ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: REGIONAL PROJECT

Countries/Region: **Djibouti, Kenya, Sudan, Uganda /Africa**
Project Tittle: **Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region**
Countries: **Djibouti, Kenya, Sudan, and Uganda**
Thematic Focal Area: **Disaster Risk Reduction and Early Warning Systems**
Implementing Entity: **Sahara and Sahel Observatory (OSS)**
Executing Entities**:** **Regional level**: Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat
National level: National Project Management Units NPMUs):
Djibouti: Ministry of Agriculture Water Fisheries and Livestock**,**
Kenya: Ministry of Environment and Natural Resources,
Sudan: Ministry of Water Resources and Electricity Ministry of Water and Environment.
AF Project ID: **AFR/RIE/DRR/2017/1**
IE Project ID: Requested Financing from Adaptation Fund (US Dollars): **USD 13,079,540**
Reviewer and contact person: **Alyssa Maria Gomes** Co-reviewer(s): **Dirk Lamberts**
IE Contact Person:

Review Criteria	Questions	AF-Comments on 1 May 2019	IE-Responses on 13 May 2019
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol?	Yes.	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. The Intergovernmental Authority of Development (IGAD) region is comprised of arid and semi arid lands (ASALs) and receives less than 600 mm of annual rainfall. The IGAD member states face severe water constraints and prolonged droughts. All four target countries are experiencing significant destructive climate change led effects of droughts on the region's economy, ecosystems and community livelihoods, especially those of the most vulnerable members among the smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda.	

Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme ?	No. **CAR 1:** Kindly submit the letter of endorsement for Uganda and the nomination letter for the new Designated Authority for Kenya.	CAR1: GWPEA is coordinating this activity to have the nomination letter for the new NDA for Kenya finalized; for Uganda, a letter of endorsement was received (signed by the Acting PS as the substantive signatory was sick).
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes; or One hundred pages for the fully-developed project document, and one hundred pages for its annexes?	No. **CAR 2:** Kindly revise the proposal to include 100 pages for the main document and 100 pages for its relevant annexes. The Adaptation Fund Board has decided: *(a) To set a page limit for new or resubmitted project/programme proposals as follows:* *(i) Fifty pages for the project/programme concept, including its annexes; and* *(ii) One hundred pages for the fully-developed project document, and one hundred pages for its annexes; and (b) To request the secretariat to communicate submission length guidance to the implementing entities of the Adaptation Fund.* *(Decision B.32/6)*	CAR2: The fully developed proposal document is now revised and includes huge editing changes as well as some content has been converted to annexes which allowed to meet the page limit as requested by the AF. Blue-Highlighted texts were inserted to refer to newly created annexes.
	3. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added	Yes. A regional approach to tackling the drought problem not only provides a transboundary innovative way for drought management but also enhances partnerships and development efforts between the focal countries in the region. Coordinated and cooperative arrangements across the countries including capturing data and sharing the resulting information, building capacity for drought management interventions,	

	value through the regional approach, compared to implementing similar activities in each country individually?	will build cohesion and provide platforms at the regional level. Both indigenous and modern knowledge, technologies and expertise will be equally shared. The DRESS-EA project will also contribute to the achievement of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI).	
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	To some extent. The planned interventions aim to provide socio-economic benefits to ecosystems and populations, including vulnerable groups such as women and youth. Interventions such as development of water points aim to reduce distance travelled by women to collect water. Energy saving cook stoves will have positive impact on reducing women's and children's burden for collecting fuelwood. Furthermore, planned interventions in early warning systems, capacity building efforts, soil and water management, surface and groundwater improvement, climate-smart agriculture, range and livestock management and the proposed income generation activities aim to make the vulnerable women, youth, children and elderly resilient against drought and climate change variability and provide them with concrete benefits (paragraphs 92 -97). In terms of environmental benefits, the project, interventions such as silvopastoral dryland agroforestry and rangeland management practices will help reduce the pressure on the ecosystems and preserve biodiversity. The project aims to improve the availability of clean water resources for human and livestock populations among smallholder farmers and pastoralist communities in the IGAD region	

		through the implementation of innovative water and soil conservation structures. These interventions will be complemented by capacity building of the smallholder farmers, pastoralists, and other involved stakeholders on techniques of managing drought-prone areas in other regions/areas. A study will be undertaken to develop gender responsive and scale-up strategies for drought, climate change and early warning technologies among women, and other vulnerable groups (Activity 4.1.2.4). (paragraph 98-103). The document mentions that in order to mitigate negative impacts of the interventions a "…gender analysis supported by a complete gender action plan have been undertaken during the development of the full proposal document". (per paragraph 103). <u>Gender assessment and gender action plan</u> **CAR 3:** Kindly submit the gender assessment, the gender action plan along with presentation of its principle findings and how these have been taken into consideration in the design of interventions.	CAR3: The report on Gender assessment and action plan is attached now to proposal in Annex 4 (page 109-117)
	5. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?	To some extent. A cost-effectiveness analysis has been provided on pages 56-59 of the project document. As per the analysis – compared to taking no action, undertaking the proposed project interventions leads to positive cost-benefit ratios. A Net present value (NPV) analysis of the project was conducted as demonstrated in table 8 to determine the cost-effectiveness of the project interventions. From the financial analysis in (Table 8) the benefit-cost ratios throughout the project duration are positive, indicating that the proposed project is worth an investment and is therefore cost effective.	

		Furthermore, as indicated in paragraph 121, the regional approach provides added advantages: - Cooperation/coordination to build cohesion and provide platforms at regional level - Facilitating exchange and experiential learning - Enabling coordinated planning and implementation of interventions thereby minimizing duplication of efforts - Contributing to the achievement of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) Majority of the project budget (6.2 million USD) consists of unidentified sub-projects (USPs). Considering that it is not possible to do a comprehensive risk assessment at this stage, the cost-effectiveness assessment not possible. While the financial analysis presented is appreciated, the unidentified sub-projects (USP) approach has not been sufficiently justified. This means that while the use of the USPs for the proposed income generation activities (IGA) on pages 42-43 is justified, there is no adequate justification for the remainder of the concrete activities. **Kindly refer to CAR 6 below.**	
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction	Yes. For all the four selected focal countries water and agriculture are priority sectors for adaptation to drought. At the regional scale, the project is consistent with Protocol on the Establishment of a Conflict Early Warning Response Mechanism (CEWARN) for the IGAD Member States, 2003 and the IDDRISI Strategy 2013.	

	strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.	As evidenced by the information provided on pages 60-65, the project is in alignment with national or sub-national sustainable development strategies, development plans, poverty reduction strategies, national communications and national adaptation programs of action. It is also consistent with national socio-economic priorities, national climate change priorities and national disaster risk management priorities.	
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	To some extent. The information provided on pages 67-84 is well received. However, it is largely limited to broad relevant policies and national requirements for environmental and social safeguarding rather than providing an overview by country, of any national technical standards that apply to the project activities and how the project will meet these standards. **CR 1:** Please clarify the national technical standards as they apply to the specific project activities, indicating the relevant project components /outputs. The proposal should include a detailed process to identify USPs and the national technical standards that may apply and how the project will meet these. **CR 2:** Please clarify how the project will meet national technical standards for the USPs. **Kindly also see CAR 6 below**.	CR1: Kindly find the Table 6 on Page 37 which provides the relevance of the project activities and the contribution of national technical standards. **N.B:** Tables presented previously on pages 67-84 are now presented as annex 9 Pages 140-149. CR2: Please see added text Paragraph 256 Page 66.
	8. Is there duplication of project / programme with other funding sources?	No. As supplemented by information provided on pages 86-89 of the project document.	
	9. Does the project / programme have a	Yes.	

	learning and knowledge management component to capture and feedback lessons?	Component 4 has activities specifically dedicated to knowledge management (KM), learning and sharing. In addition to Component 4 knowledge sharing and learning is mainstreamed in all components. (page 89-90) Specific activities and outputs are almost totally dedicated to knowledge as presents in the table on pages 90-93.	
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?	The supporting annex on "Report on Regional and National Consultation workshops" presents the findings of the consultations held in each of the four beneficiary countries. The Regional consultative meeting was held in Uganda on 15th March 2019 where all countries representatives took part It is mentioned that national consultations were held in Djibouti 10th – 12th February 2019; Kenya 19th – 22nd February 2019, Sudan 2nd to 4th March 2019 and Uganda 11th – 13th March 2019). **CAR 4:** The findings from the public consultation sessions for Kenya and Sudan are well noted. However kindly append the summary reports of the National workshops in Djibouti and Uganda presenting beneficiaries' (including marginalized and vulnerable groups) points of view on the proposed interventions and how they were taken into consideration. It is well received that consultations incorporated in a gender responsive approach. Gender-sensitive tools and gender analysis was used to collect the data. In order to ensure gender mainstreaming and responsiveness from the project design step to the	CAR4: **A separate document** (Annex 3: *Consultation workshops-reports--DRESS-EAProject-OSS-May13-2019*) includes now the two required reports with additional details on views and opinions expressed by the project's beneficiaries including marginalized and vulnerable groups as well as how the project will be taking full consideration of their expectations.

		implementation phase, the project aims to reach 50% of women among the beneficiaries. It also aims to ensure that at least 40% of women are involved and actively participate in the various activities under the 4 components of the project (paragraph 176-179). At every stage of providing inputs such as - early warning devices, soil and water conservation, climate-smart agricultural practices, range, and livestock management, 50% of the women will be the sole beneficiaries. Additionally, the project lists activities in which 50% of targeted beneficiaries will be women (page 97-98). **CR 3:** Kindly clarify how women and other vulnerable groups will be involved in "groundwater management initiatives" and in "protection of water wells and springs to ensure quality, quantity and efficient water use" (page 98). **CR 4:** Kindly clarify Activity 4.1.2.4 "developing gender responsive and scale-up strategies for drought, CC and early warning technologies"	CR 3: The involvement of women is clarified in sub. paragraph vi) on page 50. CR 4: Clarification has been done by improving the title of the activity 4.1.2.4 which is now: Develop Strategies to empower women and other vulnerable groups in drought management initiatives. In fact, this activity will ensure the continued involvement of women, youth and vulnerable groups in the project interventions focusing on adaptative actions towards drought. This will be obtained through a study aimed to provide adequate information regarding gender considerations even beyond the lifespan of the project.

			Consequently, the proposal content has been updated to take into account this change.
		Paragraph 165 of the proposal states that given the presence of indigenous peoples in the project sites during the preparation of the project Free, Prior and Informed Consent (FPIC) procedures were applied. However, the information in the proposal and the relevant annex does not reflect this process and does not provide an overview of the indigenous peoples and communities involved. **CR 5:** Please clarify the engagement with Indigenous Peoples in line with the AF ESP.	CR5: Additional text is provided to further demonstrate how the consent from indigenous peoples and communities was obtained throughout the consultative process undertaken for the preparation and validation of the full proposed project. See paragraph 158 Page 46.
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	Yes (as per paragraphs 180 – 194 on p. 98-100).	

	12. Is the project / program aligned with AF's results framework?	To some extent. Table 11 highlights gender considerations in the project. Section III E. presents a robust Results Framework that also sets gender responsive targets in line with the AF Gender Policy. **CAR 5:** Kindly provide the table for reporting on AF Core indicator methodologies. Only relevant core indicators may be reported in this table. https://www.adaptation-fund.org/wp-content/uploads/2016/04/AF-Core-Indicator-Methodologies.pdf	CAR 5: Three Adaptation Fund Core Indicators are identified for the project and presented in table 16, Pages 87-88.
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	The project intends to either establish or support existing small- scale infrastructure such as - weather stations, ground and surface water sources, watering points and community learning centers**.** Furthermore, the project intends to provide competitive small grants targeting smallholder farmers and pastoralists and their associations to undertake innovative water harvesting and storage infrastructure and innovative IGAs or drought adaptation actions (page 102). **CR 6:** Kindly explain the rationale and clarify how these efforts (competitive small grants) "aim at demonstrating that some finances will be availed after project closure so that the small- scale infrastructure developed during the project can be maintained easily". **CR 7:** Please clarify how small-scale infrastructure (i.e. weather monitoring stations, micro irrigation system, sand dams, solar irrigation system, watering points, bunds, water harvesting and storage facilities etc.) will be maintained after the project closure.	CR 6: Please find the improved text in page 53, Lines 18-23 CR7: Please see improved text (P.53, Lines 03-14)

		CR 8: Clarify the project's approach to ensure that local governments as stakeholders would be explicitly required to budget for maintenance of such infrastructure such that this activity is budgeted for every year, post the project period.	CR8: Kindly find inserted text in Lines 35-47 P. 53
		CR 9: The concept proposal mentioned setting up a "community infrastructure maintenance fund". Kindly clarify if this no longer a proposed intervention and clarify the alternative that is now proposed as well as its cost-effectiveness.	CR9: Kindly find inserted text Lines 27-33 P. 53
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified?	To some extent. The ESP checklist has been provided on pages 104-112. The table on p. 138-141 presents a speculative list of possible ESP risks and impacts findings and potential mitigation measures. These are subject to the ESMP and	

		its risks findings process for the USPs. **Please also refer to CAR 6 below.** It is important to acknowledge that the risks associated with the 6.2 million USD worth of USPs are not included here. If the risk findings presented do not include those of the USPs, there are a few issues to be clarified: Paragraph 10, p. 105, states "However, marginalized and vulnerable groups that could be impacted by the project activities have been assessed and precisely defined." **CR 10:** please provide this information. Para 18, p. 106: the findings refer to the gender analysis that was carried out. (please see CRREF1). Please also note that the ESP principle considers risk for gender equality rather than gender equity. Paragraph 36, p. 109: "There are no potential direct risks to the protection of ecosystems and its biological diversity conservation through the project." **CR 11**: Please clarify which ecosystems and biodiversity assets have been considered. On p.108, paragraph 32. related to principle 8 (Involuntary resettlement) the proposal mentions that "…the construction of appropriate and innovative water harvesting and storage infrastructure as well as mini-irrigation and water delivery systems will occupy spaces and may affect private lands or related activities". It is further mentioned on page 139 "The project will opt for state-owned lands and if needs be, compensation measures will be arranged for used private lands owners".	CR 10: Kindly find inserted text on Page55 Para. 200 This is well noted. The proposal now mentions gender equality instead of equity regarding related ESP. CR11: This is clarified on Page 58 text para 223.

		It is implied in the proposal that communities that will be most affected by the project interventions will be targeted for IGAs and small grants scheme and that such an approach will be deemed to compensate them against the project impacts. (per p.45-46, paragraph 76 and 82). **CR 12:** Kindly clarify how these potentially affected communities were involved in the consultative process, potentially affected communities' views, the process of acquiring consent, the issues raised and the approach that project to comply with AF ESP.	CR12: Added information in page 53 Para 162 and 163
	15. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?	Unclear. The project proposal mentions innovation in many places in the document. However, the nature of the innovative approaches, technologies or mechanisms needs more clarity. - Activity 2.1.2.4 mentions Undertake exchange visits • and learning tours for cross learning in areas with successful drought management innovations including ground water management initiative. **CR 12:** Cross learning and knowledge exchanges are a good way to build capacity. Kindly clarify the drought management innovations that will be the focus of these learning tours.	CR12 (bis) The drought management innovations that will be the focus of the project's learning tours are now mentioned in Paragraph 75 Page 24

		CR 13: Which are the relevant institutions promoting innovation; research & development and technology transfer on climate change that the project will collaborate with? Page 52 mentions that one other area of innovation could be "*adding value* to some of the products of pottery, energy saving stoves, and briquettes through better and fancier designs that do not compromise on the overall value. They could also innovate by customizing the products to various stakeholder needs and ably earn more money".	CR13: See the added text on page 29 paragraph 92.
		CR 14: Kindly justify the innovativeness of the above approach. Furthermore, kindly clarify if there is indeed a market for more expensive custom products or how will the project will connect producers to these markets.	CR14: See the added text on page 29 paragraph 91.
Resource Availability	1. Is the requested project / programme funding within the funding windows of the pilot programme for regional projects/programmes?	Yes at USD 13,079,540.	
	2. Are the administrative costs	Yes	

	(Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 20 per cent of the total project/programme budget?		
Eligibility of IE	3. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?	Yes.	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the	Yes. Global Water Partnership Eastern Africa (GWPEA) will execute the project at the regional level. At the local level, the project execution offices will be based at local government offices of the selected project sites in the respective countries. These are: i) the Ministry of Agriculture, Water Fisheries and Livestock of Djibouti, ii) Ministry of Environment and Natural Resources-Climate Change Directorate for Kenya, iii) Ministry of Water Resources and Electricity of Sudan and iv) Ministry of Water and Environment- Directorate of Water Resources Management of Uganda. The project execution offices will closely collaborate with local government structures in the execution of the project interventions following the local authorities planning guidelines. (Page 119-124, tables 12 and 13).	

	management arrangements?		
	2. Are there measures for financial and project/programme risk management?	Yes as illustrated in table 15.	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.	No. • An ESMP has been provided in the ESMF, Section 8. • Impact Assessments and other relevant assessments, including a gender assessment have not been submitted. Only methodologies for assessing impacts and conducting assessments have been provided in sections 6 and 7 of the ESMF. • There no adequate arrangements for monitoring ESP risks • The USP approach is not sufficiently justified. • Grievance mechanism is provided in the main text and section 9 of ESMF. • The measures included for the management of environmental and social risks are not in line with the ESP. The 'institutional arrangements for ESIA' are not clear (p. 130 onwards), with a number of stakeholders (IE, REE, NEE, communities) involved in discrete stages of the process without much apparent integration. **CR 15:** Please clarify the operational arrangements for compliance with the ESP and	CR 15: This is now clarified in Page 68 Para. 266.

		the GP during implementation, in an effective, coherent and integrated manner, reflecting the regional nature of the project. **CAR 6:** Please develop and include an ESMP in line with the ESP and GP of the AF by taking into consideration the guidance below.	CAR 6: An ESMP has been developed and is provided in section 8 of the entire ESMF *(Annex 6 provided separately),* approved by the respective country environment management authorities. The new detailed ESMP indicates the environmental and social risks and impacts in line with the ESP and GP of the AF. It further integrates all the safeguard measures and provides a detailed methodology for assessing the Unidentified Sub Projects. A Grievance mechanism is also provided and is consistent with that provided in the proposal document.
		1. The ESMF that is included does not comply with those ESP and GP requirements, and needs to be developed into a compliant ESMP. The ESMP needs to be fully consistent with the other arrangements of the project proposal. 2. Annex 6 includes an Environmental and Social Impact Framework. Projects with USPs are required to include an Environmental and Social Management Plan that integrates all the safeguard measures and arrangements that have already been identified for fully-formulated project activities, as well as a process to ensure that the USPs are subjected to the same process of risk identification, commensurate impact assessment, identification of	1. The ESMP is revised in order to make it consistent with the other arrangements of the project proposal. 2. The Annex 6 has been updated taking into account the requested improvements.

		management measures and clear planning and identifying arrangements for their implementation. 3. Kindly include the methods and processes for compliance with AF ESP, once USPs are sufficiently identified. For guidance on USPs in projects, including monitoring arrangements during implementation, please refer to https://www.adaptation-fund.org/wp-content/uploads/2019/02/AFB.B.32-33.7_Compliance-with-ESP_Update-of-PPR_and_Guidance-for-USPs.pdf 4. Additionally, the proposal needs to include adequate provisions to ensure that the USPs will also be Gender Policy compliant. https://www.adaptation-fund.org/wp-content/uploads/2017/03/GenderGuidance-Document.pdf 5. Arrangements for an extensive grievance mechanism have been developed in the proposal. Section 6, the ESMF, also includes a section on a grievance mechanism that will be established. However; the grievance mechanism in the annex and the main proposal are not consistent. **CR 16**: Please clarify how a simple (easily accessible), robust (without too many layers) and consistent (annex and main proposal differ) grievance mechanism will be established for the whole of the project.	3. At project start, and particularly when the USPs will be sufficiently identified an assessment methodology and approach presented in the full proposal will be applied to ensure the compliance with AF ESP and GP (according to AF guidance). This methodology includes also the requirements to maintain and monitor this compliance during the project implementation. 4. USPs will be compliant to GP, since the ESP and GP are very close and interdependent (PS 5 Gender Equality and Women' empowerment) Compliance of the USPs to both policies will be ensured through the methodology proposed. ~~Also~~Also, this will be ensured through the Gender Action Plan (see Annex 4) 5. Consistency is now achieved between both documents regarding the GM as well as per the ESPM CR 16: A clarifying text is added on page 70 Para. 276.

		CAR 7: Kindly submit all relevant assessments based on the outcomes of the risks screening conducted.	CAR 7: All the assessments done based on the outcomes of the risks screening have been annexed to the proposal document. These are; (i) The Vulnerability assessment; (ii) Gender analysis; (iii) The Regional ESMF with ESMPlan (iv) The Four National ESMF with ESMP already approved by the National Environment Authorities of the four Countries ; and (iv) Regional and National consultations reports that were also in the framework of further assessments.
	4. Is a budget on the Implementing Entity Management Fee use included?	Yes.	
	5. Is an explanation and a breakdown of the execution costs included?	Yes.	
	6. Is a detailed budget including budget notes included?	Yes.	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators?	Yes. On pages 142-145, sex disaggregated targets have been set in the results framework.	
	8. Does the M&E Framework include a breakdown of how implementing entity IE fees will be utilized in the	Yes, a monitoring and evaluation work plan and budget has been included in Table 17.	

	supervision of the M&E function?		
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	Yes, but inconsistencies between the table submitted need to be addressed. It appears that project outcomes are aligned with Adaptation Fund outcomes 1,2, 3,4,6 and 7. However, the two tables mentioned in section F are not consistent. For example, the first table indicates alignment with outcomes 1,3,4,6 and 7 and the second table indicating the breakdown per output is aligned with outcomes 1,2,4,6 and 3. Please note that KM related activities are aligned with AF outcome 3 and national policies, plans and strategies should be aligned with AF outcome 7. **CAR 8:** Kindly update the alignment outcome tables to ensure that that the alignment outcomes for the project are consistent in both tables.	CAR 8: Addressed. Page 89 Table 17
	10. Is a disbursement schedule with time-bound milestones included?	Yes.	

Technical Summary		The project titled, "Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region" aims to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through establishment of appropriate early warning systems and implementation of drought adaptation actions in the four targeted countries IGAD region.

	The project intends to strengthen the drought resilience of smallholder farmers and pastoralists by the following components: i. Developing and promoting regional investments in drought early warning systems (EWS) and improving the existing ones ii. Strengthening and improving the capacity of key stakeholders in drought risk management at regional, national and local levels iii. Facilitating smallholder farmers and pastoralists inputs to undertake innovative adaptation actions that reinforce their resilience to drought iv. Enhancing knowledge management and information sharing on drought resilience at the considered levels The initial technical review found that the fully-developed project proposal has identified the critical needs of the targeted countries and proposes solutions to help the target beneficiaries and ecosystems in the participating countries to adapt to climate extremities. The proposed activities align well with subnational and national priorities and are relevant to the regional context. However there a number of corrective action requests (CARs) and clarifications few requested: **Corrective action requests** **CAR 1:** Kindly submit the letter of endorsement for Uganda and the nomination letter for the new Designated Authority for Kenya. **CAR 2:** Kindly revise the proposal to include 100 pages for the main document and 100 pages for its relevant annexes. **CAR 3:** Kindly submit the gender assessment, the gender action plan along with presentation of its principle findings and how these have been taken into consideration in the design of interventions. **CAR 4:** The findings from the public consultation sessions for Kenya and Sudan are well noted. However kindly append the summary reports of the National workshops in Djibouti and Uganda presenting beneficiaries' (including marginalized and vulnerable groups) points of view on the proposed interventions and how they were taken into consideration. **CAR 5:** Kindly provide the table for reporting on AF Core indicator methodologies. Only relevant core indicators may be reported in this table. **CAR 6:** Please develop and include an ESMP in line with the ESP and GP of the AF by taking into consideration the guidance provided. **CAR 7:** Kindly submit all relevant assessments based on the outcomes of the risks screening conducted. **CAR 8:** Kindly update alignment outcome tables to ensure that that the alignment outcomes for the project are consistent in both tables. **Clarification requests** **CR 1:** Please clarify the national technical standards as they apply to the specific project activities, indicating the relevant project components /outputs.

	CR 2: Please clarify how the project will meet national technical standards for the USPs. The proposal should include a detailed process to identify USPs and the national technical standards that may apply and how the project will meet these. **CR 3:** Kindly clarify how women and other vulnerable groups will be involved in "groundwater management initiatives" and in "protection of water wells and springs to ensure quality, quantity and efficient water use" (page 98). **CR 4:** Kindly clarify Activity 4.1.2.4 "developing gender responsive and scale-up strategies for drought, CC and early warning technologies" **CR 5:** Please clarify the engagement with Indigenous Peoples in line with the AF ESP. **CR 6:** Kindly explain the rationale and clarify how these efforts (competitive small grants) "aim at demonstrating that some finances will be availed after project closure so that the small- scale infrastructure developed during the project can be maintained easily". **CR 7:** Please clarify how small-scale infrastructure (i.e. weather monitoring stations, micro irrigation system, sand dams, solar irrigation system, watering points, bunds, water harvesting and storage facilities etc.) will be maintained after the project closure. **CR 8:** Clarify the project's approach to ensure that local governments as stakeholders would be explicitly required to budget for maintenance of such infrastructure such that this activity is budgeted for every year, post the project period. **CR 9:** The concept proposal mentioned setting up a "community infrastructure maintenance fund". Kindly clarify if this no longer a proposed intervention and clarify the alternative that is now proposed as well as its cost-effectiveness. **CR 10:** please provide this information in Paragraph 10, p. 105. **CR 11**: Please clarify which ecosystems and biodiversity assets have been considered. **CR 12:** Cross learning and knowledge exchanges are a good way to build capacity. Kindly clarify the drought management innovations that will be the focus of these learning tours. **CR 13:** Which are the relevant institutions promoting innovation; research & development and technology transfer on climate change that the project will collaborate with? **CR 14:** Kindly justify the innovativeness of the IGA activity related to making fancier custom products. Furthermore, kindly clarify if there is indeed a market for more expensive custom products or how will the project will connect producers to these markets.

	CR 15: Please clarify the operational arrangements for compliance with the ESP and the GP during implementation, in an effective, coherent and integrated manner, reflecting the regional nature of the project. **CR 16**: Please clarify how a simple, robust and consistent (annex and main proposal differ) grievance mechanism will be established for the whole of the project.
Date:	1 May 2019

ADAPTATION FUND

REGIONAL PROJECT PROPOSAL

I. PART I: PROJECT INFORMATION

Title of Project/Programme:	STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION
Countries:	DJIBOUTI, KENYA, SUDAN AND UGANDA
Thematic Focal Area[1]:	Disaster Risk Reduction and Early Warning Systems
Type of Implementing Entity:	REGIONAL IMPLEMENTING ENTITY
Implementing Entity:	SAHARA AND SAHEL OBSERVATORY (OSS)
Executing Entities:	**Regional level**: Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat **National level:** National Project Management Units (NPMUs): ▪ **Djibouti:** Directorate of Rural Hydraulics**,** ▪ **Kenya:** Ministry of Environment and Forestry, ▪ **Sudan:** Ministry of Water Resources, Irrigation and Electricity ▪ **Uganda:** Ministry of Water and Environment.
Amount of Financing Requested:	13,079,540 US DOLLARS

Table of Contents

List of Figures & Tables

List of Annexes

1 Project / Programme Background and Context:

1.1 Project area context

1. The IGAD (Inter-Governmental Authority on Development) region (also called the horn of Africa) in its entirety comprises of the countries - Ethiopia, Eritrea, Somalia, Djibouti, Sudan, Kenya and Uganda. The region is a large area that occupies about 5.2 million km^2 with a human population of about 230 million people growing at a rate of 2.6% Babikir et al, (2015)2. The region is a mosaic of cultures with considerable ethnic diversity both regionally and within countries. It is said to be home to some 340 languages. Many of the region's ethnic groups are also split across several countries by national boundaries. This Horn of Africa region supports one of the largest concentrations of pastoralist people anywhere in the world. It is one of the regions that is most vulnerable to climate-related risks; apart from protracted conflict and political violence (itself partly caused by competition for resources), climatic-induced risk is the major driver of vulnerability in the region, particularly for poor communities whose livelihood depends on rain-fed agricultural systems (ICPAC/WFP, 2017.)3.
2. The IGAD member states face severe water constraints and prolonged droughts. Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm (Figure1) of rainfall annually (IGAD 2013)[4]. It is predicted that the frequency and intensity of droughts would increase as a result of climate change, especially in semi-arid areas5. In fact, climate change has exacerbated drought occurrences due to high anomalies in precipitation.
3. From the year 2015 to-date, high rainfall anomalies have been recorded (Figure 2). Moreover, the region faces uncontrolled activities such as deforestation and poor agricultural practices that lead to reduced water retention capacities, surface runoffs, and soil cover losses. Such activities not only impact negatively on water resources, environment and other ecosystems that serve as community livelihood sources but also increase their vulnerability to droughts. Significantly reduced precipitation levels lead to food insecurity, civil strife over water, food and pastures, drying-up of rivers, streams and aquifers as well as loss of plant available water in the soils on which smallholder farmers and pastoralists derive their livelihoods.

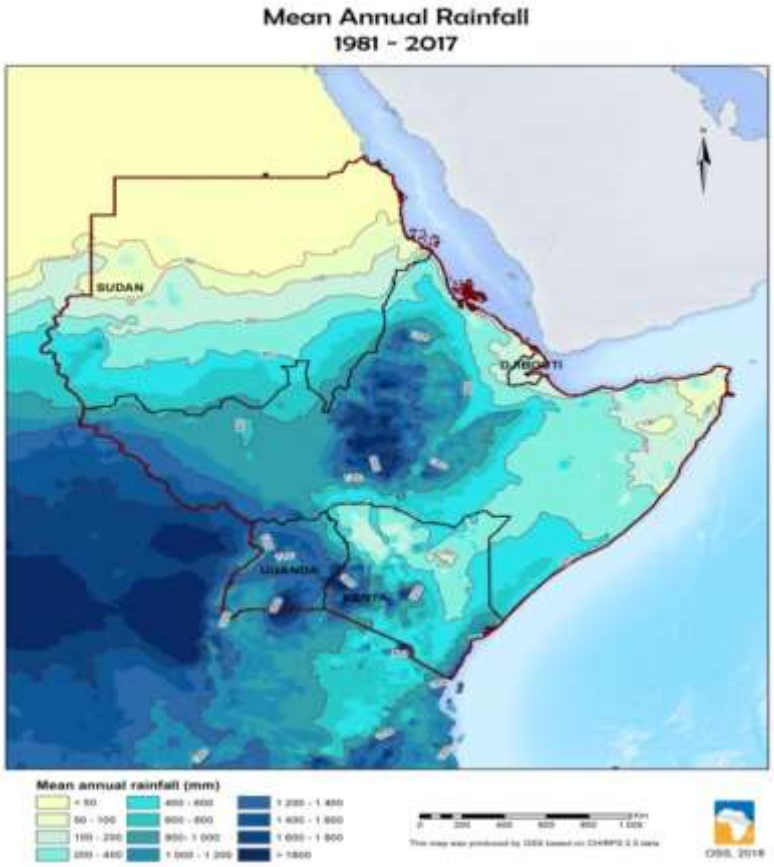


Figure 1 : Average annual rainfall (mm) in the Arid and Semi-arid Lands (ASALs) of the Horn of Africa

4. The dominant livelihoods in the region are agriculture, mainly dominated by smallholder farmers and pastoralists or semi-pastoralist production systems. Among smallholder farmers and pastoralists within the IGAD region, are women, children, youth and elderly that comprise the most vulnerable groups of societies in drought hit areas. The causes for vulnerability to droughts resulting from climate change that have led to significantly reduced precipitation in the region include low adaptive capacity by communities especially the smallholder farmers and pastoralists as well as inadequate information sharing systems for such communities to plan sufficient drought adaptation interventions. It also integrates inadequate innovative adaptation actions to droughts, poor early warning systems and insufficient knowledge and skills in drought management. Climate change contributes to higher temperatures in the region thereby aggravating the impacts of drought. Higher temperatures result in greater evaporation, reduction in soil moisture, leading to drier conditions and failed rains. Crops and pastures suffer due to less water with eminent failed harvests and reduction of feed for livestock.

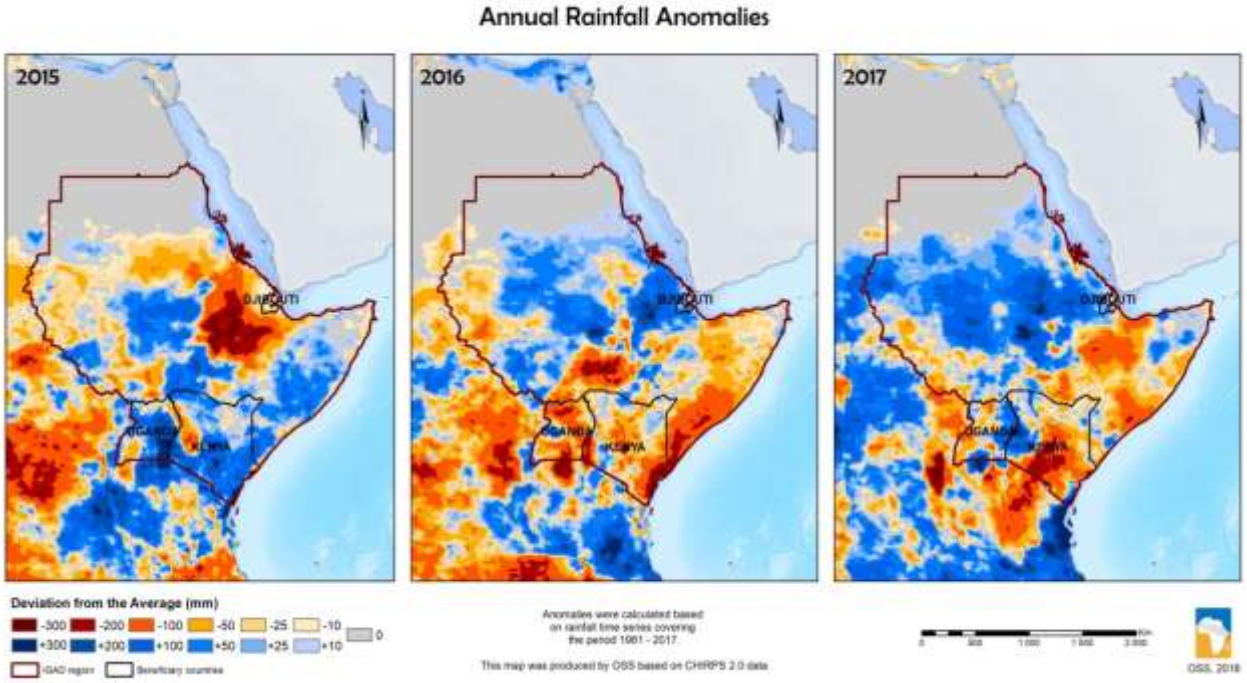


Figure 2: Rainfall deviations in the IGAD region between 2015 and 2017

5. Drought and its consequences for instance degradation of environmental and natural resources, continues unabated largely due to climate changes, increased human population, inadequate institutional capacities, civil strife and high poverty levels in the region (IFRC, 2011). Water pollution, food insecurity, civil conflict over water, food, and pastures, drying up of rivers, streams and aquifers and the general land degradation (vegetation and soil degradation) are major impacts of droughts resulting from climate change. Due to the significant destructive climate change led effects of droughts on the region's economy, ecosystems and community livelihoods, especially those of the most vulnerable members among the smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been the most affected.

6. **Djibouti** is vulnerable to extreme events droughts[6]. Almost three-quarters of the total land area in this country is arid, yet nearly all the land is under pasture land and agricultural use[7]. However, increasing desertification remains a significant challenge where 227,463 people are threatened with food insecurity in the hardest-hit areas of Ali Sabieh, Obock and Dikhil[8]. Djibouti imports nearly all cereals consumed in the country, and food aid represents almost 10% of total imports. The Djibouti National Adaptation Programmes of Action (DNAPA, 2006)[9] however, recognizes agro-pastoral and pastoral communities as the most vulnerable to climate change and drought with high crop and animal losses due to drought reported. According to the DNAPA (2006) women are more vulnerable to water scarcity since they travel longer distances to fetch fresh potable water. Rangelands and grasslands equally face increasing degradation due to overgrazing. Droughts, floods, sea level rise, and epidemics, whose frequency, occurrence, and impacts have increased in recent years, already pose a significant risk to the country's vulnerable population. However, the vast majority of Djibouti's rural population remains highly susceptible to climatic uncertainty because they live in deserts or marginal and infertile areas, often with highly erodible soils, poor ground cover, and limited water supplies where food security is a serious concern. The country is home to a large pastoralist population, living

on poor quality pasture lands, and the impact of climate-related changes on livestock production could be significant[10]. Therefore, droughts pose a severe challenge to the already limited water stocks, frequently necessitating emergency food and water assistance. Drought conditions have previously affected nearly 28,650 people in the northwest pastoral, southeast border, and central lowlands, especially near Obock (The World Bank Group, 2011). The DNAPA prioritizes drought adaptations where drought risk management is a key area that requires urgent adaptation interventions to secure water resources and conserve soil and related ecosystems on which local communities depend.

7. **Kenya** faces risks of climate variability and change with droughts reported to be recurrent (Kenya National Adaptation Plan (KNAP, 2016). Kenya has, generally, scarce and unevenly distributed fresh water resources with major rivers showing severely reduced volumes during droughts, and many seasonal ones completely drying up[11]. The most drought vulnerable areas in Kenya are found in the Northwestern where transboundary transhumance of the Karamajong and Turkana across the Uganda and Kenya borders is pronounced. These areas are characterized with widespread crop failures and falling terms of trade for pastoralists that have affected both farming and agro-pastoral communities in the northwest, northeastern and coastal strip of Kenya (Onyandike, 2017). Actually, the agricultural sector is well considered as a very climate sensitive sector that is negatively affected by current climate variabilities such as droughts resulting in reduced productivity and insecure livelihoods. Such eminent impacts of droughts including reduced production of not only staple food crops such as maize but also other major crops such as tea, sugarcane and wheat have eventually led to increased imports especially of (maize, wheat and sugar) and reduced exports (e.g. tea), thereby weakening the country's balance of payments (Ministry of Environment and Natural Resources, 2010). Conflicts resulting from the displacement of communities by transhumance seeking water and pastures are also a common phenomenon. Fortunately, the proposed project presents an opportunity to complement the KNAP (2016) that aims to strengthen the adaptive capacity of vulnerable groups such as women, orphans and children, the elderly, and persons with disability to manage drought risks through technological support, awareness raising, up-scaling, financing specific drought adaptation actions.

8. In **Sudan**, Communities and ecosystems are vulnerable to climate-related impacts that are associated with climate variability and climate change. Currently, the major climate hazards consist of droughts and extreme flooding events as well as other climate-related phenomena such as dust storms, thunderstorms, and heat waves, whose occurrences though less frequent, still pose serious threats to local livelihoods. Generally, about seven major drought events characterized with major rainfall variability[12] are reported to have occurred in Sudan. Average annual rainfall has reportedly declined from about 425 mm/year to about 360 mm/year leading to intense rainfall variability and frequent drought occurrences. The hardest hit areas are in the western and northern parts of Sudan within the semiarid portions of the Nile including North & Western Sudan (North Kordofan and Darfur), Kassala State and some parts of the rain-fed areas in central Sudan basin. Over 80% of the population lives in rural areas and depends on agriculture and livestock production. Agriculture is among the sectors that are most vulnerable to droughts and climate change in addition to livestock, water resources and health (Sudan National Adaptation Programme of Action (SNAPA, 2006)[13]. The productivity of natural pastures has tremendously reduced in the last thirty years due to recurring droughts. The deterioration of pastures is not only limited to grasses but also decreasing the production of trees that negatively impact on soil, biodiversity, forests and food security. Consequently, the most severe effects of these changes have been felt by the most vulnerable groups of communities including the very poor people, women, and children. These groups have been reported to be significantly affected because they mostly depend on natural resources (Ahmed Eltohami, 2016). However, their options to adapt to drought and climate change are still impeded by limited capacity. Fortunately, the SNAPA prioritizes project interventions that focus on enhancing resilience to rainfall variability, reducing vulnerability to droughts by communities and ecosystems through improved crop, water resources, and biodiversity and environment management.

9. In **Uganda**, areas that are highly vulnerable to severe droughts are located within a region commonly referred to as the "cattle corridor" an area stretching from Karamoja region in the northeast, through central to the southwest of the country. These areas are mainly rangelands and cover approximately 84,000 km^2 (about 40 percent) of the total land area of Uganda. In these areas, semi-arid and dry sub-humid conditions prevail, and are characterized by low, unreliable and variable rainfall (450–800mm)[14]. Therefore, this is a semi-arid area characterized by, high rainfall variability and drought occurrence. Pastoralism and crop production are the main economic activities from which most vulnerable local communities derive their livelihoods. Agriculture is recognized by the Uganda National Climate Change Policy (UNCCP, 2015)[15] as the most vulnerable and severely affected sector especially in these parts of the country. Indeed, two consecutive seasons of rain shortage hit production across much of the country causing a drastic increase in staple food prices (UNCCP, 2015). Pastoralists frequently acknowledge evidence of climate change. Dry

periods have become longer and are occurring more frequently and rainfall has been less regular. Many of the perennial rivers have turned into seasonal rivers[16] (Stark, 2011). In addition, overgrazing is rampant in the area due to: (i) disruption of traditional transhumance corridors limit cattle movement (in many cases as a consequence of change in land tenure policies from communal property to individual titling of land)[17].

10. Such vulnerability not only negatively impacts on peoples' livelihoods but also the country's economy. Communities in the cattle corridor have long been well known for heavy reliance on mobile pastoralism as an important strategy to cope with resource variability. However, the abilities of these communities to cope have greatly weakened due to the aggravated impacts of climate change driven frequent and severe droughts. The ability of local community populations and ecosystems in such areas to recover from the shocks is so limited that they inevitably resort to overexploitation of natural resources using unsustainable methods. Food stocks are critically low in northeastern Karamoja. The UNCCP proposes the implementation of adaptation strategies for reducing climate change effects on agriculture to build climate resilient farming communities in the affected parts including drought-prone areas of Uganda.

11. Overall, it is evident that in the four riparian countries, prolonged and widespread drought is a recurrent feature that is exacerbated by climate change phenomena, advancing desertification and ecological degradation[18]. In the proposed project focal countries of Djibouti, Kenya, Sudan, and Uganda within the IGAD region in the Horn of Africa (HOA), climate change has aggravated the impacts of droughts manifested in form of acute water constraints resulting from high rainfall variability and increasing temperatures. Future climate change projections between 2030 and 2080 paint a gloomy picture characterized by high rainfall variability and increased temperatures in the IGAD region of which the four countries are part (Figures 3 and 4).

12. The predominant livelihood system, especially in the ASALs of the HOA, is pastoral and agro-pastoral production. The pastoralists are constantly on the move, within and outside their national boundaries, in search of pasture and freshwater resources, often resulting into conflicts, which frequently necessitate regional interventions to resolve or prevent. Some other factors that worsen the vulnerability to drought risk include a high dependency on climate-sensitive livelihoods, fragile and rapidly degrading physical environment, inadequate extension services and high incidences of conflicts that are rampant in the region (Global Water Partnership East Africa, 2015).

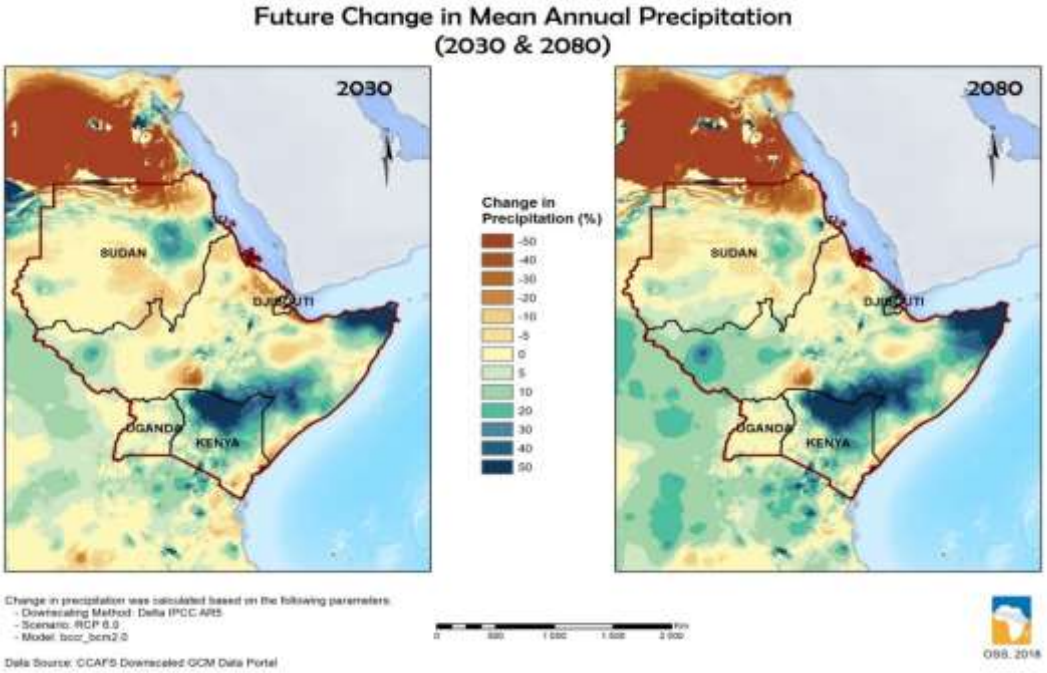


Figure 3 : Projected mean annual precipitation between 2030 and 2080 in the proposed project areas

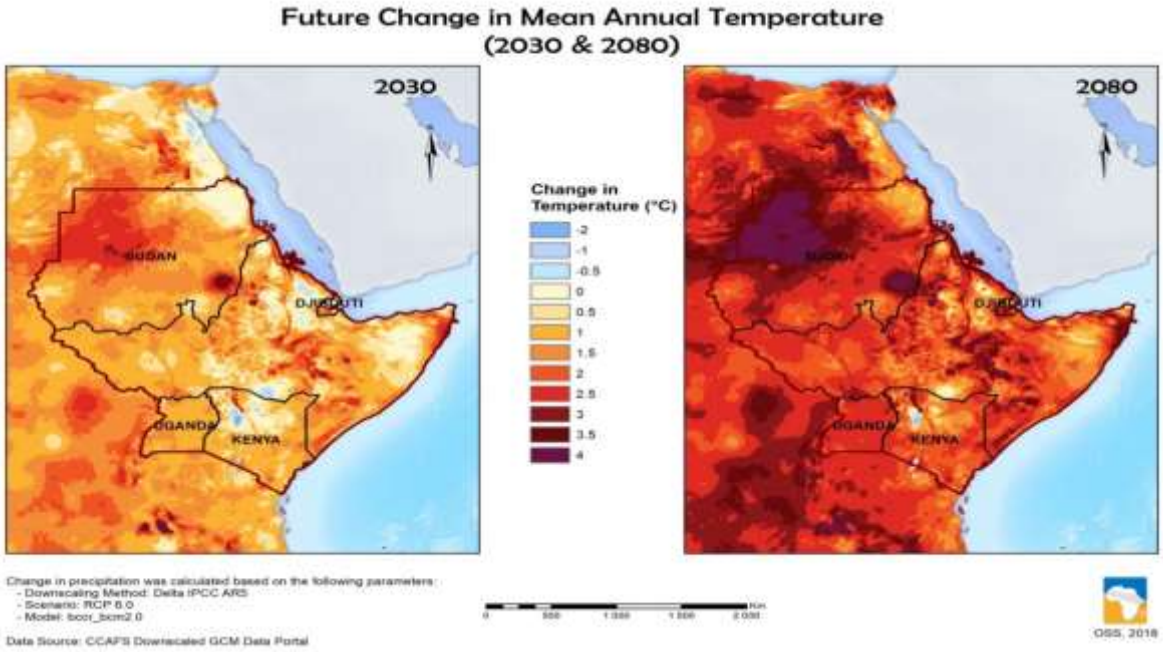


Figure 4 : Projected mean annual precipitation between 2030 and 2080 in the proposed project areas

13. Global Water Partnership East Africa (GWPEA) is collaborating with IGAD and governments of Djibouti, Kenya, Sudan and Uganda through the Integrated Drought Management Programme (IDMP) and the Water, Climate and Development Programme (WACDEP) to enhance drought resilience in the region. The proposed project will build on the existing initiatives and establish new mechanisms to address drought-related challenges in the region through facilitating investments in early warning systems, building the capacity of targeted stakeholders, supporting innovative adaptation actions and enhancing knowledge management and skills.

14. The proposed DRESS-EA project will further strengthen linkages between the existing drought strategies at both regional and country levels and the drought declaration (for example the Windhoek declaration) that was adopted at the Africa Drought Conference (ADC) in August 2016 in Windhoek, Namibia. Furthermore, the project will support countries in the implementation of the Paris Agreement commitments on Nationally Determined Contributions (NDCs). Countries in the IGAD region including Djibouti, Kenya, Sudan and Uganda have put in place the NDCs as part of their national development processes and have either identified NDC priorities (e.g. Kenya and Uganda) or are in process of identifying their country priorities (Djibouti and Sudan). In addition, the countries have developed National Adaptation Plans (NAPs) and /or National Adaptation Frameworks. The project will engage the responsible entities in the countries to identify priorities and synergies in the NDCs and NAPs for support during project implementation.

15. The DRESS-EA project will also contribute to the attainment of Sustainable Development Goals (SDGs) targets of the four countries. This will be possible through the wide partnerships (at regional scale) that the project has proposed to put in place. Many of the targets of SDGs are closely linked to water resources management as water remains a key resource in several sectors of the economies of the focal countries. A prolonged absence of water (rainfall) often results in a drought, therefore, the need to target water resource management. The DRESS-EA project will strengthen national, regional and inter-regional alliances not only to realize SDG 6 but for many other development goals targets such as SDG 13[19]. These two goals align quite well with the DRESS-EA project interventions. Also, the proposed DRESS-EA capacity development approach reflects the essence of SDG 17 i.e. use of national, regional and global partnerships for developing a knowledge base, and effective capacity development. The DRESS-EA project results framework is fully aligned with the means of implementation of the global development agenda, SDG 17, target 17.9[20] and SDG 6a[21] and 6b[22]. The DRESS-EA project will further contribute to SDG1[23], 2[24] and 5[25].

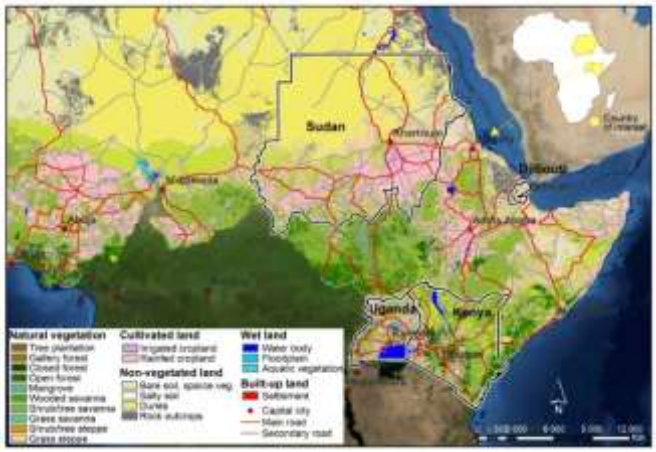
16. Employing such a regional approach to tackling the drought problem not only provides a transboundary innovative way for drought management since its occurrence is not limited to borders but also enhances partnerships development efforts between the focal countries in the region. Coordinated and cooperative arrangements across the countries including capturing data and sharing the resulting information, building capacity for drought management interventions, will build cohesion and provide platforms at the regional level. The diversity of ideas generated will be harnessed so that both indigenous and modern knowledge, technologies and expertise will be equally shared. The DRESS-EA project will also contribute to the achievement of the IGAD Drought Disaster Resilience

and Sustainability Initiative (IDDRSI). Overall, regionally led project implementation is less expensive and faster. It helps build a pool of regional and national experts. The innovations generated are adopted more easily by the member countries and moreover, it promotes sustainability. It provides platforms and means for the countries to share experiences, practices, lessons, knowledge, and resources.

1.2 Description of the Project sites

17. The project will be implemented in different sites within each of the four selected countries of the IGAD region. Basically, these are areas that are considered to be most vulnerable and prone to drought based on the following criteria:

- In terms of the environmental conditions, the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (focusing on vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).
- Communities inhabiting such sites are also food insecure characterized by recurrent famine and a shortage of food. There is high dependence on the rain-fed agriculture especially high dependence of farmers and pastoralists on crop and livestock farming.
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender. Low-income levels of the population/high poverty levels in such sites therein are known and reported.



- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income.

18. These criteria allowed the selection of the project sites which are the most vulnerable to drought and Climate Change Impacts.

Figure 5 : Landcover map in countries of interest (Sudan,Uganda,Kenya and Djibiouti)

1.2.1 Geographical location and area

19. ***In Djibouti,*** the project will be implemented in three sites that are considered most vulnerable to droughts (Figures 6). The sites include Bieidley in Ali Sabieh region as well as, Wadi Gobaad, and Hanle sector in Dikhil region. Ali Sabieh Region is located at latitudes 11.1516° and Longitude 42.7122N and 9.6" 42° 42.44" E and lies in southern Djibouti with a total land area of about 2,400km^2. It borders Somalia and Ethiopia near the Dikhil region to the west. Dikhil region is the largest region in Djibouti with a total land area of approximately 7.200 km^2.In Dikhil region, Wadi Gobaad is 120 km long and drains south of the Gobaad depression to the southwest of the Republic of Djibouti. On one hand, Dikhil region is the confluence of many superficial flows of the Adigala region in Ethiopia that crosses from south to north into Djibouti territory via Abbot Lake as Eyla. On the other hand, the Hanle sector is found 150-200m above sea level. The three project sites in Djibouti are majorly characterized by the pronounced warm and dry climate, very low and highly variable precipitation (not exceeding 200 mm annually) with scattered shrubs and grassland patches.

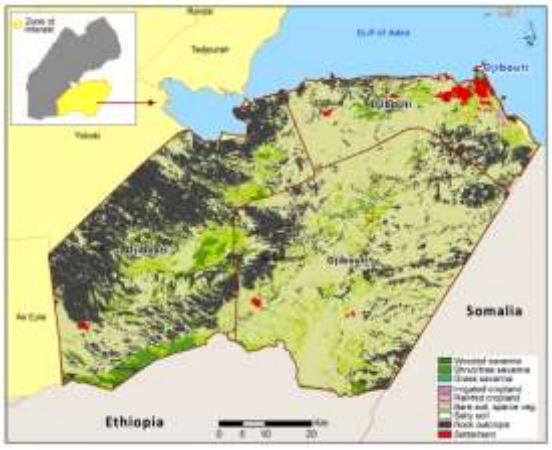


Figure 6: Location of project sites (Ali Sabieh/Bieidley, Wadi Gobaad and Hanle sector) in Djibouti

20. ***In Kenya***, the project will be implemented in Kitui and Samburu counties (Figure 7) that lie between latitudes 0°10‟ and 3°0‟ south and longitudes 37°50‟ and 39°0‟ East and latitudes 0°30'and 2° 45' north of the equator between longitudes 36°15' and 38° 10'east of the Prime Meridian respectively. Kitui covers an area of 30,496.4 km^2 including 6,369 km^2 occupied by Tsavo East National park. Kitui County shares its borders with seven other counties: Machakos and Makueni counties to the west, Tana River County to the east and south-east, Taita Taveta County to the south, Embu to the north-west, and Tharaka-Nithi and Meru counties to the north. Samburu County (0030' – 2 045'N and 36015' – 38010'E) is located within the northern parts of Great Rift Valley in Kenya in the region of Arid and semi-arid lands (ASAL) covering an area of 21,022.27 km^2. It is bordered by the following Counties Turkana (Northwest), Baringo (Southwest), Marsabit (Northeast), Isiolo (East) and Laikipia (South). The County is a member of North Rift Economic Block (NOREB).

Figure 7 : Location of project sites (Kitui and Samburu counties) in Kenya

21. ***Sudan*** stretches over land between latitudes 10°N and 23°N and longitudes 21°45´E and 38°30´E. The territory borders South Sudan, six other African nations, and the Red Sea. The majority of the land is composed of vast arid plains interrupted by a few widely separated ranges of hills and mountains. Sudan, the third largest country in Africa, has an area of 1,886,068 km2 (181 million hectare). The Nile River divides the country into eastern and western halves. Most of the population lives along the river, the major cities, industry, wealth and power are all concentrated there. Water resources outside the Nile basin are limited, soil fertility is low, and drought is common. Considering the extent of drought occurrence in Sudan***,*** the project will be implemented in Kosti and surroundings within El Salam in the White Nile state (WNS). The WNS lies between latitudes 12^o and 13.3^o N and longitudes 31^o and 33.3^o E, straddles the White Nile South of Khartoum and borders six states. Kosti lis found in the White Nile State that lies along the western bank of the White Nile River (Figures 8). It is bordered by South Sudan to the south, South Kordofan state to the west and Kosti town mid-way to the north and North El Zelate town of South Sudan to the north. To the east there is White Nile. The locality covers an area of about 5919 km^2 and represents about 11.2% of the total WNS area.

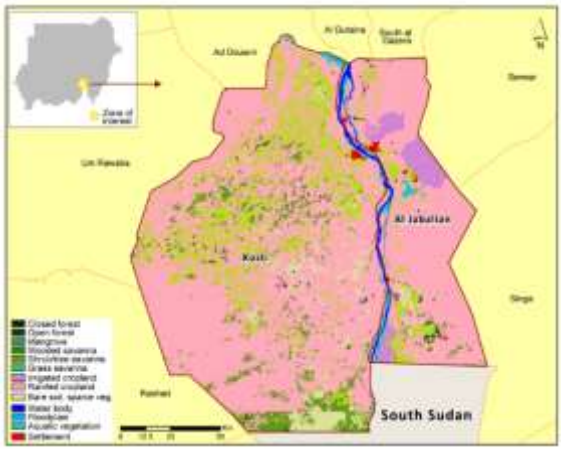


Figure 8: The location and landcover of El Salam in Sudan

22. ***In Uganda***, the project will be implemented in Rupa Sub County in Lokere Catchment, Nangoloapolon sub-catchment, Moroto district (figure 9 and 10). The catchment is located in the districts of Kaabong (5.4%), Moroto (32.0%), Kotido (3.8%), Napak (32.9%) and Nakapiripirit (2.2%) in the Karamoja Region and; Amuria (11.0%), Katakwi (9.5%) and Soroti (3.3%) in Teso Region. Lokere Catchment covers a total area of 8,156 km^2. Rupa Sub County generally lies within the upper part of Lokere catchment in Nangoloapolon sub catchment in Moroto district. Moroto district is situated in the Mid North Eastern Uganda between latitudes 1˚53'N, 3˚05'N and Longitudes 33˚38'E, 34˚56'E and at altitudes between 1,356m – 1,524m above sea level. It shares borders with 4 districts: Kotido to the north, Lira to the northwest, Katakwi to the west, and Nakapiripirit to the south. Kenya is its eastern neighbour. Moroto is one of the seven districts in the Karamoja Region in northeast Uganda (the others being Kaabong, Kotido, Abim, Napak, Amudat and Nakapiripirit). The district has a total area of 8,516 km^2 of which 4,900 km^2 is covered by game reserves and 100 km^2 by Mount

Moroto. Upper Lokere catchment and the sub-catchment are characterized by the highlands of Mount Moroto and the escarpment along the Ugandan-Kenyan border. This Sub County in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya. This calls for transboundary approaches and interventions in tackling the drought problem across neighboring areas in Uganda and Kenya.

Figure 9: Districts and Sub-Counties in Lokere Catchment in Uganda

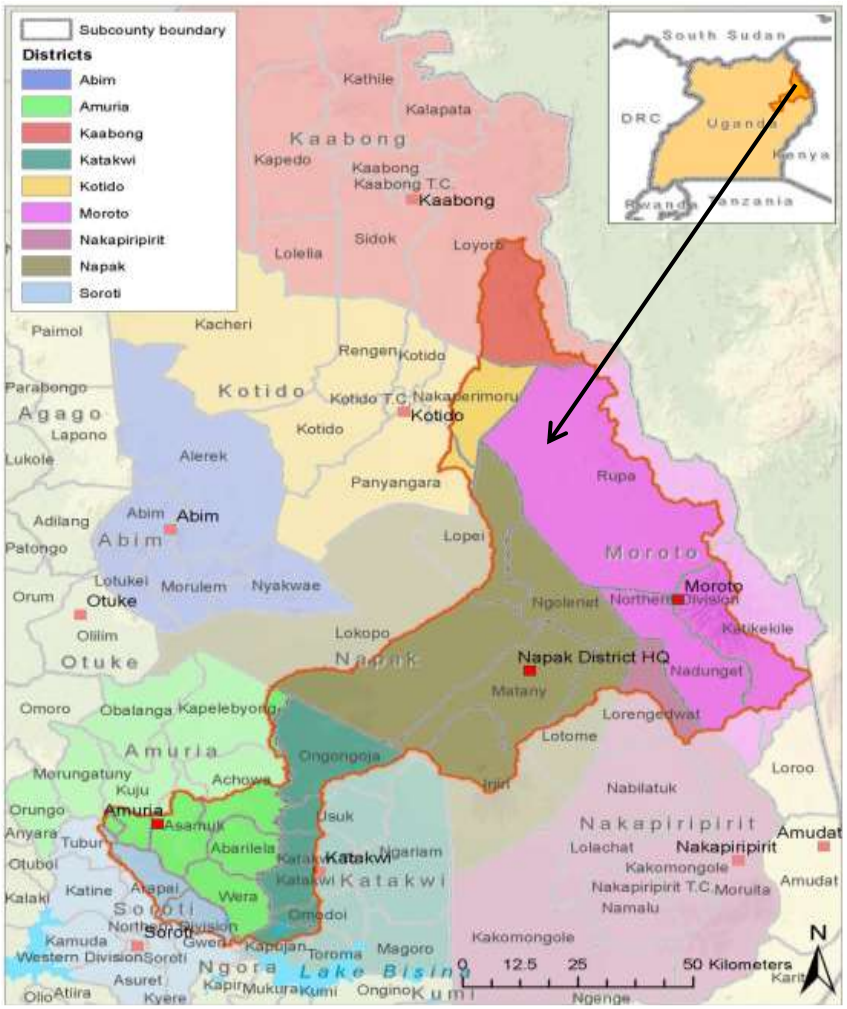


Figure 10 : Districts and Sub-Counties in Lokere Catchment (Source: Lokere catchment Management Plan)

1.2.2 Agriculture

Djibouti

23. In Djibouti, the agricultural sector contributes just 3% of GDP, and only a few people work in farming[26].About 10% of the workforce is engaged in agriculture. There is generally high dependency on imported food stuffs. Due to the Djibouti climate (arid to semi-arid) and the scarcity of fresh water resources (~150 mm rainfall/year), only irrigated and seasonal agriculture is possible (Sougal et al, 2009).The climatic conditions and poor soils limit agricultural food production to the extent that the domestic demand for food is barely met by 15% of the overall food production in the country. The agricultural lands are widely distributed on the terraces of the large basins of Wadi Gobaad and Hanley Wadi with a cultivated area of 0.5 to 1 ha per farm. Irrigation water is obtained from the wells dug in the terraces. According to the Government of Djibouti, only 10,000 hectares (24,700 acres) of arable land exist in the country. Majority of the agriculture is irrigated and domestic food production satisfies only 20% of the grain needs and 10% of the fruit and vegetable requirements of the population. Palm oil, refined sugar, and rice accounted for a combined 25.9% of total imports in 2007. Due to the limited number of either permanent or intermittent water sources, rainfall is a key determinant of food security in the country. Livestock production is regarded as more important than crop farming although the former is highly susceptible to droughts. Therefore, it is vital for the DRESS-EA project to design and implement interventions that are aimed at boosting agricultural crop and livestock production in the proposed project sites in Djibouti.

Kenya

24. Out of the total area of 30,496.4 km^2 for Kitui County, about 6,369 km^2 of the County land consists of the Tsavo East National Park and is not available for agricultural production. About 14,137.2 km^2 is arable agricultural land and 6,364.4 km^2 non-arable land. Despite such proportion of land area that is unavailable for crop and livestock farming in Kitui County, agriculture remains the backbone of the economy. In the highlands of Kitui for instance, farmers are involved in subsistence agriculture by mainly growing cotton, tobacco, sisal, mangoes, maize, beans, cassava, sorghum, millet and pigeon peas. These crops are well adapted to the climatic conditions of Kitui characterized by the hot dry months with high temperatures. Crops produced are consumed locally with the surplus being sold to traders from Nairobi and neighboring towns. In the lowlands, farmers keep livestock - mainly cattle, sheep, goats, and chicken - as a means to supplement crop farming as their source of income. Livestock rearing is the backbone of Samburu County's economy. The majority of people are nomadic pastoralists who mainly keep cattle, camels, sheep and goats. These animals are mainly sold to the Kenya Meat Commission as well as traders from Nairobi and other neighboring towns especially during droughts. Despite the harsh climatic conditions, some Samburu residents have recently started growing crops in effort to fight starvation and boost food security. Drought-resistant crops such as millet, sorghum and certain species of maize are grown in areas such as Lpartuk, Poros and Malaso. Given such enormous challenges to agricultural crop and livestock production, there is a need to undertake interventions aimed at increasing the resilience of agricultural systems in the proposed project sites in Kenya.

Sudan

25. Overall, El-Salam like in vast areas of Sudan is dominated by traditional subsistence agriculture where over 70% of the population is dependent on crop production and/or livestock farming to support their livelihoods. There are three ecological zones ranging from sub-humid to semi-arid with an annual rainfall that ranges from 300 mm in the north to at least 600 mm in the south. Majority of the farming schemes in Sudan are traditional farming schemes (10 – 30 feddans) although there are also some mechanized rainfed schemes (500 – 1000 feddans). Agriculture generally accounts for about 30.4% of GDP in Sudan (Sudan National Adaptation Plan (SNAP) 2016[27]). The agricultural sector mainly comprises smallholder farmers that employ largely rain-fed and traditional practices. Farmers produce a range of crops. The main crops grown are sorghum that occupies close to three quarters of the area, followed by wheat (18%) and cotton (8%). The major food security crops are sorghum, wheat and to a much lower extent millet. Sorghum wheat and millet contribute 57%, 39% and 4% to the total annual average cereal production in Sudan. The main livestock produced are sheep, goals and cattle. Not only are the small-scale farmers dependent on the sector for food but also employment to support their livelihoods. With such dominant characteristics of agricultural sector in El-Salam, and especially Kosti, the proposed project site remains highly vulnerable to climate variability due to past persistent droughts and anticipated climate change. Therefore, the agricultural crop and livestock production within White Nile State in the El-Salam locality is quite low due to the vulnerability of rain-fed agriculture that is greatly affected by rainfall variability and prolonged droughts. There is a need for targeted interventions to improve the agricultural production in the area.

Uganda

26. Overall, Uganda is regarded as agriculture-based economy and a food basket for the Eastern Africa region considering its ability to produce various foods in large quantities28. The sector comprises the food and cash crops production, livestock, forestry and fishing sub-sectors that contribute approximately 62, 8, 17 and 13 percent respectively to the agricultural Gross Domestic Product (GDP) (UBOS, 2012). However, agricultural systems in the proposed project site in the Karamoja region especially where Lokere catchment, Nangoloapolon sub catchment and Rupa sub County are part, is influenced and determined by the temporal and spatial variations in rainfall. Since the 1880s integrated crop farming and transhumance livestock management systems, also described as agro-pastoralism has been practiced in the area[29]. The Karamajong regard crop farming and transhumance livestock keeping as mutually reinforcing: when the first fails, the second helps absorb the shock, and vice-versa (Cullis *et al* 2018). Crop production in Karamoja is purely rain-fed crop, although the environment and climate are more conducive to livestock rearing than crops. This sub-region is a food deficit zone in two out of every three years (on average). Majority of households depend on food purchases from the market, supplemented by food from their own crop production, and milk, meat and sometimes blood from their own livestock. Overall, this area has some of the poorest food security and nutrition indicators in the region30 hence calls for interventions to improve agricultural production therein.

1.2.3 Pastoralism

27. In Djibouti, livestock resources are important and approximately 60% of the population depend on it as a source of livelihood. There is an estimated 1 million head of sheep and goats and 300,000 cattle in the country. (IGAD 2015).

The sector is faced with many challenges including inadequate government policies to support sustainable livestock production, lack of rainfall to naturally produce pasture/fodder, insufficient groundwater to grow irrigated livestock feed, poorly developed public or private sector animal health, production and breeding services.

28. Moreover, there is little governmental budgetary support that could facilitate and promote private sector investment in the livestock sector. Therefore, the sector has attracted little innovation such as promoting public-private partnership investment to develop it even though most of the country's inhabitants have a strong cultural attachment to livestock.

29. Approximately 130,000-170,000 pastoralists and/or nomads in Djibouti live in the rural parts of the country. These nomads live very traditional lives, sheltering themselves in portable huts made of branches and woven mats and living through the herding of sheep, goats, and cattle. However, due to the consistent presence of drought, pastoralists have lost 70-80% of their livestock from a lack of food and water.

30. In Kenya, the majority of people in Kitui are nomadic pastoralists who mainly keep cattle, camels, sheep, and goats. These animals are mainly sold to the Kenya Meat Commission as well as traders from Nairobi and other neighboring towns, especially during droughts. The Samburu people are nomadic pastoralists related to the Maasai that mainly occupy the county. The Samburus rely on sheep, goats, cattle, and camels as their source of livelihood. Livestock rearing is the backbone of Samburu County's economy. Their main food consists of maize, milk and blood, and meat on special occasions such as during circumcision ceremonies, marriage and birth of a child. Other ethnic groups living in Samburu County include Rendille, Turkana, and Borana. These are nomadic pastoralists who rear cattle, donkeys, camels, and goats. Cattle are an essential feature of the Samburu culture, especially because milk is an important part of the Samburu diet-a mixture of blood and milk. Traditionally, men are supposed to protect their villages and the livestock, whereas the women are tasked with looking after children and performing domestic duties such as cooking, fetching water and gathering firewood.

31. In Sudan, in the early 1990s, drought caused a dramatic decline in livestock raising, following a period in the early 1980s when livestock provided all or a large part of the livelihoods of more than 40 percent of the country's population. Livestock raising was overwhelmingly in the traditional sector, and, although initial steps had been taken to improve productivity and develop market orientation for the modern monetized economy. In 1983, more than 50 million Sudan's animals comprised the second largest national herd in Africa, next in size to that of Ethiopia. According to FAO estimates in 1987, it is indicated that there were about 20.5 million cattle, 19 million sheep, 14 million goats, and 3 million camels. Other animals included 660,000 donkeys, 21,000 horses, a small number of pigs and 32,000 chickens. By 1991, these numbers had been reduced by around one-third due to the drought. In other hand, August 1988, floods in the south was described as the worst in Sudan's history; and the ravages of civil war in the south has brutally decreased the productions. Approximately 80% of the pastoralists moved from the El Salam to South Sudan in search for pastures and water where they stay from September to June every year.

32. In Uganda, the pastoral livelihood zone runs along the extreme eastern border with Turkana-Kenya, which comprises mostly of eastern Kaabong and Nakapiripirit, a huge proportion of Kotido, and Moroto as well as parts of Napak. In this area, transhumance is practiced by Karamajong and Turkana across the Uganda and Kenya border in search for water and pastures. At the on-set of the rains, these communities return to their homes in the respective countries. In the pastoral and agro-pastoral livelihood zones of Karamoja, households obtain a proportion of their annual income from livestock. Among the climate risks facing the pastoral sectors are higher temperatures, increased unreliability of rainfall (more variability), increased length or intensity of dry periods and increased intensity of extreme events. The impacts resulting from these risks are increased evaporation of water points leading to shortage of water and competition between people and livestock for limited resources and conflict, increased incidence of disease outbreaks as disease vectors change and grow, changing water systems which increase the difficulty of maintaining healthy animals in a sanitary environment, lack of reliable markets due to bad roads, reduced forage availability and increased milk spoilage due to higher average temperatures.

1.2.4 Water resources

Djibouti

33. Djibouti is generally poorly endowed with natural resources. It has inadequate arable land, insufficient rainfall, and underground water resources. The hydrographic network is formed only by temporary flow streams called "wadis". The wadis drain twenty-six major watersheds, themselves composed of many sub-basins. No precise data exists on these watersheds (infiltration coefficient, wadi flow, flood characteristics). This network of intermittent streams drains the southern plateaus of Djibouti. The mountainous areas, on both sides of the Gulf of Tadjourah, flow into the sea. The rest of the national network feeds the depressions which present a pastoral potential, see agro-pastoral

by places. However, the country is characterized by the scarcity of irrigable agricultural land: the national irrigated area does not exceed 1,000 hectares. The soil cover is often skeletal (lithosols) this explains the runoff which is still tempered by the state of roughness of the soil, strongly covered with pebbles thus partially limiting the erosion.

34. Considering the number of experimental and experimental drilling carried out in the District of Dikhil, there are strong hydraulic potentialities. The Djibouti Water Master Plan provides, as an example, as a possible alternative, the supply of the Djiboutian capital from the Hanle Plain. The District has, moreover, some rare perennial sources of water. The hydrology is distributed between that of surface (flow fluviatile) and that of the subsoil (aquifers). However, considering the experimental drilling carried out in Dikhil, there are strong hydraulic potentialities. The Djibouti Water Master Plan provides, as an example, as a possible alternative for water supply to the Djiboutian capital from the Hanle Plains. The District has, moreover, some rare perennial sources of water. The hydrology is distributed between that of surface flow and that of the subsoil (aquifers). Surface water is characterized by the occasional flow of rivers from wadis during rainy periods. These wadis are fed, in addition to precipitation, by the hypodermic or sub-surface water runoff, corresponding to the movement of water down through the soil of the slopes in the process of drying. These wadis have an episodic flow (spasmodic) that lasts only a short time. They are characterized by a torrential and erosive flow on the ground with topographic encapsulation in relief of plateaus and mountains. In the plains and plateaus reliefs, wadis have wandering and endorheic patterns. These plains are important for recycling of runoff and surface runoff, resulting in the accumulation of loose lateritic layers, which are favorable for the development of agricultural activities. This action of water accumulation allows a better recharge of the underlying aquifers (groundwater). The arable land is large despite the small farms carried out by the rural population. In fact, the development of agricultural practices is limited by the combination of several practical parameters of a hydrological, technical and pedological nature that highlighted in this section.

Kenya

35. Most of Kenya's water originates from its five "water towers": Mau Forest Complex, Aberdare range, Mount Kenya, Mount Elgon and the Cherengani Hills. They are the largest montane forests in the country and form the upper catchments of the main rivers in Kenya (except Tsavo river flowing down Mount Kilimanjaro) (NEMA, 2010). However, Kenya is a land of contrast. Though it is home to some of the great water towers of East Africa, 90 percent of the country is either arid or semiarid. Rainfall patterns are highly variable, both annually and across seasons, a challenge likely to be further exacerbated by climate change. For the economy, local water stress is already a factor, not only in the arid areas but also in more water-rich regions where water-intensive economic activity has grown rapidly, such as Naivasha, greater Nairobi, and northern Mt Kenya. In the future, water demand is expected to grow very rapidly, especially in the context of ambitious agribusiness development plans (Water Resources Group report, 2015).

Sudan

36. In Sudan, the main water resources comprise rainfall that is harvested in small scale dams and artificial ponds (haffirs). The White Nile River is another source of water. Irrigated pump schemes along the left bank of the river act as barriers for animals to reach the river and most of the time conflicts arise between farmers and pastoralists. During wet period floods from seasonal Khors, particularly Khor Abu Habil which originates from the Kordofan mountains hits the west side of the locality. It is worth-mentioning that the rain water needs to be stored for use during dry periods (summer), as filing of the ponds and small earth dams, and recharge of the shallow wells completely depend on rainfall. There are a number of water pump schemes in Sudan scattered along the river Nile. However, most of them have not been operational since 1995. No groundwater sources have been recorded in the El Salaam. Rainwater harvesting facilities mainly haffirs (artificial bonds) therein enable farmers and pastoralists to harvest and store water during dry spells. The White Nile River is the major source of water in the El Salaam.

Uganda

37. Karamoja has a uni-modal rainfall pattern, with a single long-rainy period between April and November. Rainfall peaks during April and May. Rainfall in Karamoja is characteristically episodic, alternating with a prolonged severe dry season and considerable variation from year to year. Cyclic droughts occur every 2-3 years. The episodic nature of these events means that most of the region's population is typically affected by a sequence of shocks that pose significant challenges to livelihood security. The main climate related shocks in the region include erratic and unevenly distributed rainfall which can result in droughts (generally between April-June), severe dry spells and erratic rains (particularly between May-July), floods (particularly from July-September), outbreaks of livestock disease or changing crop pest dynamics (August-September), high food prices and general livelihood insecurity (USAID, 2016)[31]. Despite the limited water resources in the Karamoja area, Lokere Catchment is well drained with a dense network of meandering seasonal rivers and streams. The only permanent streams run in the Mount Moroto Ranges (IIRR 2015),

all other rivers and streams are seasonal. They originate in the mountainous areas along the border with Kenya, of which the rivers Nangoloapolon, Apule, Matheniko, and Omanimani are the most noticeable. With more frequent and severe droughts, such water resources in Uganda will likely experience negative impacts on water supply, biodiversity, and hydropower generation. A shift in rainfall patterns decreases the recharge of rainwater into the soil, which has far-reaching negative impacts on groundwater resources and water tables in wells.

1.2.5 Population and indigenous people

Djibouti

38. Overall, there is a high human population that is vulnerable to climate change and droughts in the project sites in Djibouti. Overall, the human population of Djibouti is estimated to be 923,000 persons, comprised of two main ethnic groups; the Afars and the Issas, with a small portion of other mixed ethnical groups. Two thirds of its population lives in the urban sites mainly in the capital town of Djibouti. About 58.1% live in the capital city, Djibouti-Ville. The hinterland, an extension of the deserts of Ethiopia and Somalia, is sparsely occupied by a poor pastoral and largely nomadic population. Djibouti's population is young, with about 40 percent under age 15 and only 15 percent over 40 years of age 18. The Dikhil region occupies about 30% of the national territory with a total area of about 6,800 square kilometers. The population of the region is estimated at about 88,948 inhabitants, or 10.87% of the total population of Djibouti or 25.9% of the total national population living outside the city of Djibouti. The new zone straddles the Obock and Tadjourah districts, but covers only about 80,000 hectares. About 8000 inhabitants are considered in this area outside Tadjourah.

Kenya

39. Kenya is a medium human development country with HDI index of 0.555, ranked 146 out of 188 countries in 2015. After recording strong performance between 2000 and 2010, Kenya's HDI has experienced only modest growth since 2010, from 0.53 to 0.555 in 2015. At the County level, Nairobi County had the highest HDI of 0.641 above the national average. Kitui County's HDI was estimated at 0.481 being below the national average in 2012. Effective development at the county level provides an opportunity to address the disparities that are reflected in the HDI.

40. According to the 2009 Population and Housing Census, the population of Samburu County was 223,947. Given a population growth rate of 4.45 percent per annum, as opposed to the national growth rate of 3 percent, the County population is projected to increase to 399,378 by 2022 and 456,418 by 2025. These changes represent about 25% population rise between 2017 and 2022. This increase is significant and calls for commensurate expansion of basic amenities in the County. Furthermore, there is need to increase investment in economic activities in order to make the county self-reliant in food security and creation of employment opportunities. From the Population census data, it is evident that the County has a youthful population with over 80 percent of the population being below 35 years of age in 2009.

41. The population density is expected to rise to 15 and 19 persons per Km^2 by 2017 and 2022 respectively. Samburu West constituency had the highest population density of 29 persons per Km^2. Samburu north and Samburu East had 17 and 8 persons per Km^2 respectively. In 2009, the county had a total population of 223,947 comprising of 112,007 males and 111,940 females respectively giving a sex ratio of 1:0.98. Samburu County has various mixed ethnic backgrounds comprising of Samburu people, Turkanas, Boranas, Somalis, Elmolos and Oromos which makes it a diverse County mostly comprising of pastoralists and nomads.

42. Population dynamics form an integral part of socio-economic and cultural development for Kitui County. According to KNBS (2009), the county has population of 1,012,709. Also, 531,427 are females while 481,282 are males. The population was projected to grow to 1,065,330 by 2013 and is projected to reach 1,176,650 in 2022. The population growth rate of the county at 2.1% is slightly lower than the national rate of 2.6%. Population density in Kitui was 33 persons per Km^2 in 2009 compared to a national average of 66 persons per Km^2. The population density is estimated at 37 persons per Km^2 and is projected to increase to 39 persons per Km^2. Kitui Central has the highest density. High population exerts pressure on social and natural resources, and it is imperative for the county to develop strategies in addressing the population growth rate.

43. Kitui County shares its borders with seven other counties: Machakos and Makueni counties to the west, Tana River county to the east and south-east, Taita Taveta county to the south, Embu to the north-west, and Tharaka-Nithi and Meru counties to the north, it has a diverse ethnic composition consisting of Kambas which is the main ethnic community and flanked by Somalis, Merus, Boranas, and Gares

Sudan

44. In Sudan, the human population of the area constitutes about 136,000 people (permanent), 120,000 (refugees in camps), 68,000 people (coming from South Sudan. Kosti is the most populated locality followed by Aldueim, Alquiteina and Rabak, but Kosti and Rabak are the most densely populated localities. The population of the area is around 136,000 in addition to huge number of refugees (120,000) and returnees (68,000). El Salam locality is maintaining long open border with South Sudan as well as historical social/blood relationships as a result of mixed-marriages particularly with Shuluk and Nuer tribes, the most dominant in Upper Nile States, these factors have motivated/driven majority of the South Sudanese flee to WNS in seek of safe refuge. Generally, the settlements in Es Salam locality are scattered with some concentrations around productive agricultural areas, trading centres, and water sources. El Selame, El Ahamd, El Gemea, Awlad Hassan, Mashalga and Uwesab are the permanent pastoralist tribes. Hasaneya and Husonat are cattle breeder tribes, while El Kababeesh and Bany Garar are camles breeders. Other tribes such as Taisha, Mesarya, and Hawasset are most of the year moving with their animal from place to place as per water and pasture availability. Within the area, 7 camps to accommodate the refugees and re-turnees are existing. The estimated population of them exceeds 120,000. Needs for food, energy and health protection are in the top of the issues facing these groups.

Uganda

45. The human population in Lokere catchment comprises mainly the rural poor estimated at 420,000 people. Such population constraints or is in dire need of the scarce water resources during drought. The Karamoja region is home to 11 ethnic groups: the largest, “true” Karimojong—Matheniko, Pian, and Bokora; the Jie; the Dodoth; the Pokot; and a number of smaller groups that includes the Tepeth, Nyakwae, Ik or Teuso, Napore, and Ethur The Karamajong are Paranilotic speakers, while the Napore, Ethur, and Nyakwai are Luo speakers and the Tepeth and Ik speak a separate language Opinions vary as to the origins, but there is general agreement that by 1800 the Karimojong occupied the Magos Hills in Moroto District and that the Turkana, Jie, Dodoth, and Iteso splintered off, mostly amicably apart from the Jie, who broke away by force. In 2014, the District of Moroto had a total population of 104,539 people. The area is sparsely populated with an overall land density of 29 persons per km^2, up from 17 persons / km^2 in 1991. The district has growth rate: 2.4% and population density of 29/km^2. The population is mainly rural, with only 13.7 living in urban areas. Rupa Sub-county had a population of 25,785 people by 2014, of whom 13,393 were female and 12,392 were males. The average household size in Rupa sub-county is 4.8, higher than the Moroto District average of 4.4 people (UBOS 2014)[32]. The Settlement pattern in the district is of a scanty nature with concentrations around productive agricultural areas, trading centres and near rivers and springs (UNDP, 2014). The main tribal groupings are the Tepeth and Matheriko whose main livelihood is agro-pastoralism practicing both subsistence agriculture and semi nomadic livestock rearing (Lysette Boucher, 2016). The Tepeth are a forest-dependent pastoralist group who live in the mountains of Moroto, Napak and Kadam in Karamoja. The 2014 National Population Census put their population at 23,500. They are considered one of the minority ethnic groups of Uganda. They depend on the resources of the mountains, though all three mountains have been gazetted as Central Forest Reserves (Bintoora 2015)[33].

46. The vulnerability of the Tepeth as a minority ethnic group has been escalated by the gradual reduction of the resource base on which they depend. The reduction is due to land use change towards crop farming mainly by other ethnic groups Bintoora (2015). This has led to deforestation in Mt. Moroto Central Forest Reserve and along river valleys that were dry season grazing areas for the Tepeth. Trees of high food, medicinal and cultural value to the Tepeth are being cut as land is turned into crop fields. As a result, the Tepeth are overgrazing fragile high-altitude moorland areas leading to unprecedented land degradation. Commercial charcoal burning associated with settlers within the CFRs, the return of peace to the region, uncontrolled burning, commercial and artisanal mineral exploitation, and the extension of Moroto Municipality into the CFR all contribute to forest degradation, increasing the vulnerability of the Tepeth minority group. Their livelihoods and security are at risk as essential forest resources become scarce and loss of forest cover exposes them to cattle raiders from neighboring communities (Bintoora, 2015).

1.2.6 Livelihoods

47. With its few natural resources and low rainfall, Djibouti has limited possibilities for agricultural production. Activities in the primary sector make a negligible contribution to the national economy although are extremely important at the rural level, where livestock forms the basis of household livelihoods. Livestock rearing is the main livelihoods activity for 80% of rural households. The mode of livestock keeping is subsistence nomadic or semi-nomadic pastoralism of small ruminants (primarily goats) and camels. The livelihood system is highly vulnerable to the impact

of recurrent drought (Babikir et al, 2015). Livestock pastures constitute the country's major industries with the fishing sector employing only about 1,000 people in Djibouti.

48. The economy of Kenya is largely dependent on agriculture and tourism. About 75% of Kenya's population earns its living from agriculture which in turn depends on rainfall. About 70% of the poor are in the central and western regions, living in areas that have medium to high potential to agriculture. The highest poverty levels in Kenya are in the ASALs where over 60% of the population lives including Kitui and Samburu counties. Tourism is a key economic activity in Samburu as Bee-keeping has remained a major economic activity, especially in Kitui. Despite the harsh climatic conditions, some Samburu residents have recently started growing crops in an effort to fight starvation. Drought-resistant crops such as millet, sorghum and certain species of maize are grown in areas such as Lpartuk, Poros, and Malaso for food as well as income. Tourism is also a major source of revenue to the Samburu people, with some of the residents being employed in the county's safari lodges and others working as tourist guides. The county's main attraction sites offer a thriving market for Samburu artifacts such as beads, necklaces, and bracelets.

49. The agricultural sector constitutes an important source of livelihood especially rural livelihoods in the entire White Nile State in Sudan. Most people in the area engage themselves in crop and livestock keeping. They also undertake other livelihood alternatives such as providing wage and skilled labour. Along with crops, livestock is an important livelihood in the area and the main livestock kept are small ruminants and poultry that nevertheless are sold to pay for food and medical expense. Dairy farming and fisheries are another livelihood means. Fish is sold fresh or subjected to traditional simple processing[34].

50. In Uganda, the Karamoja region is characterized by high prevalence of hunger, stunting and lack of access to food, with over 80 percent of children and 50 percent of women suffering from anemia. Heavy reliance on the natural resources' base renders livelihoods highly sensitive to climate variability and change manifested through recurring droughts, unpredictable rainfall patterns, flash floods and prolonged dry spells (CARE 2013). The main livelihood of the Karamojong and Iteso in Lokere Catchment revolves around a mixed agro-pastoral economy. An increasing number of people rely on agro-pastoral livelihoods, which combine livestock rearing with crop production. Due to these constraints, women have adopted other options in livelihoods like charcoal burning, firewood and local brew sales as a substitute to crop agriculture that suffered crop failure for quite a number of years. Crop failures and cattle deaths due to severe droughts increase the communities' vulnerability to starvation and deprivation. Women bear the brunt of bad harvests and loss of livestock as they solely take on the role for providing for the family in difficult times through sale of charcoal, firewood, and causal labour. In Rupa and Kothiro sub-counties of Moroto District, artisanal mining is becoming prominent as a form of livelihood activity employing both men and women. Minerals including limestone, marble and gold from the slopes of Mount Moroto are important to communities for income generation (CARE 2013,). These activities help communities adapt to harsh environments, but at the same time increase the rate of land degradation. Mining has contributed to degradation of Mt. Moroto CFR, and also increased the vulnerability of the minority Tepeth community (Bintoora 2015).

1.2.7 Climate

51. In Djibouti, the average annual rainfall over the country is of the order of 150 mm. The maximum annual rainfall is observed in the mountainous areas west of Tadjourah (Goda Massif). Rainfall decreases sharply in the direction of the northeast to the coast at Obock-Khor Angar-Doumeira with 50 to 100 mm per year. In the northern parts of the country, the annual rainfall is 100 to 150 mm (Dorra-Balho), while in the western regions (Hanle Plain, Gobaad Plain) precipitation exceeds 150 mm. In the south of the country, in the coastal plain, the annual rainfall is between 130 and 200 mm, and decreases towards Dikhil. Climatic data have two distinct regimes: the seaward slope with an arid to semi-arid climate of the Mediterranean type and the tropical and warm continental slope. The rainfall varies from 50 mm (Obock) to 300 - 400 mm on the heights. The altitudinal data is here major and determines characteristic vegetation stages. It should be noted that the violence of the rains is also a fundamental fact that must be considered closely. As for temperatures, they are high with westerly and northwesterly winds that accentuate the arid nature of the country.

52. Kitui has three different climates: Hot semi-arid climates, Tropical savanna climate, and Warm-summer Mediterranean climate. The county receives between 500mm and 1050mm of rainfall annually, with average rainfall of 900mm a year. It has two rainy seasons; May-June (long rains) and September-October (short rains). Kitui County is mostly dry and hot with temperatures ranging between 14°C during the coldest months (July-August) and 34°C during the hottest months (January-March). Samburu however, is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). The county receives between 200mm and 250mm of rainfall annually. The rainfall pattern is

unpredictable and at times the county receives no rain in a whole year. The elevation and orientation of the major topographic features such as Mathew ranges and Ndoto hills influences rainfall distribution. Apart from South Horr and Wamba areas, short rains occur during the months of July and August, sometimes extending into September. At Wamba and South Horr areas, the short rainy season is usually delayed and occurs in October and November and sometimes extends into December. The southwest plains and the Lorroki Plateau receive between 500 mm and 700 mm of rain annually. The Nyiro and Ndoto Mountains and Matthews range receive the highest amount of rainfall between 750 mm and 1250 mm per annum. The central basin and the plains east of the Matthews Range are the driest parts of the county with annual rainfall of between 250 mm and 500mm. Annually, the county has annual mean temperature of 29^0C with the maximum range being 33^0C and minimum of 24^0C. The central plains and the region east of the Matthews Range have the highest temperatures while the highland belts in the North Eastern side of Lorroki Plateau are cooler.

53. Despite El-Salam's location in the south of the WNS, it is severely impacted by the climate change induced drought. It is one of the most vulnerable locations for agriculture, water and health. The total average annual rainfall in this area varies between 300 to 600 mm/year. There is a short rainy season with heavy rainfall events from July to October with typically up to a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events during August. The average minimum temperature (1963 – 2004):15.7^{0}C (Jan.) – 25.3^{0}C (May). Average maximum temperature (1964 – 2004): 32.5^{0}C (Jan.) – 41.5^{0}C (Apr/May). The average annual rainfall (1961 – 2008) is 350 mm.

54. The total average annual rainfall varies between 550 mm/year in the upstream areas of Lokere and 1,300 mm/year in downstream areas. There is a short rainy season with heavy rainfall events from April to July with typically a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events from September till December/January. The long rainy season is almost absent in the upstream parts of Lokere. Precipitation is highly variable in space and time, with both intense rainfall events and long dry periods. The dry season lasts between 2 to 9 months, depending on the year and the location in the catchment. The long dry season lasts longer the further one moves north in the catchment. As a result of the high rainfall variability Lokere Catchment suffers from acute water shortages during the dry season in the Middle and Upper Catchment and heavy flash floods during the rainy season in Middle and Lower Lokere. During the dry season the Karamajong migrate many kilometres in search of water and pasture for their animals. Climate change projections indicate that temperatures will rise, rainfall intensity will increase and extreme events such as droughts and floods will occur more often.

1.2.8 Biodiversity

55. According to the National Biodiversity Strategy Paper, Djibouti's (terrestrial and marine) biodiversity consists of 826 plant species and 1,417 animal species, including 493 species of invertebrates, 455 species of fish, 40 species of reptiles, 3 species of amphibians, 360 species of birds and 66 species of mammals. The terrestrial fauna in Djibouti are beautiful species. Vultures and sea eagles, herons, ibises and pelicans, flamingos, common bustards, ostriches, antelopes, gazelles have become rare. The Kudu is endangered, and the oryx is rare, Arcouboudo (oroeotragues) that seem to walk on tiptoe, dig-digs, dwarf antelopes, are still widespread.

56. Other species of terrestrial fauna include carnivorous and wild animals, fennec, jackal, wild cat, hyena, cheetah and panther. The warthog, various monkeys, monitor lizards (giant lizards), sand squirrels etc. are also available biodiversity resources. In the proposed project areas, hunting is prohibited as well as throughout Djibouti. As far as the North Zone is concerned, turtle fishing is also prohibited. All conventions on biodiversity including on endangered species are ratified by the Republic of Djibouti.

57. Kenya is endowed with unique natural ecosystems that constitute biodiversity assets in the terrestrial, aquatic and aerial environments. These comprise over 35,000 species of flora and fauna (NEMA, 2009). The species diversity comprises; 7,000 plants, 25,000 invertebrates (of which 21,575 are insects), 1,133 birds, 315 mammals, 191 reptiles, 180 freshwater fish, 692 marine and brackish fish, 88 amphibians and about 2,000 species of fungi and bacteria. This diversity is as a result of the variable ecosystems ranging from marine, mountains, tropical, dry lands, forests and arid lands. In addition, there are some 467 inland lake and wetland habitats covering about 2.5% of the total area. Kenya's rich biodiversity can be attributed to a number of factors, including a long evolutionary history, variable climatic conditions, diverse habitat types and ecosystems. In Samburu, there is a total of 3,250 km^2 of gazetted forests translating to a 15.4percent forest cover in the county.

58. This mainly consists of indigenous forests uniformly distributed across the county. The main tree species are the *Acacia* spp, *Commisera*, *brocella* which are dominant in the lowlands of Samburu North and Samburu East as well as sections of Samburu Central. The highland species include: cedar, podo, chepnuts and olea, Africana amongst others these are mainly found in Kirisia and Porror areas. The most endangered species are the Cedar and Podo because of

their value in construction of houses particularly in upcoming urban/trading centers. The County boasts of having the largest number of wildlife outside the game reserve. Some of the wild animals found in the County include; Reticulated Giraffe, the endangered bevy zebra, Besia Oryx, Greater and Lesser Kudu, Gerenuk, Somali ostrich, Pun cake tortoise, Wild Dog, lions, elephants, and buffalos in addition to the small wildlife.

59. The vegetation pattern in Moroto district is typically semiarid with dry tree Savannah species dominantly grass species. The main vegetation communities in the district include: forests at high altitudes (dry montane forests), Savannah woodland, semi evergreen thickets, deciduous thickets, Riparian communities, and grass steppe communities. Forests are found only at Localized patches on hills and mountains such as Mt. Moroto, Kamalinga forest on Mt Napak. Forest cover is estimated at 100 km^2 (UNDP, 2014). Mt. Moroto Central Forest Reserve (3,008 m above sea level) is one of the few important water catchment areas in semi and chronically food insecure Karamoja region of Uganda. The forest reserve is rich in biodiversity and mineral resources. It hosts about 200 species of trees and shrubs. The vegetation is classified as *Combretum butyrospermum* and dry savana acacia with *Juniperus podocarpus* dry montane forest (Nanyunja, 2003[35], cited in Bintoora 2015). Endemic bird species of *Tricholaema melanocephora, Nectarinia habessinica, Mirafra poecilsterna and Tchagra james* (Nature Uganda, 2010[36]) as well as wild animals such as leopard, Cheetah, rock hyrax and olive baboons are found in Mt. Moroto forest ecosystem. Like most parts of Karamoja, the reserve is endowed with precious mineral resources such as gold and marble stones (Bintoora, 2015). Thus, mining is one of the leading causes of degradation of this forest and the biodiversity therein.

1.2.9 Climate Change, droughts, vulnerability and threats

(Details are provided in the vulnerability assessment, Annex 5)

60. **Djibouti** is characterized by a very arid and semi-desert type of climate, which makes it extremely sensitive to climate change-induced drought and water scarcity risks. It experiences fluctuating, low and abrupt precipitation regime with annual mean rainfall of 150 mm, mean temperatures between 17°C and 42°C and extremely high rate of evapotranspiration amounting to 2000 mm per year.

61. The vast majority of Djibouti's rural population is highly susceptible to climatic uncertainty – they live in deserts or marginal and infertile areas, often with highly erodible soils, poor ground cover and limited water supplies, where food security is a serious concern (Figure 11).

Figure 11: Typical landscape of marginal and infertile areas, with highly erodible soils, poor ground cover and limited water supplies in Gobaad and Hanle sites

62. Djibouti imports nearly all of the cereals consumed in the country, and food aid represents almost 10% of total imports. The country is poor in natural resources and arable land are limited (only 0.1% by area), as well as rainfall and groundwater reserves. According to the UN assessment of 2005, the population of Djibouti was 800,000 inhabitants, of which two-thirds live in the capital. The poor pastoral and nomadic people in Djibouti are highly vulnerable to prolonged droughts. The last major drought claimed nearly 4 percent of gross domestic product (GDP) annually between 2008 and 2011 and impacted more than half of its 860,000 residents. Djibouti is at particular risk for water shortages and severe flooding, both of which profoundly impact its growing but fragile economic sector.

63. **In Kenya,** the rural populations, who derive their livelihoods from agricultural activities, are particularly vulnerable to impacts of Climate Change on the agricultural sector. Such impacts include crop failures and consequent reduced yields, reduced fish stocks, impacts on prices of food, farmers' incomes and livelihoods. Pastoralism on the other hand is practiced in the Arid and Semi-Arid Lands (ASALs) regions of the country, which are characterized by high spatial temporal variability in rainfall and account for about 80 per cent of Kenya's land surface area. Pastoralists are usually worst hit by climatic changes (including seasonal weather changes, increasing temperatures, rainfall variability and extreme weather events) which often result in livestock losses and associated income and livelihood losses. Rainfall distribution is erratic and unreliable due to drought most especially in ASALs. Kitui County is mostly dry and hot with temperatures ranging between 14°C during the coldest months (July-August) and 34°C during the hottest months (January-March).

64. The county receives between 500mm and 1050mm of rainfall annually, with an average rainfall of 900mm a year. It has two rainy seasons; May-June (long rains) and September-October (short rains). Also, Samburu is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). The county receives between 200mm and 250mm of rainfall annually. The rainfall pattern is unpredictable and at times the county receives no rain in a whole year with communities adapting by digging shallow water basins and deep-water tanks on their lands (Figure 12). The water quality is poor.

Figure 12: Shallow water basin and deep ground water tank in Kitui site in Kenya.

65. Although **Sudan** is generally vulnerable to climate change especially to the high rainfall variability and related recurrent droughts, the human and livestock populations as well as the ecosystems in El Salam are highly vulnerable to the effects of drought (Figure 12). Insufficient and highly variable annual precipitation define the climate of most of Sudan with El Salam recording average minimum temperature (1963 – 2004) of 15.7°C in (Jan.) and 25.3°C (May); average maximum temperature (1964 – 2004) of 32.5°C (Jan.) and 41.5°C (April/May). The average annual rainfall (1961 – 2008) of 350mm characterizes Kosti in ElSalam. Agro-pastoralist communities have inadequate water points in the vast area and travel very long distances in search of water (Figure 13).

Figure 13: Human and livestock populations and ecosystems faced with inadequate water resources due to climate change aggravated drought in Kosti, ElSalam, Sudan

66. In **Uganda**, the climate is not only a driving force but also a key determinant of the status of natural resources, such as water resources, forest, agriculture, ecotourism, and wildlife. Uganda has diverse and rich biodiversity, which has provided both food and medicines. The first rainy season ranges from March to June, while the second one ranges from August to November. The rainfall level ranges from 400 to 2200 mm per year. The precipitation pattern in Lokere is classified as bimodal, but is highly variable in space and time, with high peak events and long dry periods. Variance in annual rainfall is highest in the middle parts of the catchment. It is characterized by prolonged dry spells and erratic rainfall with flash floods that erode soils, leaving deep gullies (Figure 14).

Figure 14: Inadequate water resources during drought and effects of flush floods during the short erratic rains in Rupa, Lokere catchment, Uganda.

67. These prolonged dry spells result in: total crop failure with far-reaching impacts on food security, leaving communities vulnerable to starvation; reduced water and pasture for livestock; disease outbreaks; loss of biodiversity and increased resource use conflicts. Overall the targeted countries have experienced drought pressure for quite a long time. The table below illustrates the drought years with widespread impact. *(Cf. Annex 5, Table 1)*

2 Project / Programme Objectives:

68. The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

69. The project targets to consolidate synergies and adopt innovative and resilient drought management actions from selected IGAD region countries including Djibouti, Kenya, Sudan and Uganda. More specifically, this project is intended to strengthen the drought resilience of smallholder farmers and pastoralists by:

- Developing and promoting regional investments in drought early warning systems (EWS) and improving the existing ones
- Strengthening and improving the capacity of key stakeholders in drought risk management at regional, national and local levels
- Facilitating smallholder farmers and pastoralists inputs to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhancing knowledge management and information sharing on drought resilience at the considered levels.

3 Project / Programme Components and Financing:

Table 1: Budget summary

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1. Development and enhancement of a regional Drought Early Warning System	1.1: Increased use of effective Early Warning Systems by stakeholders	1.1.1: Efficient and effective EWS in place/developed	Djibouti, Kenya, Sudan &Uganda	708,000
		1.1.2: Institutional linkages for EW information established	Djibouti, Kenya, Sudan &Uganda	441,000
		1.1.3: Feedback mechanism for EW information developed	Djibouti, Kenya, Sudan &Uganda	316,000
		1.1.4 Emergency plan for drought management is put in place	Djibouti, Kenya, Sudan &Uganda	922,100
2. Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects	2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened	2.1.1: Drought management plans (DMPs) integrating CC aspects and adaptation actions are developed	Djibouti, Kenya, Sudan &Uganda	360,000
		2.1.2: Adaptive capacity of institutions, farmers, and pastoralists in drought management is improved	Djibouti, Kenya, Sudan &Uganda	950,000
	2.2: Partnerships for drought management at regional, national and local levels strengthened	2.2.1: New/existing regional and National arrangements /networks for drought management supported	Djibouti, Kenya, Sudan &Uganda	440,000
3. Supporting innovative drought and Climate change adaptation actions	3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	3.1.1: Innovative water and soil conservation structures constructed	Djibouti, Kenya, Sudan &Uganda	1,550,000
		3.1.2: Groundwater sources established/ improved	Djibouti, Kenya, Sudan &Uganda	460,000
		3.1.3: Adaptive agricultural practices for improving crop production promoted	Djibouti, Kenya, Sudan &Uganda	1,140,000
		3.1.4 Adaptive livestock and rangeland practices enhanced	Djibouti, Kenya, Sudan &Uganda	1,044,040

		3.1.5: Enabling environment for smallholder farmers' and pastoralists' adaptive activities created	Djibouti, Kenya, Sudan &Uganda	625,600
		3.1.6: Environmentally friendly IGAs ([e.g., Pottery, Beekeeping, Energy saving stoves, Briquettes making, and interlocking bricks) promoted	Djibouti, Kenya, Sudan &Uganda	1,460,280
4. Enhancing knowledge Management, awareness creation and information sharing	4.1: Knowledge and awareness on drought risks management is increased	4.1.1 Good practices and lessons on drought management documented and disseminated	Djibouti, Kenya, Sudan &Uganda	304,000
		4.1.2 Drought information management strengthened	Djibouti, Kenya, Sudan &Uganda	288,000
	M&E		Djibouti, Kenya, Sudan &Uganda	287,100
6. Project/Programme Execution cost				1,045,860
7. Total Project/Programme Cost				11,009,020
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				1,024,660
Amount of Financing Requested				**13,079,540**

4 Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	June 2020
Mid-term Review (if planned)	June 2022
Project/Programme Closing	June 2024
Terminal Evaluation	September 2024

II. PART II: PROJECT JUSTIFICATION

A. Project components

COMPONENT 1: DEVELOPMENT AND ENHANCEMENT OF A REGIONAL DROUGHT EARLY WARNING SYSTEM

70. Component one will focus on upgrading, as well as reinforcing, the climate change early warning process since smallholder farmers and pastoralists are facing challenges of accessing timely and accurate climate information for planning and responding to drought risks. Current EWS are inadequate and unsustainable causing crop failures, pasture losses, the death of livestock, soil degradation, conflicts, migration, and food insecurity. The purpose of this component is to conduct baseline studies and assessments as a first step to understand the current status of the existing EWS for different types of hazards in the four selected countries. By understanding the challenges associated with the existing EWS, the project will consequently undertake interventions aimed at promoting adaptation actions to address drought risks and improving the situation for the benefit of smallholder farmers and pastoralists, including women. In achieving these goals, the project proposes to improve and develop effective and efficient innovative EWS by equipping and upgrading weather stations including observation and monitoring infrastructure to ably collect weather related information that could aid smallholders, farmers, and pastoralists to plan appropriate drought adaptation measures. It is also understood that good risk management decisions rely on accurate information, which, in turn, requires reliable and timely data which is by far the most useful assets farmers and pastoralists can access to help them adopt drought resilient actions. In fact, farmers and pastoralists are constrained in accessing EW information and later alone respond or deal with emergencies, for these reasons, the project proposes to construct and/or renovate EW information centers where all the necessary data for drought adaptation planning could be availed to the farmers and pastoralists and support emergency planning.

71. Institutional linkages for sharing early warning information will also be supported and the targeted beneficiaries' capacities reinforced to access EW information for instance through, developing social media tools and other response and feedback mechanisms for EWS. Quite often even with efficient and effective high quality EWS, there are always possibilities of shortfalls in supplies or interventions to respond to drought. The project will endeavor to provide support to plan for such shortfalls that were not envisaged by developing drought emergency plans. In this case, the project will further support regional and national stakeholders in securing appropriate equipment and plank operations for populations and monitor feedback mechanisms regarding the preparation and implementation of contingency plans.

72. These specific aspects will be achieved through outcome 1.1, outputs 1.1.1, 1.1.2, 1.1.3 and 1.1.4 presented below. The proposed activities in relation to the corresponding outcomes and outputs are also presented.

Outcome 1.1: Increased use of effective Early Warning Systems by stakeholders

Output 1.1.1: Efficient and effective DEWS in place/developed

Activities

- Activity 1.1.1.1 Assess the status of EWS in the target countries and the update options of traditional EWS with modern EW technologies
- Activity 1.1.1.2 Develop an EWS prototype to be used at the regional and national levels
- Activity 1.1.1.3 Equip/upgrade selected weather stations and Remote sensing derived products, time series of bioclimatic variables, etc.
- Activity 1.1.1.4 Construct/renovate and equip EW information centers including database
- Activity 1.1.1.5 Support/Equip project beneficiaries (pastoralist, farmers, and extension agents) to access EW information (e.g. devices including, brochure, SMS, Radio etc.)
- Activity 1.1.1.6 Conduct a baseline study

Output 1.1.2: Institutional linkages for EW information established

Activities

- Activity 1.1.2.1 Develop/Review EW information sharing frameworks at regional. National and sub-national levels
- Activity 1.1.2.2 Develop an implementation action plan to operationalize the frameworks
- Activity 1.1.2.3 Hold inter-ministerial and sectoral meetings for data sharing
- Activity 1.1.2.4 Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)
- Activity 1.1.2.5 Support Incorporation of EW information into planning and budgeting processes of targeted countries

Output 1.1.3: Feedback mechanism for EW information developed.

Activities

- Activity 1.1.3.1 Support regular stakeholder EW information feedback platforms for farmers and pastoralists
- Activity 1.1.3.2 Hold quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders
- Activity 1.1.3.3 Conduct KAP surveys on EW information
- Activity 1.1.3.4 Develop periodic feedback user-friendly tools on accessing, utilizing and reporting EW information to mandated institutions

Output 1.1.4: Emergency plan for drought management is put in place

Activities

- Activity 1.1.4.1 Develop an emergency response plan for drought disasters at the regional and national levels
- Activity 1.1.4.2 Monitor the EWS, feedback mechanism and its contingency plan at regional level
- Activity 1.1.4.3 Acquire equipment for drought management (machines/pickup, bicycles, motorcycles)
- Activity 1.1.4.4 Implement two blank operations (including regional and national levels)
- Activity 1.1.4.5 Acquire tools and materials to disseminate warning messages to the populations (e.g. beacons, flags, sirens, signaling, speakers, telephone, local radios etc.)

COMPONENT 2: STRENGTHENING THE CAPACITY OF STAKEHOLDERS TO MANAGE DROUGHT RISKS DUE TO CC EFFECTS

73. The current capacity to integrate drought risk management interventions into development plans is insufficient to ably implement drought adaptation actions and support responses at the community level. These coupled with a limited budget allocation for drought risk management at the national level aggravates drought management among the vulnerable communities in the four riparian countries. Therefore, communities' drought coping mechanism is weak.

74. Component two aims at strengthening and improving the adaptive capacity of various stakeholders including women and youth that are affected by climate change induced drought and contribute to drought adaptation and resilience

in various ways. Such stakeholders include extension agents, artisans, local government or sub-national and national as well as regional leaders including technical and non-technical plus the smallholder farmers and pastoralists in the four selected countries/areas. This project seeks to, first of all, understand the stakeholders' needs in drought adaptation and contribute to developing their capacity to plan and manage droughts if their resilience is to be enhanced. Based on such needs, capacity building plans including developing the appropriate tools and materials will be supported. The proposed activities are indicated under outcomes 2.1 and 2.2 in outputs 2.1.1, 2.1.2 and 2.2.1.

75. The project has proposed several drought management innovations. In fact, for cross-learning purposes (Activity 2.1.2.4), focus will be on easily adoptable and fast replicable innovations by communities. Innovations with such high multiplier effect include locally made water harvesting and storage structures e.g. simplified water jars. Others include rock water harvesting, sunken sand dams and water ponds etc. also, ground water management initiatives are critical because it poses a huge potential and yet an immediate solution for water security amongst the communities.

Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened

Output 2.1.1: Drought management plans (DMPs) integrating CC aspects and adaptation actions developed

Activities

- Activity 2.1.1.1 Develop/update existing DMPs at national and sub-national levels integrating CC aspects and adaptation actions
- Activity 2.1.1.2 Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists
- Activity 2.1.1.3 Support integration of DMPs into the national and sub-national development plans. This activity involves organizing workshops for stakeholders to meet, share documents and integrate the drought management plans into national and sub-national level development plans.
- Activity 2.1.1.4 Support formulation of bye-laws and ordinances at sub-national and lower political units. The support required is facilitating the organization of a workshop for formulating as well as deliberating on the specific bye-laws.

Output 2.1.2: Adaptive capacity of institutions, farmers, and pastoralists in drought management improved

Activities

- Activity 2.1.2.1 Undertake a capacity needs assessment to identify gaps and hindrances to effective drought management
- Activity 2.1.2.2 Develop capacity building plans for regional, national and sub-national levels
- Activity 2.1.2.3 Develop capacity building materials
- Activity 2.1.2.4 Undertake exchange visits and learning tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives
- Activity 2.1.2.5 Train staff managing EW information centers
- Activity 2.1.2.6 Train extension staff and artisans in drought adaptation interventions
- Activity 2.1.2.7 Facilitate community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach
- Activity 2.1.2.8 Support farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services. In this activity farmers and pastoralists will be provided with inputs

Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened

Output 2.2.1: New/existing regional and National arrangements /networks for drought management supported

Activities

- Activity 2.2.1.1 Support review/development of MoUs, protocols and stock route agreements for Drought Management and reducing conflict between farmers and pastoralists
- Activity 2.2.1.2 Facilitate the establishment of regional and national drought management multi-sectoral/stakeholder platforms to coordinate partner efforts
- Activity 2.2.1.3 Support regional and national partners to jointly mobilize resources for Drought Management in a changing climate context.

COMPONENT 3: DROUGHT AND CLIMATE CHANGE ADAPTATION ACTIONS

76. Component three aims at increasing resilience of smallholder farmers and pastoralists by supporting them to undertake concrete innovative and appropriate sustainable land, water, crops and livestock management measures or technologies. It is understood that currently, smallholder farmers and pastoralists have limited drought adaptation technologies that have consequently caused the extremely low productivity characterized by low crop and livestock food production levels, food insecurity and low incomes. The proposed project seeks to understand the current status of water security by focusing on surface and groundwater resources, soil and water conservation, crop and livestock production and sources of incomes. Some of the specific climate change and drought adaptation interventions include: developing soil and water conservation, water harvesting and storage structures e.g. simplified water jars, rock water harvesting, construction of sunken sand dams and water ponds. Mini-irrigation systems to support crops

during water stress will be constructed. Underground water sources e.g. construction of boreholes and water wells will be constructed. Drought resistant pastures and crops will be promoted to enhance the resilience of pastoralists and farmers. The project further aims to establish an innovative competitive grant scheme targeting household value addition to food crops as well as food crop and livestock products. The competitive small grants scheme will focus on encouraging and rewarding the efforts of the most vulnerable among smallholder farmers and pastoralists such as the women, youth and elderly. Such efforts sought for evaluation will be on drought adaptation actions or IGAs. For instance, the innovativeness of the competitive grant scheme will include interventions on alternatives energy sources (solar, improved energy stoves, etc.), energy saving innovations, interlocking blocks and charcoal briquettes manufactured from household waste such as briquettes from crop residues will be promoted. Pasture management techniques- including growing fast-growing pasture varieties and storage as silage or hay for longer term use by domestic animals, improved livestock breeds of animals (cattle and goats), drought-resistant crops will be tackled. These are some of the probable innovative drought adaptation actions that could be rewarded under the competitive small grants scheme of the proposed project. These aspects are covered under outcome 3.1 and outputs 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5 and 3.1.6.

Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions

Output 3.1.1: Innovative water and soil conservation structures constructed

Activities

- Activity 3.1.1.1 Undertake assessment on surface water utilization/potential/availability and develop water Management Plans in project sites
- Activity 3.1.1.2 Construct appropriate, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells. Furthermore, Contour Stone Bunds and Stone Lines for water and soils conservation will be established.
- Activity 3.1.1.3 Construct mini-irrigation and water delivery systems (e.g. gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems)
- Activity 3.1.1.4 Support protection of water wells and springs to ensure quality, quantity and efficient water use by providing inputs, for instance, live markers around the wells. Train the established water management committees to protect water wells and springs to ensure quality, quantity and efficient water use
- Activity 3.1.1.5 Promote appropriate soil and water conservation measures (e.g. terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening). other soil and water conservation measures (e.g. Integrated soil fertility management, terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)

Output 3.1.2: Groundwater sources established/ improved

Activities

- Activity 3.1.2.1 Undertake assessment on groundwater utilization/potential/availability and develop groundwater Management Plans in project sites
- Activity 3.1.2.2 Review/develop regulatory framework and guidelines on groundwater sources
- Activity 3.1.2.3 Restore degraded water catchments to improve recharge rates of groundwater

Output 3.1.3: Adaptive agricultural practices for improving crop and livestock production promoted

Activities

- Activity 3.1.3.1 Promote fast growing and drought resistant crop varieties (e.g. Promote agro-silvopastoral systems (dryland agroforestry) (e.g. fast-growing multi-purpose tree species such as Acacia mearnsii,)
- Activity 3.1.3.2 Promote agrosilvopastoral systems (dryland agroforestry) (e.g. fast-growing multi-purpose tree species such as Acacia mearnsii, integrated with crops and livestock rearing)
- Activity 3.1.3.3 Provide inputs for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)
- Activity 3.1.3.4 Promote climate-smart agricultural practices

Output 3.1.4: Adaptive livestock and rangeland practices enhanced

Activities

- Activity 3.1.4.1 Promote improved rangeland management practices (e.g. developing of rangeland management plans, reduction livestock stocking, integrated pest and disease management)
- Activity 3.1.4.2: Support introduction of drought-tolerant livestock breeds. The project will collaborate with animal research/breeding centers in the targeted countries to identify livestock breeds that are able to feed on poor quality forages (a characteristic of drylands) and crop residues. Often these are the breeds that have low feed requirements and yet produce better quality livestock products in the drylands.
- Activity 3.1.4.3: Promote hydroponic systems for growing nutritious fast-growing cereals for livestock (animal feeds). Hydroponics agricultural systems have the advantage of growing crops with less water and moreover recyclable. The other merits of the system are that it requires a small area of operation, plants grow quicker, production is throughout the year and there is

quality control of the plants being raised. The project will train potential farmers/pastoralists to adopt the system and will select women and youth groups to demonstrate the technology for future scale up/replication

- Activity 3.1.4.4 Support farmers and pastoralists to prepare high-value silage and hay for livestock during dry spells. The targeted communities will be trained in this aspect to increase on the production of livestock products. Preparation of nutritious silage and hay is a function of its exposure to appropriate weather condition, methods of collection of materials from the field, using optimum temperatures for curing. Other ways to increase the quality of hay and silage are the size of particles used in its processing and fiber ratios. High-value silage and hay will be made through the use of proper harvesting techniques of the materials and good management.
- Activity 3.1.4.5: Support formation and/or facilitate existing livestock associations/groups/cooperatives at the community level.

Output 3.1.5: Enabling environment for smallholder farmers and pastoralists' adaptive activities created

Activities

- Activity 3.1.5.1 Introduce and promote Index-based weather insurance in partnership with insurance companies. The targeted communities face the challenge of addressing residual losses and damages due to climate change risks. The focal countries require being supported to improve contingency measures and risk mitigation strategies. The DRESS-EA project will mobilize partners to support target countries to enhance knowledge and capacity on innovative risk insurance. Further, the project will collaborate with relevant partners and existing initiatives in the insurance sector to improve understanding of the risk profiles of the targeted countries. This information will be useful to connect the potential beneficiaries to providers of the risk insurance solutions. The project will also support countries to explore climate risk-pooling insurance solutions and other insurance products to address residual losses to climate risks.
- Activity 3.1.5.2 Conduct drought risk assessments on the agriculture value chain
- Activity 3.1.5.3 Facilitate farmer and pastoralists associations/cooperatives to generate analyze and share market information.
- Activity 3.1.5.4 Create linkages between farmer and pastoralists associations/cooperatives at regional, national and sub-national levels to enable sharing of market information

Output 3.1.6: Environmentally friendly IGAs ([e.g., Pottery, Beekeeping, Energy saving stoves, Briquettes making, and interlocking bricks) promoted

Activities

- Activity 3.1.6.1 Support women and youth groups with inputs for IGAs including (e.g. growing of sisal and Aloe vera to support rope production and art crafts; beekeeping; briquette making; keeping of local poultry (e.g. Kroilers) and community tourism. Farmer groups will be trained in modern techniques of sisal and Aloe growing. Also, the project will assist farmers to acquire high-value planting materials. Aloes spp that grow in dryland and produce quick returns through the sale of the aloe gel will be targeted. For example, Aloe ferox grows quite well in drylands and produces bitter extract and leaf powder for use as a constipation remedy as well as supporting immune function. This product is highly marketable and required by pharmaceutical companies. Linkage of collaboration between producers (farmer associations) and a prospective buyer will be made.
- Activity 3.1.6.2 Provide competitive small grants targeting smallholder farmers and pastoralist associations to undertake innovative IGAs or drought adaptation actions.
- Activity 3.1.6.3 Provide inputs for value addition crop and livestock products

Selection Criteria for beneficiaries of the IGAs and competitive small grants scheme

77. The people and/or communities that will be most affected by the project activities in accordance with the ESMP of the proposed project will be deliberately targeted for undertaking the environmentally friendly IGAs and later on access the competitive small grants scheme. Such vulnerable members of the population are for instance communities/people whose properties or sources of income have been affected by the project such as the indigenous peoples for example the Karimojong in Rupa Sub County, Uganda. The views/opinions of such people will be considered. Deliberate efforts will be made to consult them about which income generating activities they would be interested in and willing to undertake. Such people/communities will be prioritized such that deliberate efforts are made to reach out to the most vulnerable members of such communities. Furthermore, the most vulnerable members among the small holder farmers and pastoralists including women and youth will be prioritized as beneficiaries for the environmentally friendly IGAs and small competitive grants scheme. The selection criteria for such populations/ individuals will include:

Criterion 1: Land use and ownership

78. The people and/or communities that inhabit areas and/or sites or lands where the project interventions have been planned to be undertaken will be accorded maximum priority. The impacts of such project activities could potentially affect the properties and income sources of the most vulnerable among people and/or communities.
79. As provided in the ESMP framework for the proposed project (Annex 6), as a form of compensation such people will be deliberately allowed access to the support for the environmentally friendly IGAs as well as the competitive small

grants scheme. Efforts will be made throughout project implementation to ensure that such people are involved in all the consultative meetings and workshops such that their views, opinions and priorities are accorded due consideration.

Criterion 2: Vulnerability

80. The most vulnerable groups that heavily rely on the environmental/natural resources in the proposed project areas for their livelihoods and are most exposed to hazards risks will be selected for the IGAs and Competitive small grants scheme. Women and youth will be deliberately prioritized.

Criterion 3: Gender

81. In consultation with local leaders or community leaders such as the traditional elders, at least 40% of the women will be deliberately selected for the IGAs support. Similarly, for the competitive grant scheme, women especially those engaged in innovative value addition IGAs will be selected.

Criterion 4: Resource users

82. Populations using natural resources and deriving their income from them will be deliberately prioritized in accessing and participating in project interventions and the alternative income generating activities. Their knowledge of resources and their dynamics is a major asset for conservation, rehabilitation and restoration actions of habitats. It is understood that, their proximity to and close interaction with the natural resources gives them relatively wide knowledge, skills and experiences that could be utilized in project implementation.

Criterion 5: Impacts

83. Communities that will be most affected by the project interventions e.g. construction of water harvesting and storage as well as small irrigation systems, water points and restoration of water catchments will be targeted for IGAs and small grants scheme. Such an approach will be deemed to compensate them against the project impacts.

Criterion 6: Education

84. Young graduates living in and around the project sites and are interested and willing to write micro-projects on alternative income generating activities and any other value addition interventions e.g. drought adaptation actions will be selected for the IGA and small grants support. This approach is not only advantageous in halting rural exodus but also in posterity promotes the sustainability of project results.

COMPONENT 4: KNOWLEDGE MANAGEMENT AND AWARENESS CREATION

85. There is limited awareness on drought risks and adaptation actions amongst stakeholders leading to poor planning and responses to drought risks and disasters with low crop and livestock yields hence food insecurity and low incomes. This component seeks to support knowledge generation, packaging, and dissemination between and across stakeholders in various institutions within the targeted countries in the region.

86. The activities of the proposed project basically facilitate institutions to generate knowledge on drought risk management, undertaking study tours and exchange visits, documenting lessons learned or best practices and generally facilitating knowledge exchange. The information, lessons learned, best practices and innovative technologies will be documented and shared for the use by various stakeholders. The specific activities of this component are highlighted under outcomes 4.1 and 4.2 and outputs 4.1.1 and 4.2.1.

Outcome 4.1: Knowledge and awareness on drought risk management increased

Output 4.1.1: Good practices and lessons on drought management, EWS, and Climate Change impacts documented and disseminated

Activities

- Activity 4.1.1.1 Document lessons and best practices from project interventions. From the onset of project implementation, lessons and best practices that can be replicated will be documented. This will also promote sustainability as it will promote continuity of the good practices identified even beyond the project implementation period.
- Activity 4.1.1.2 Generate and package information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders. Generate and package information dissemination materials on EW and drought adaptation actions in forms for easy uptake (e.g. policy briefs and brochures). The packaged information will be done commensurate with the various levels i.e. at Policy (national and sub-national levels), technocrats, and community levels.
- Activity 4.1.1.3 Disseminate/share knowledge and information through the use of existing and popular platforms e.g. electronic and print media as well as telecommunications that is easily accessible to the stakeholders.

Output 4.1.2 Drought information management strengthened

Activities

- Activity 4.1.2.1 Support existing channels/networks for information generation and dissemination at the regional level (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms)
- Activity 4.1.2.2 Engage policymakers in the dissemination of drought management information and best practices
- Activity 4.1.2.3 Support drought management working groups to share and disseminate the information. This involves organizing workshops and meetings for vulnerable groups of women and youth to share and disseminate information on drought management.
- Activity 4.1.2.4 Develop Strategies to empower women and other vulnerable groups in drought management initiatives

87. The proposed project targets smallholder farmers and pastoralists that are threatened by the changing climate risks from recurrent and prolonged droughts that negatively impact on their sources of livelihood in the IGAD region. The project basically intends to increase the resilience of such populations to the impacts of recurrent and prolonged droughts. In fact, recurrent and prolonged drought not only limit agricultural production but also lead to chronic scarcity of water, food, and pastures for human and animal/livestock populations of communities especially in arid and semi-arid areas in drylands within the IGAD region.

88. The tables in annex 8 present the training plan and the key modules as well as the associated topics to be undertaken within the framework of the capacity building process:

B. Promotion of new and innovative solutions to climate change adaptation

89. First of all, pastoral and agro-pastoral communities in the four targeted countries have experienced drought pressure for quite a long time. Their survival is essentially dependent on climate-sensitive livelihoods that are derived from fragile and degraded natural resources amidst weak and inadequate extension services for improved natural resources management. The abilities of these communities to cope with climate-related events such as droughts have greatly remained weak. The ability of local community populations and ecosystems in the proposed project areas to recover from the shocks is largely limited. Therefore, this project will promote new and innovative solutions by employing a Regional Participatory Learning and Action Approach. In this approach, new and already existing innovative solutions to communicate, manage and adapt to climate change and drought impacts will be identified through participatory processes involving gatherings at national, sub-national and regional levels. Considering the project design, it essentially seeks to develop and maintain a strong linkage between the stakeholders at the regional level and others including smallholder farmers and pastoralists at the sub-national levels. Such linkage has been and continues to be a major hindrance to the resilience of communities to climate change impacts and drought. Smallholder farmers and pastoralists rarely access early warning information on droughts. If they did, still they rarely use it to plan the various adaptation activities. This project innovatively harnesses, develops and enhances the communication channels and linkages, develops new and upgrades existing tools and technologies for various stakeholders including smallholder farmers and pastoralists in the focal countries. The proposed project also seeks to provide fora and platforms where stakeholders can easily share information, and other opportunities for managing climate change impacts and drought risks. The project further innovatively plans to train extension staff such that they could easily support knowledge and capacity building among smallholder farmers, pastoralists and other stakeholders.

90. Another new and innovative solution to climate change adaptation is the inclusion of small competitive grants to stimulate and reward hard work. Small competitive grants will be provided to the most vulnerable yet organized farmers' groups including women and youth with innovative ideas. Women and youth groups will be provided an opportunity to present and showcase their innovative climate change adaptation and drought management ideas or mini-projects. Some of the innovative IGAs activities and drought adaptation actions envisaged under the competitive small grants program include: *Training, skills building* and *engaging* in gender responsive and home-based income generating activities such IGAs include pottery, production of energy saving stoves and briquettes making for vulnerable members of the community (e.g. women, youth and the elderly). Smallholder farmers and pastoralists interested in pursuing specific IGAs will be supported with training sessions and facilitators or experts to be knowledgeable, skilled and perfect these activities and develop innovative ideas. It is well known that among smallholder farmers and pastoralist communities in the four selected focal countries in the IGAD region, women are essentially responsible for home keeping where they manage homes daily with numerous domestic chores. The men may not allow them to travel far or be away from home for relatively longer times unless they are attending regular women group meetings for household development. Therefore, promoting IGAs that respond to such society social set up for stay home women and mothers as well as the elderly is a major innovation that enhances sustainability

under the proposed project. In this case, such vulnerable members of the community stay home and focus on making such products as pottery, weaving sisal and other crafts, producing briquettes and energy-saving stoves which they later sell for income. Women and the elderly can ably engage in such home-based productivity by accessing the funds under the competitive small grants scheme which they invest to ably produce more for higher incomes. One other area of innovation could be *adding value* to some of the products of pottery, energy saving stoves, and briquettes through better and fancy designs that do not compromise the overall purpose of the product. They could also innovate by customizing the products to various stakeholder needs and ably earn more money from them.

91. In terms of innovative drought adaptation measures under the competitive small grants program, notable activities include *training* and *skills developing* and *value addition* to the various drought-resistant food crops and food crop products; drought tolerant livestock products. Similarly, Smallholder farmers and pastoralists interested in pursuing such IGAs will be supported with training sessions and facilitators or experts to be knowledgeable, skilled and perfect these activities and develop innovative ideas. For instance, among smallholder farmers' crops such as tubers and cereals could be ground using local materials and stored for longer periods. This way a farmer can rest assured of higher incomes for a relatively longer time. Also, pastoralist women and girls are known and credited for adding value to milk products, for instance, they skillfully process milk to ghee and store such a high-value product longer. Aware that there are similar products on the market, the project will invest in producing better design of the products to improve branding. This will attract more customers hence, increase incomes. The project will create market linkages between producers and potential buyers. This will be possible through facilitating producers to participate in business tours, supporting producers in trade shows (to exhibit the products), business forums etc. In addition, the project will support radio talk shows on products generated during project implementation. The proposed project will also support these vulnerable members of the community to innovate more using the competitive small grants scheme. The ideas or mini-projects will be evaluated competitively under a specific call for innovative ideas where the best persons are evaluated following specified criteria will be awarded the small grant for implementation. The following criteria will be used to select the beneficiaries for the competitive small grants scheme: They should (i) be women, youth or men that are already actively participating in the DRESS-EA project activities, special focus will be on vulnerable and marginalized groups; (ii) the rationale should be for IGA, (iii) be knowledgeable and skilled in the IGAs and drought adaptation measures they intend to innovate in, (iv) write, cost and present their ideas, (v) the innovation plans should be feasible with net profit, (vi) have the capacity to scale up the innovation at the end of the project, (vii) activity that contributes to resilience to climate variability and change. One other innovative aspect of the proposed project is the introduction and promotion of Index-based weather insurance in partnership with insurance companies. In this activity, appropriate insurance products that could help smallholder farmers and pastoralist reduce and offset climate change-related losses from crop and livestock and other livelihood sources will be promoted in partnership with insurance companies. The targeted communities face the challenge of addressing residual losses and damages due to climate change risks. The focal countries require being supported to improve contingency measures and risk mitigation strategies.

92. Among the relevant institutions promoting innovation; research & development and technology transfer on climate change that the project will collaborate with, there will be the involvement of IGAD Climate and Predication Centre (ICPAC) which is the technical arm of IGAD with role to generate, apply and disseminate climate products. Secondly, there are research institutions in the target countries providing innovative drought ideas. These include in Djibouti (the Ministry of Higher Education and Research is the focal point ministry for research and innovations and they carry out research on climate related resilience aspects including drought; Kenya (International Livestock Research Institute), Sudan (Hydraulic Research Centre) and Uganda (Resilience Africa Network-RAN with an Eastern *Africa resilience* Innovation Lab (RILab) located in Makerere University.

C. Economic, social and environmental benefits

93. The DRESS-EA project's design promotes activities that are compliant and compatible with the ecological and social context of smallholder farming and pastoralist in the IGAD region as well as the Environmental and Social Policy of the Adaptation Fund.

At the socio-economic level

94. The project will directly contribute to improving the populations' livelihoods, across the four selected countries in the IGAD region, through innovative approaches and measures and income-generating activities. The development of new EWS infrastructures and the improvement of existing ones at regional and national levels and the organization of smallholder, pastoralists and vulnerable groups of women and youth will serve to enhance their livelihoods.

95. In fact, activities such as promoting the growth of drought-resistant crops and drought tolerant breeds of livestock, soil and water conservation measures and climate-smart agriculture are expected to increase incomes. The livelihoods improvement will also be based on the development and promotion of IGAs (ecotourism, beekeeping, sisal, and crafts production, energy saving stoves, briquettes and promotion of interlocking bricks for construction).
96. Furthermore, these actions would also socially enhance and ensure food and water security for the drought-affected populations in the four countries by limiting the drought-related risks on agriculture and pasture and health (water-related diseases). Indeed, the project plans to improve water resources quality and quantities, to prevent communities from natural disasters and avoid epidemics.
97. Another benefit from such measures would be reduced social unrest, conflicts and, migration of community members seeking water and pastures and other sources of livelihoods. Therefore, in posterity, these measures would socially reduce people's instability and migration across the countries as well as across the regions within the countries.
98. Some activities of the project are specifically targeting women, women-headed households, and vulnerable groups by involving them in the consultative processes. In addition, to reduce their vulnerability to drought, for instance, the competitive small grants programme, improved cook /energy saving stoves and briquettes stoves will be introduced and promoted for both income generation and improving resilience to climate change. The stoves will also have the positive impact of reducing women's and children's burden of collecting fuelwood. Women could then spend more time on productive activities. The youth will also be engaged in activities such as pottery and ecotourism.
99. Overall, the planned interventions of the proposed project provide concrete socio-economic and environmental benefits to ecosystems and populations especially the vulnerable groups including women and youth among smallholder farmers and pastoralists in the region. The interventions essentially reduce pressure on the ecosystems so that they can provide the goods and services to vulnerable populations upon which they derive their livelihoods. It is evident that with such planned interventions in early warning systems, (capacity building efforts, soil and water management, surface and groundwater improvement, climate-smart agriculture, range and livestock management and the proposed IGAs) not only make the vulnerable women, youth, children and elderly resilient against drought and climate change variability but also provide them with concrete benefits in terms of food, crop products, livestock products, income/money from sale of such products and clean and safe water. Developed water points support women and children in reducing the distance traveled to collect water. The stoves will also have the positive impact of reducing women's and children's burden of collecting fuelwood. Women could then spend more time on productive activities.

At the environmental level

100. The project will have very high impacts on the natural ecosystems' restoration and management. The implementation of the proposed drought EWS will allow the reduction of the impacts related to climate changes disasters especially droughts. The information that the drought EWS will generate at the appropriate time will help the community leaders, the natural resources managers and the individual smallholder farmers and pastoralists to develop contingency plans/emergency plans and eventually reduce the damages and losses associated with climate change and droughts. The project will develop specific contingency plans based on the analysis of the vulnerabilities of ecosystems and populations.
101. The development of drought management plans or reviewing the existing ones will greatly contribute to drought management at various levels. In addition, the implementation of concrete drought adaptation actions will also have concrete benefits on the ecosystems through the implementation of adapted approaches, measures and actions.
102. Moreover, during the project implementation period, the activities to be undertaken will have direct environmental benefits. For instance, the silvopastoral dryland agroforestry and the rangeland management practices will help reduce the pressure on the ecosystems and preserve biodiversity.
103. Activities will also focus on surface and groundwater resources by drawing up their current status and by undertaking activities for better mobilization and use efficiency. This will be achieved through the implementation of innovative water and soil conservation structures, the establishment, and enhancement of groundwater sources and the promotion of adaptive agricultural practices. The concrete impact of the project on developing surface and groundwater resources is the availability of clean water resources for human and livestock populations among smallholder farmers and pastoralist communities in the IGAD region.
104. The lessons learned and the good practices to be adopted will be extended to sites in the four participating countries and other countries and sites in the IGAD region. This will be achieved through the involvement of the populations and actors at local and central level. The planned sensitization and communication activities will ensure the

mobilization of decision makers and local population and their engagement for a sustainable management of the ecosystems in the focal countries. The results of dissemination and scaling up in addition to the awareness-raising actions will be the basis for sustaining the project's achievements and their ownership by the population. Capacity building of the smallholder farmers, pastoralists, and other involved stakeholders will focus on the approaches and adapted techniques of managing drought-prone areas in other regions/areas.

105. All these are anticipated benefits of the project interventions. However, to mitigate negative impacts of the interventions in compliance with AF ESP, Environmental and Social Impact Assessments, Gender analysis supported by a complete gender action plan as well as a grievance redress mechanism have been undertaken during the development of the full proposal document. Beyond the lifespan of the project as a way to further ensure sustainable benefits to vulnerable groups, it is proposed that a study will be undertaken to develop gender responsive and scale-up strategies for drought, CC and early warning technologies among women, and other vulnerable groups (Activity 4.1.2.4).

Table 2:Benefits of the project

Outcome of the project	Economic benefits	Social benefits	Environmental benefits
Outcome 1.1: Increased use of effective Early Warning Systems by stakeholders	▪ Reducing agricultural production losses through better management of drought areas using indicators.	▪ The implementation of the proposed drought EWS will help in safeguarding social assets. ▪ The livelihoods enhancement of smallholder, pastoralists and vulnerable groups of women and youth. ▪ The information will provide input to the population in order to adapt their agricultural production and practices.	▪ A better understanding of the interaction between climate, environment and human factors which impact the sustainable use of natural resources.
Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened		▪ Drought management plans will provide opportunities for social cohesion and further work on developing resilience at national and sub-national levels.	▪ The outcome will contribute in lowering the excess demand for natural resources through fair and equitable sharing of water resources.
Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened	▪ Local communities will benefit in term of new ways of resilient economic activities if their views are integrated for developing drought adaptation instruments. ▪ The participatory approach will help in creating new work opportunities.	▪ The participation and involvement of people will contribute to develop long-term sustainable products and services which will be beneficial in increasing personal and national growth.	
Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	▪ Improve the gross income through promoting the growth of drought-resistant crops and drought tolerant breeds of livestock, soil and water conservation measures and climate-smart agriculture. ▪ Develop specific activities on value chain associated to adaptation needs. ▪ Reduce expenditure through bringing together the economic sectors and stakeholders. ▪ Develop new careers.	▪ Improvement of life quality through income increase ▪ Securing of the drinkable water supply. ▪ Enhancing of food and water security for the drought-affected populations. ▪ Reducing social unrest, conflicts and, migration of community members seeking water and pastures and other sources of livelihoods	▪ Efficient use of water. ▪ Reduce the pressure on the ecosystems and preserve biodiversity. ▪ Improved land management/conservation infrastructure, leading to reduced soil loss and increased quantity of agricultural produce. ▪ Improving water resources for human and livestock populations. ▪ Improve the efficiency of projects
Outcome 4.1: Knowledge and awareness on drought risk management Increased	▪ Increase in availability of regional expertise decreases the costs for external know-how	▪ Adaptive capacity of communities to drought increased ▪ General raising of awareness of importance of ecosystems services to the community and the need for an enhanced role by the community ▪ Strengthening the active participation of vulnerable populations in decisions linked to climate change ▪ Strengthen cohesion and integration between stakeholders	

D. Cost-effectiveness

106. The proposed project focuses on using the regional approach towards improving drought resilience of smallholder farmers and pastoralists through enhancing and developing an EWS. The project has a twofold objective, it aims at the one hand to sharing updated and relevant information to announce the drought on a regional scale, which will enable the deployment of a regional action plan where the joint capacities and measures of intervention will be more

efficient and more cost-effective. On the other hand, it plans to contribute to improving the conditions and infrastructures of the beneficiary countries in the most vulnerable sites they selected, thus permitting an effective response to drought and greater resilience to climatic variations and changes, which intensified this situation over last decades.

107. Drought phenomenon is a transboundary issue faced by the four target countries, so the DRESS-EA project has similar challenges to be addressed allowing capacity building and support processes streamline, thus creating an economy of scale in implementation. It encompasses an important capacity-building component of the various stakeholders, policy makers, managers, technicians, local government representatives, local community representatives and people. It further proposes to support the vulnerable members such as women, children, youth and elderly in undertaking the innovative IGAs. Undertaking these interventions in four selected countries of the IGAD region is not only catalytic but also pioneers innovativeness in addressing climate change and drought that transcend the political boundaries. Comparing taking no action and actually undertaking the proposed project interventions basically leads to positive cost-benefit ratios and Net Present Value (NPV), probably with varying magnitudes.

Determination of project cost effectiveness

108. This project has been developed targeting its implementation for a period of four years targeting the detailed human populations in the countries as detailed in table 3. The project has four components. The total project budget for is USD 13,079,540 (Thirteen million seventy-nine thousand five hundred forty. The detailed budget for each component splits from the entire project budget indicated in table 4.

Table 3: Countries cost/investment

Country	Project sites	No. of people
Djibouti	Dikhil	88,948
	Biedley	8,000
Kenya	Kitui	481,282
	Samburu	224,000
Sudan	Kosti/El Salam	136,000
Uganda	Rupa	25,785
Grand Total		**964,015**

Table 4: Total project cost/investment

Components	Cost (USD)	Cost (UGX)
Component 1	2,387,100	8,832,270,000
Component 2	1,750,000	6,475,000,000
Component 3	6,279,920	23,235,704,000
Component 4	592,000	2,190,400,000
Management fees	2,070,520	7,660,924,000
Total	**13,079,540**	**48,394,298,000**

109. Based on the World Bank (2015) and ICPAC, 2017[37] population figures and the socio-economic characteristics in the Greater Horn of Africa including the IGAD, the average population growth rate of three percent (3%), it is anticipated that, at the commencement of the project in the next two years, the target population within the project sites will be 1,022, 550 inhabitants. The average household size is 6 persons. Therefore, considering the target population, the estimated number of households is 170,425 persons. According to the results framework end of project target milestones, 60% of the target population is expected to have improved incomes as a result of improved drought and resilience. Thus, a total of 613,530 people will be directly affected by project interventions. Based on the total investment of the project, it can be estimated that the cost of the project per beneficiary will be USD 21.3.

110. The financial profitability of the project investment can be determined based on the following financial appraisal techniques: *i)* Benefits cost ratio, *ii)* Cash Flows, *iii)* Net financial Present Value (NPV), and *iv)* (Internal) financial rate of return (IRR)

Financial Analysis

111. Direct benefits of the project can be estimated from the activities or interventions undertaken by the project beneficiaries. The monetary evaluation of the avoided effects of the concrete adaptation actions including the physical quantification of the impacts and substituted/ exchanged value is vital for the financial analysis of the

project. This implies that multiplication of the number of units affected by their monetary value. The monetary value of these interventions will be made to obtain total direct benefits accruing to project beneficiaries. The analysis will take into consideration, the following:

Discount Rate: The discount rate also called the hurdle rate or cost of capital is the expected rate of return for an investment. In other words, this is the interest percentage that an investor anticipates receiving over the life of an investment. Therefore, it will take into consideration (i) the market interest rate for a comparable period; (ii) the inflation rate and (iii) the risk premium. For the *DRESS-EA* project, the discount rate used is 8%. This rate takes into consideration, among others, the inflation rate.
Project costs by component estimation: The main costs necessary for the implementation of the project are related to studies/consultancies, trainings, investments (infrastructure such as as the water related infrastructure, equipment such as the Early Warning System prototype and associated devices, etc...). These costs by components are estimated from the costs of the activities planned for the implementation of the project.
Project benefits and revenues Estimation: The project benefits estimation is mainly based on the added value generated by the promoted activities/project interventions.
Project Residual value estimation: Equipment, infrastructure and other equipment acquired during project implementation spanning several years. Given that the duration of the project is 4 years, these investments will have a residual value that will be taken into account at the end of the project period as a benefit.
Project Cash Flows estimation: annually over 4 years;
Project Net Present Value (NPV): is the sum of the cash flows;
Project Internal Rate Return: is the rate that leads to an NPV nil value. For this project, the rate that makes it possible to bring back the NPV to zero is 57.8%.

Table 5: Financial analysis for cost effectiveness of the project

Section	Year 1	Year 2	Year 3	Year 4
A. Cost components				
Project Accounting cost				
Component 1 costs	759,360	1,294,350	256,630	76,780
Component 2 costs	420,000	576,670	418,670	334,670
Component 3 costs	143,340	1,273,790	3,015,950	1,846,830
Component 4 costs	81,000	100,730	279,930	130,330
Execution costs (management units)	395,000	220,000	200,630	230,230
Implementation costs (management unit)	232,000	275,000	242,000	275,660
Total costs	**2,030,700**	**3,740,540**	**4,413,810**	**2,894,500**
B. Financial benefits				
Benefits from studies/consultancies	1,525,185	815,670	248,670	128,670
Benefits to water users		366,795	927,885	700,305
Benefits to trainers and trainees	120,000	397,005	307,005	307,005
Benefits to agricultural crop farmers		270,000	765,000	405,000
Benefits to agricultural livestock farmers and rangeland users		186,000	558,000	252,000
Benefits to business community	120,000	769,365	1,550,595	942,945
Benefits to the crafts associations/groups	35,010	190,020	825,030	600,000
Residual value				1,110,000
Total financial benefits	**1,800,195**	**2,994,855**	**5,182,185**	**4,445,925**
C. CASH FLOWS (B-A)	(230,505)	(745,685)	768,375	1,551,425
BENEFITS COSTS RATIO (B/A)	0.89	0.80	1.17	1.54
NPV				$897,569
IRR				57.8%

112. From the financial analysis in (Table 5) the benefit cost ratios throughout the project duration are positive. The NPV is also positive with a positive Internal Rate of Return. The positive values of the financial appraisal parameters indicate that the proposed project is worth an investment and is therefore cost effective.

Advantages of the regional approach

113. It is worth noting that climate change and drought cannot be coordinated only at the respective national levels because these aspects are transboundary in nature. Therefore, regional coordination has comparative advantages that are cost-effective with positive cost-benefit ratios considering scenarios of implementing the interventions or not.

114. Implementing this project using the regional approach provides the following advantages. First of all, drought is a transboundary challenge that affects many countries including the four selected countries of the IGAD region. These transboundary challenges require using transboundary innovative solutions, hence the proposed regional approach to address the drought problem in the IGAD. In addition, the regional approach to tackling the drought challenge presents the advantages below.

(i) *Cooperation/coordination:* Drought is regional phenomena and as such, the data and information generated by each country will feed into the regional EWS and make it more efficient. In addition, the project will strengthen the regional capacity; build cohesion and provide platforms at the regional level.

(ii) *Knowledge, technology, and expertise:* A wider platform at the regional level to harness diversity of ideas, indigenous and modern knowledge, technologies and expertise in drought risk management will be established. This will facilitate exchange and experiential learning;

(iii) *Duplication:* The regional design will enable coordinated planning and implementation of interventions thereby minimizing duplication of efforts*;*

(iv) *Contribution to regional frameworks:* The project will contribute to the achievement of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI). Overall, regionally led implementation is less expensive and faster. It helps build a pool of regional and national experts. The innovations generated are adopted more easily by the member countries and moreover, it promotes sustainability. It provides platform and means for the countries to share experiences, practices, lessons, knowledge, and resources.

E. Consistency with development strategies

115. The proposed project will contribute to achieving the respective national adaptation priorities. For all the four selected focal countries water and agriculture are priority sectors for adaptation to drought, in a Climate change context. Consequently, the project is in alignment with national or sub-national sustainable development strategies, development plans, poverty reduction strategies, national communications and national adaptation programs of action. It is also consistent with national socio-economic priorities, national climate change priorities and national disaster risk management priorities.

Regional level

Protocol on the Establishment of a Conflict Early Warning and Response Mechanism (CEWARN) for the IGAD Member States, 2003	The CEWARN mandate is "to receive and share information concerning potentially violent conflicts as well as their outbreak and escalation in the IGAD region, undertake an analysis of the information and develop case scenarios and formulate options for response."
IDDRISI strategy, 2013	This is an initiative developed for driving a regional agenda to develop and harmonize policies, strategies, and systems throughout the IGAD region. It enhances cooperation and integration among the member countries and causes the execution of national and regional projects in a coordinated framework of implementation, aimed at ending drought emergencies.

National level

1) Djibouti

Intended Nationally Determined Contribution	Djibouti's mitigation contribution is to abate its greenhouse gas emissions by 40 percent by 2030 relative to the business as usual scenario. http://www4.unfccc.int/ndcregistry/PublishedDocuments/Djibouti%20First/CPDN%20Djibouti_9%20-%20CPDN%20-%20Format%20pour%20soumission%20CCNUCC.pdf
Primary Sector Development Master Plan 2009-2018	This is a reference framework for the planning and development of natural resources in the primary sector. The Ministry of Agriculture of Livestock, and the Sea, in charge of hydraulic resources, have prepared it. This plan aims at improving the contribution of the primary sector to the socio-economic development of the country by a better valorization of the resources of this sector.
Accelerated Growth Strategy for the Promotion of Employment 2015-2019	This is the first instrument for the operationalization of the Vision Djibouti 2035. It is built around four strategic axes: (i) economic growth, competitiveness and role private sector engine, (ii) human capital development, (iii) public governance and institutional capacity building, and (iv) regional development poles and sustainable development. It aims to achieve, for the 2015-2019 period, an average real GDP growth rate of 8%.
Vision Djibouti 2035	Achievement of the goals of the 2035 Djibouti vision will be achieved through the strategies that underpin each of the identified pillars and cross-cutting themes (Gender, Youth, and Environment).To address food and nutrition insecurity and combat food shortage, the 2035 Djibouti vision aims to promote a food and nutritional security strategy. In the context of more productive and sustainable agriculture, forestry and fisheries, Vision Djibouti 2035 provide for the promotion and development of agriculture, fishing, and breeding.
Second national communication, 2013	The development of this document demonstrates to the international community the vulnerability of the Republic of Djibouti to the impacts of climate change and its financing and capacity-building needs in the areas of both mitigation and adaptation.
National adaptation programme of action - NAPA (2006)	National adaptation programmes of action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage.
Strategy and Action Plan for the implementation of the Great Green Wall, 2011	The overall objective of the Strategy and Action Plan for the implementation of the Great Green Wall is to create sustainable socio-economic and environmental development conditions for the populations concerned by the GGW.

2) Kenya

Constitution of Kenya (2010)	Kenya's Constitution provides the basis for action on climate change by guaranteeing citizens a clean and healthy environment, which is a fundamental right under the Bill of Rights
Intended Nationally Determined Contribution	Kenya's mitigation contribution is to abate its greenhouse gas emissions by 30 percent by 2030 relative to the business as usual scenario. Kenya also commits to mainstream adaptation into Medium-Term Plans and to implement actions. Achievement of these contributions will require financial, technology and capacity building support (MENRRDA). http://www4.unfccc.int/ndcregistry/PublishedDocuments/Kenya%20First/Kenya_NDC_20150723.pdf
Second Medium-Term Plan of Vision 2030	Mainstreaming of climate change in national planning, by identifying actions to address climate change, many of them recommended in the NCCAP (MODP)
County Integrated Development Plans	Many county governments are addressing climate change in their policy and planning documents, including the CIDPs that outline development priorities (County Governments).
National Climate Change Framework Policy	Adopts a climate change mainstreaming approach that includes integration of climate change considerations into development planning, budgeting and implementation in all sectors and at all levels of government (MENRRDA).
Climate change legislation	A Climate Change Bill is expected to be enacted into law. This legislation includes the establishment of a National Climate Change Council that has responsibility for coordination of climate change actions, including mainstreaming climate change in national and county budgets, plans and programs (MENRRDA)
Draft National Policy on Climate Finance	aims to further Kenya's national development goals through enhanced mobilization of climate finance (National Treasury and MENRRDA)
National Climate Change Response Strategy, 2010	The first national policy document on climate change has improved understanding of the issue and has guided policy decisions (MENRRDA).
National Climate Change Action Plan 2013-2017	Sets out priority adaptation and mitigation actions that will help Kenya move toward a low carbon climate resilient development pathway. Effective implementation will be supported through the establishment of an enabling governance structure including a climate change policy and law, a funding mechanism and investment framework, a capacity development and management framework, and a national performance and benefit measurement system (MENRRDA).
National Adaptation Plan	Consolidates the country's vision on adaptation supported by macro-level adaptation actions that relate with the economic sectors and county level vulnerabilities in order to enhance long-term resilience and adaptive capacity (MENRRDA). http://www4.unfccc.int/nap/Documents%20NAP/Kenya_NAP_Final.pdf The NAP recognizes the governance and institutional arrangements for implementation of adaptation actions as stipulated in the NCCAP and Climate Change Act, 2016. With drought being the main hazard, the NAP recognizes that the National Drought Management Authority (NDMA) is a key institution in enhancing adaptive capacity. Established in 2011, NDMA is mandated to establish mechanisms to ensure that drought does not become famine and that impacts of climate change are addressed.
Green Economy Strategy and Implementation Plan	Sets out a framework to encourage a shift towards a development path that promotes resource efficiency and sustainable management of natural resources, social inclusion, resilience and sustainable infrastructure development (MENRRDA).
Agricultural Sector Development Strategy	The Agriculture (farm forestry) Rules require the establishment and maintenance of farm forestry on at least 10 percent of every agricultural land holding (MALF)
Draft Kenya Climate Smart Agriculture Framework Programme 2015-2030	Promotes climate resilient and low carbon growth sustainable agriculture that ensures food security and contributes to national development goals in line with Kenya Vision 2030 (MALF and MENRRDA).
REDD+ Readiness	The proposal outlines a strategy for developing REDD+ in Kenya (REDD+ Coordination Office, KFS).
Renewable energy policy tools	0% import duties and Value-added tax exemption on renewable energy materials, equipment and accessories; feed-in tariffs at a price level that attracts and stimulates new investment in the renewable energy sector (ERC).
Energy regulations	On solar water heating, energy management and solar photovoltaic systems were passed in 2012. The regulations require that: buildings using more than 100 liters per day shall use solar water heating systems; designated energy consuming facilities shall carry out energy audits and implement audit recommendations; and design, manufacture and sale of solar PV be licensed by the ERC. Draft regulations developed to set minimum energy performance standards for selected electrical appliances and improved biomass cookstoves (etc.)

3) Sudan

Intended Nationally Determined Contribution	Sudan intends to pursue implementing low carbon development interventions in three sectors of energy, forestry, and waste in line with Sudan's national development priorities, objectives and circumstances. http://www4.unfccc.int/ndcregistry/PublishedDocuments/Sudan%20First/28Oct15-Sudan%20INDC.pdf
Agriculture and Articulate a Future Vision and Action Plan for Agricultural Revival	In continuation of the strategy to support agriculture manifested in the declaration of the green mobilization and the preparation of the five-year strategic plan, the government has formulated the present status of agriculture and articulated a future vision and action plan for Agricultural in 2008. The overall mission of the agricultural development strategy is to transform agriculture from a sector dominated by subsistence production to a modern sector responsive to market signals and with substantial contributions to poverty reduction, growth, foreign exchange earnings and sustainable management of natural resources.
Interim Poverty	Interim Poverty Reduction Strategy Paper is a national multi-sectoral strategy paper of Sudan. Its main objective is the

Reduction Strategy Paper.	reduction of poverty in Sudan and providing the roadmap for the elaboration and implementation of the full Poverty Reduction Strategy Paper. The Paper covers the area of environmental protection, agriculture, and livestock.
National Action Plan for the implementation of the Great Green Wall for the Sahel and Sahara Initiative (GGWSSI) 2015	The National Action Plan for the implementation of the Great Green Wall for the Sahel and Sahara Initiative (GGWSSI) is a national action plan with a cross-sectoral approach. The timeframe of this Action Plan is 5 years between 2015 and 2020. The main objectives of the Action Plan are the restoration of degraded lands; forest and rangeland sustainable management; support to livelihoods and resilience of local communities.
National Adaptation Plan 2016	The Plan provides information on actions to reduce climate change vulnerability regarding water resources, agriculture and food security, public health, coastal zones, and rural communities in all the 18 states of Sudan. http://www4.unfccc.int/nap/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf
National Adaptation Programme of Action 2007	In order to offer an effective basis for urgent and immediate action to reduce the mounting risks of climate change on the nation's most vulnerable communities, the government of Sudan has adopted the national adaptation programme of action (NAPA) in 2007. The overall goal of the NAPA process in Sudan has been to identify urgent and immediate activities to address climate variability and climate change within the context of the country's economic development priorities. http://extwprlegs1.fao.org/docs/pdf/sud148489.pdf
Second national communication, 2013	This document identifies specific adaptation measures to build future resilience against looming impacts.
Combat Desertification Law of 2009.	This Law consisting of 25 articles divided in V Sections aims at: establishing the competent authorities, at national and local level, to achieve: elimination or mitigation of desertification; achieving development of material and human capabilities; creating a successful environment to achieve the intended goals; and coordinating between them through a mechanism of supervision and follow-up.

4) Uganda

Intended Nationally Determined Contribution	The livelihood of the people of Uganda is highly dependent on the exploitation of her natural resources, including climate. In submitting this INDC, Uganda's priority is the adaptation. The country will continue to work on reducing vulnerability and addressing adaptation in agriculture and livestock, forestry, infrastructure (with an emphasis on human settlements, social infrastructure, and transport), water, energy, health and disaster risk management. Sustainable Land Management (SLM) and Climate Smart Agriculture (CSA) will be scaled up to increase resilience at the grassroots level.
National Climate Change Policy	The National Climate Change Policy is a national sectoral policy of Uganda. Its main objective is to ensure that all stakeholders address climate change impacts and their causes through appropriate measures while promoting sustainable development and a green economy.
National Agriculture Policy, 2013.	This National Agriculture Policy (NAP) shall be guided by six principles derived from the country's lessons learned in implementing the PEAP, the PMA, and decentralized governance through the Local Government Act of 1997. The overall objective of the agriculture policy is to achieve food and nutrition security and improve household incomes through coordinated interventions that focus on enhancing sustainable agricultural productivity and value addition; providing employment opportunities, and promoting domestic and international trade.
Second National Development Plan (NDPII) 2015/16-2019/20.	This Plan is designed to propel Uganda towards middle-income status by 2020, in line with the aspiration of Uganda's Vision 2040. This Plan aims at strengthening Uganda's competitiveness for sustainable wealth creation, employment, and inclusive growth. This Plan prioritizes investment in five areas with the greatest multiplier effect on the economy, which are: (i) agriculture, (ii) tourism, (iii) minerals, oil, and gas, (iv) infrastructure development, (v) human capital development.
Uganda Vision 2040.	The present Uganda Vision 2040 lays out the general development objectives for Uganda over a 30-year period. Its goal is to transform Uganda from a predominantly peasant and low-income country to a competitive upper middle-income status country. Together with the National Development Plan, Uganda Vision 2040 provides the overall leadership and policy direction for job creation and priority setting. It prioritizes agricultural development as well as tapping into the youth demographic dividend. Agricultural production in Uganda is mainly dominated by smallholder farmers engaged in food and industrial crops, forestry, horticulture, fishing and livestock farming.
Uganda National Land Policy.	The Uganda National Land Policy is a national policy of the Republic of Uganda whose main goal is to ensure an efficient, equitable and optimal utilization and management of Uganda's land resources for poverty reduction, wealth creation, and overall socio-economic development. To this end, the document provides for a set of goals, including in the area of the environment.
Second national communication, 2014	This document summarizes up to date information as well as general and specific data on climate change in Uganda, the national greenhouse gas inventory, interventions made and/or proposed in adapting to and mitigating climate change. https://unfccc.int/resource/docs/natc/uganc2.pdf
National Adaptation Programme of Action (NAPA) 2007	Undertook the first preliminary assessment of the country's vulnerability to climate change, and identified its adaptation priority projects. The proposed project is anchored firmly in the priorities identified in the NAPA. The project will contribute towards implementing NAPA Priority projects in Uganda such as Community Tree Growing, Land Degradation Management, and Water for Production and Development Planning

F. Alignment with national technical standards

116. During the implementation of the project, the implementing entity (OSS) and the other executing entities must comply with the Adaptation Fund standards and policies such as the Environmental and Social Policy and the Gender Policy. In order to ensure the national ownership of the project and the sustainability of its expected outcomes, the project will also be implemented in accordance with the international and national standards of the 4 countries concerned.

117. Four National Executing Entities (NEE) will be involved in the project execution. The NEE of the DRESS-EA project will be i) the Ministry of Agriculture, Water Fisheries and Livestock of Djibouti – Directorate of Rural Hydraulics, ii) Ministry of Environment and Natural Resources-Climate Change Directorate for Kenya, iii) Ministry of Water Resources and Electricity of Sudan and higher council for Environment and Natural resources (HCENR) iv) Ministry of Water and Environment- Directorate of Water Resources Management of Uganda.

118. The National Executing Entities have been consulted during the development of the full proposal to ensure that all activities comply with relevant national standards, as well as the environmental and other statutory laws and regulations of the four countries. In the following tables are listed the laws and regulations related to Policies framework, Legal framework and Institutional Framework of most of the fields that are included into the DRESS-EA project. These tables present the purpose of the Policy and its relevance to the project. Other national laws on Environmental, Social and Gender assessment in each of the countries will be followed during the project execution and implementation to ensure compliance and to complement with the ESP of Adaptation Fund. It should be noticed that the ESIA reports has been submitted to the National Environment Authorities for review and compliance verification with the national standards. In addition, compliance certificates will be provided by the incumbent national authorities and will be annexed to the ESIA study.

119. Project activities will be screened, their impacts assessed and depending on the magnitude of the impacts, they will undergo an Environmental Impact Assessment (EIA) or Review in accordance with EIA procedures and guidelines of the respective countries as well as the Adaptation Fund. Mitigation measures will then be proposed.

120. Each executing country has developed their own environmental standards and regulations and potential projects are required to comply with these standards in accordance with the laws of that country. These entities responsible for the execution of the project will also be called upon to respect the guidelines of the various international conventions and agreements such as the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity, the Convention on Desertification, the Paris Agreement. Some of the national laws, codes, and standards applicable to the theme of this project are identified within the tables in Annex 9.

121. The project will involve national technical standards as they are relevant to planned activities as presented in the following table:

Table 6: National technical standards relevance to the project

Legislation	Purpose of the law	Relevance to the Project
DJIBOUTI		
Law n ° 51 / AN / 09 / 6th L Bearing Environment Code	In its general provisions, it says that "The environment of Djibouti is a national heritage, an integral part of world heritage. Its preservation is therefore of primary interest at the local, national, regional and international levels to ensure the needs of present and future generations. Moreover, it says "Every citizen has the right to a healthy environment under the conditions defined by this law. This right is accompanied by an obligation to preserve and protect the environment.	Despite all the measures taken to avoid and minimize environmental and social risks, implementing the project activities may have negative impacts on the population and ecosystems. In order to avoid or to minimize the UPSs E&S risks, the provisions of this law will be applied for their Assessment (Output 3.1.1 to 3.1.6).
Decree No. 2011-029 / PR / MHUEAT revising the environmental impact assessment procedure.	This decree concerns environmental management texts concerning major works. The decree thus insists on the obligation of the environmental impact study and the respect of the procedure for all the projects, whether public or private, consisting of works, agricultural, mining, artisanal installations., commercial or transport whose realization is likely to harm the environment	The project UPSs focus on the themes of intelligent agriculture, small-scale irrigation, the introduction of drought-resilient seeds, small rural development infrastructure, etc. E&S Screening for USPs will be done according to the provisions of this procedure. However, as the themes of the UPSs generally relate to intelligent agriculture, the introduction of drought-resilient seeds, irrigation, small rural development infrastructure, etc…., which will be conducted at small scales and at different sites. According to the provisions of this procedure, these activities will not require EIA. However, in case a

		study for some sites will be required, a summary EIA according to the same procedure will be realized.
Decree No. 2013-110 / PR / DFAIT establishing the National Early Warning and Reaction Mechanism for Pastoral and Urban Conflicts	The National Early Warning and Response Mechanism for Pastoral and Urban Conflicts (CEWERU) is the lead agency for national alert and response initiatives. It is responsible, inter alia, for: - Collect, check useful information on early warning and response to conflicts; - carry out a preliminary analysis of the information collected; - Develop reaction strategies; - Implement the capacity building programs of its members and stakeholders concerned with conflict prevention and response; - Liaise and coordinate with civil society groups involved in information gathering, at the community level and at other levels; - Prepare periodic reports on early warning in the field of conflict;	The DRESS EA component 1 (Output 1.1.1 to 1.1.4) major activities under are related to the establishment of an early warning system. The scope and the operational, institutional, legal terms of this system will be imperatively aligned with the provisions and guidelines of this law.
Decree No. 2006-0192 / PR / MID setting up an institutional framework for risk and disaster management	For the application of the law N ° 140 / AN / 06 / 5th L on the national policy of risk and disaster management. Risk and disaster management is part of the overall framework of protection and security activities. It is based on integrated and comprehensive procedures that include prevention, warning, preparedness, management, relief, recovery and development measures. The risk and disaster management plans include: - the general risk and disaster management plan; - support plans for specific risks; - emergency organization plans, known as ORSEC plans; - emergency plans. They define the priorities and priorities for risk and disaster management in the short, medium or long term.	The project aims, among other things, to set up an early warning system for drought and develop an emergency response plan. This decree will control the activities under Output 1.1.4 and Output 2.1.1
KENYA		
Water Act, 2016 (No. 43 of 2016).	This Act provides for the regulation, management and development of water resources and water and sewerage services in line with the Constitution. It establishes the Water Resources Authority, the National Water Harvesting and Storage Authority.	Activities under outputs 3.1.1, 3.1.2, 3.1.3 et 3.1.4 will be done in accordance with this law at the local level. The indicated actors will be associated to ensure that the activities to be undertaken are in line with the national standards in terms of water resource management.
Environmental (Impact Assessment and Audit) Regulations, 2003 (Cap. 387).	These Regulations, made under section 147 of the Environmental Management and Co-ordination Act, contain rules relative to content and procedures of an environmental impact assessment in the sense of section 58 of the Act, contain rules relative to environmental impact audit and monitoring and strategic environmental assessment and regulate some other matters such as appeal and registration of information regarding environmental impact assessment. These Regulations shall apply to all policies, plans, programs, projects and activities.	The project UPSs focus on the themes of intelligent agriculture, small-scale irrigation, the introduction of drought-resilient seeds, small rural development infrastructure, etc. E&S Screening for USPs will be done according to the provisions of this procedure. However, as the themes of the UPSs generally relate to intelligent agriculture, the introduction of drought-resilient seeds, irrigation, small rural development infrastructure, etc...., which will be conducted at small scales and at different sites. According to the provisions of this procedure, these activities will not require EIA. However, in case a study for some sites will be required, a summary EIA according to the same procedure will be realized.
Environmental Management and Co-ordination (Public Complaints Committee) Regulations, 2012 (L.N. No. 112 of 2012)	These Regulations, made by the Minister for Environment and Mineral Resources under section 147 of the Environmental Management and Co-ordination Act, 1999, concern lodging of complaints relating to any matter set out under section 32 of the Act with the Public Complaints Committee established under section 31 of the Act and the handling of such compliant by the Committee. These Regulations shall apply, as far as practicable to allegations investigated by the Committee on its own initiative. The Complaints Committee shall investigate: (a) any allegations or complaints against any person or against the National Environment Management authority in relation to the condition of the environment in Kenya; (b) on its own motion, any suspected case of environmental degradation. The Committee may, in its discretion, refer any matter relating to a complaint to the National Environmental Tribunal.	Despite all the measures taken to avoid and minimize environmental and social risks, implementing the project activities may have negative impacts on the population and ecosystems. In accordance with this procedure, a grievance mechanism is to provide affected persons by adverse environmental, social and gender impacts and harms resulting from the projects activities, with an accessible, transparent, fair and effective process for the submission and processing of their complaints. This mechanism will apply in all project activities.
Agriculture (Crop Production)	These Rules implement provisions of the Agriculture Act with respect to production programmes and production orders relative to the cultivation of agricultural land. The Rules prescribe, in the Schedule, forms for such orders and programmes, require each provincial agricultural board to specify an earliest and latest date of planting for	The project Output 3.1.3 is related to Adaptive agricultural practices for improving crop production promoted. The provision of this Act will be applied in the implementation of these activities.

Rules (Cap. 318).	each crop and specify conditions of cultivation that shall be observed in order to be eligible for the guaranteed minimum return on harvest.	
SUDAN		
National Adaptation Programme of Action	In order to offer an effective basis for urgent and immediate action to reduce the mounting risks of climate change on the nation's most vulnerable communities, the government of Sudan has adopted the national adaptation programme of action (NAPA) in 2007. The overall goal of the NAPA process in Sudan has been to identify urgent and immediate activities to address climate variability and climate change within the context of the country's economic development priorities.	The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region. This objective is in in line with the NAPA Goals namely the reduction of rural vulnerability, the promotion of sustainable livelihoods, the training and improvement of abilities of farmers, etc…
Environment Protection Ordinance of 2000.	This Ordinance aims at the protection of the environment against pollution. The Chapter 3 pertains to the environment protection policies; the environmental impact assessment; obligations of the Relevant Authority; and the reporting.	Despite the regulations of any other Act related to an approval for an individual intending to embark on projects expected to have a negative effect on environment or the natural resources, such an individual shall submit a feasibility study signed by the Evaluation and Follow-up Committee formed by the Council. Indeed, the screening of the USPs E&S risks will be realized in accordance with the disposition of this Ordinance.
Irrigation and Drainage Act of 1990.	This Act establishes that any work related to irrigation or drainage provided needs a permit from the Ministry of Irrigation and Water Resources.	The permits for projects that draw water shall be valid for a period of ten years from the date of granting the license and may be renewed for similar periods. To exploit new lands, not yet licensed for irrigation with water resources available in the State Plan, must submit an application to the Ministry for authorization containing the required data. In the framework of the DRESS-EA project, it is planned to realize some mini-irrigation structures under Output 3.1.1 and 3.1.3 that E&S risks will be assessed in accordance with this Act.
Law of 2004 for the National Fund to ward off the effects of agricultural risk and support agricultural insurance.	This Law aims at establishing a National Fund with the purpose of: controlling agricultural risk including drought, desert encroachment, floods, conflicts and fires; encouraging interest in agriculture and agricultural production; stabilizing and developing agricultural areas and communities. In addition, the Law will contribute in supporting and encouraging the insurance companies to work in the agricultural field; achieving stability in the sector through funding and compensations to farmers and producers in case of losses and developing agricultural sector through the use of modern technology.	Under Output 3.1.5, it is planned to Introduce and promote Indexbased weather insurance in partnership with insurance companies. This activity is in line with this Law and be carry out in accordance with its provisions.
UGANDA		
Environmental and Social Safeguards (ESS) Policy Framework	This Environment and Social Safeguards Framework is to be used by the Ministry to ensure that all environmental and social safeguards are adequately addressed as required by the Adaptation Fund. The goal is to avoid unnecessary environment and social harm because of implementation of Adaptation Fund projects by the ministry, which is a key requirement of the fund.	As an executing entity and an entity accredited by the Adaptation Fund, the MWE has developed an E & S policy that meets the Fund's principles. The project will be executed at the national level in accordance with the obligations under this policy.
National Policy for Disaster Preparedness and Management	The National Policy for Disaster Preparedness and Management is a national cross-sectoral policy of Uganda. Its main goal is to establish institutions and mechanisms that will reduce the vulnerability of people, livestock, plants and wildlife to disasters in Uganda. The Policy contains specific sets of objectives for a variety of disaster types, including drought, floods, landslides/mudslides, and fires. According to the document, an effective disaster preparedness and management depends on multi-sectoral planning and programming. It is based on a rational assessment of disaster risk and on the analysis of the vulnerability of the communities.	The project intends to set up a Drought Emergency Plan. According to this policy, planning for disaster has to be undertaken at all levels – from the national to the village level. For this reason, the implementation of Output 1.1.4 and 2.1.1 will ensure community participation, public awareness, institutional capacity building, partnership and co-ordination, and implementation of international agreements in accordance with the disposition of the policy.
National Irrigation Policy.	Impact of climate change as a serious challenge as evidenced by prolonged droughts and severe flooding in most parts of the country requires a policy framework on irrigation as core public investment to mitigate these effects and prevent the agriculture sector from further loss. It is against this background that Government of Uganda through the Ministry of Agriculture, Animal Industry and Fisheries and the Ministry of Water and Environment and in consultation with other key	Mini-irrigation structures under Output 3.1.1 and 3.1.3 that E&S risks will be assessed in accordance with the provision of this Policy.

	stakeholders have jointly developed the National Irrigation Policy. This Policy is aimed at increasing efficient water use in irrigation and contributes to agricultural production and productivity. It is complementary to the National Water Policy and shall be implemented accordingly.	

122. The key Environmental standards and regulations of the countries are presented in Table 7:

Table 7: Environmental Standards and guidelines in executing countries

NO	*COUNTRY*	*ENVIRONMENTAL STANDARDS*	*RESPONSIBLE INSTITUTION*
1	Djibouti	The project will comply with the environmental standards in Djibouti i.e. National Environmental Impact Assessment Procedures and Guidelines. The Ministry of Habitat, Urbanism, Land Planning and Environment of Djibouti is responsible for approving and evaluating the EIAs.	The Ministry of Habitat, Urbanism, Land Planning and Environment
2	Kenya	The National Environmental Management Authority of Kenya is responsible to coordinate and supervise Environment related activities in Kenya. Identified activities in the project will be categorized according to the Environment Impact Assessment Regulations of Kenya. For example, the small projects are subjected to the Environment Social Monitoring Plan (ESMP)	National Environmental Management Authority of Kenya
3	Sudan	The government of Sudan adopted a National Strategy for Development. The strategy enabled the establishment of the Higher Council for Environment and Natural Resources (HCENR) to oversee, coordinate and liaise on issues pertaining to and linked with, the environment. Sudan has a comprehensive environmental legislation, Environmental Protection Policy Act. This is clear on developmental projects, of which construction that might negatively impact the quality of the environment should undergo an Environment Feasibility Study (EFS)	Higher Council for Environment and Natural Resources
4	Uganda	National Environmental Impact Assessment Procedures and Guidelines.	National Environmental Management Authority of Uganda. This is the Agency responsible for coordination, supervision, and compliance with environmental standards in the country.

123. In order to ensure that all Unidentified sub-projects (USPs) are compliant with the environmental and social policy requirements and/or standards of the respective countries, all sub-projects will be detailed per country during project implementation. In addition, as regards to the USP and according to OSS and Adaptation Fund standards, further Environmental Impact Assessments will be undertaken in compliance with the OSS and AF methodology as well as the National laws and standards. The USPs will be subjected to initial screening and categorized based on individual country requirements and specifications as stipulated in their Environmental laws and regulations. For Projects whose impacts can easily be mitigated, appropriate mitigation measures will be proposed and recommended for implementation by the project stakeholders. For those with more complex impacts that may need deeper studies, full environmental impact assessment will be recommended and undertaken before the actual activity implementation takes place.

124. An Environmental and Social Management Framework has been developed and annexed to this document. Four national Environmental and Social Management Frameworks has been established and takes into account the laws and regulations governing Environment and social issues in the target countries and well as the Environment and social policy of the adaptation fund. During the project implementation and since the kickoff workshop, all relevant laws, regulations and existing technical standards including water resources management, water infrastructure development, agriculture development, and other project related activities will be reviewed and relevant aspects observed including labor and public procurement procedures for project investments. The proposed project will be aligned to respect all current regulations relating to water, biodiversity and soil protection, and work for a better management of natural resources. The project will be implemented using the existing structures (Ministries). The respective Ministries are expected to spearhead and ensure that all relevant laws and regulations applicable to each Country are observed.

G. Project duplication

125. During the design process, all stakeholders, including other projects entities were consulted in order to avoid any potential duplication of efforts, resources or geographical coverage, and to ensure synergy between ongoing initiatives and the proposed DRESS-EA project.

126. The project will complement and create synergies with existing similar initiatives including projects and programmes. At the regional level the ongoing projects and programmes include:

127. The *Integrated Drought Management Programme (IDMP) in the Horn of Africa* promotes drought resilience of countries, communities, and ecosystems in the region. It is part of the global IDMP programme that the Global Water Partnership (GWP) and the World Meteorological Organization (WMO) launched in Geneva in March 2013 at the High-level Meeting on National Drought Policy (HMNDP). Overall, the IDMP HOA builds climate resilience, reduce economic and social losses, and alleviate poverty in drought-affected regions within the HOA through an integrated approach to drought. Specifically, the program operates in Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda covering all the focal countries for the DRESS-EA Project.

128. The programme facilitates collaborative and integrated approaches to achieve sustainable management of water and drought in the drought-prone areas of the HOA mainly focusing on enhancing strong partnership and strengthening capacities with the overall aim of developing resilience to drought and climate change in the HOA following an *Integrated Water Resource Management (IWRM) approach*. Its particular contribution is to strengthen partnership and influence policy and practice towards the better integrated management of drought in the HOA in a changing climate. The DRESS-EA Project will supplement this project by strengthening the capacities of different institutions in the focal countries to generate, package and disseminate drought information as well as supporting the implementation of adaptation actions. (1)

129. The *Agricultural Climate Resilience Enhancement Initiative (ACREI) Project* (Ethiopia, Kenya, and Uganda) focuses on enhancing the capacity of communities to cope and adapt to climate variability by building their resilience and their livelihoods which are dependent on climate-sensitive resources. The interventions are intended to technically improve climate forecasts using a regional approach and build the capacity of communities to understand and appropriately use climate information and related agro-advisories in decision-making to climate-proof their livelihoods, and thus enhance their food and nutrition security. The Project uses Agro-pastoralist Field School (APFS) approach, an adaptation of the well proven Farmer Field School approach as its main delivery mechanism that builds strongly on previous experiences. The Project uses Climate-sensitive APFS interventions in engaging communities in participatory group learning and experimentation coupled with Village Community Banking approach (VICOBA) to support community uptake of strategies and practices for resilient local food and income systems (2). The DRESS-EA Project will supplement efforts of this project by further simplification and packaging of drought information and support drought actions. The projects also are focusing on different parts of the countries (Uganda and Kenya) that are the same while others are different countries altogether (Djibouti and Sudan).

130. *Strengthening IGAD's capacity to enhance drought resilience in the Horn of Africa (SCIDA-II). (2016-2018).* The main objective of the project is to strengthen IGAD's competencies and services in order to help coordinate and implement the Drought Disaster Resilience and Sustainability Initiative (IDDRSI). IDDRSI's objectives are linked more closely with the fight to eliminate the causes of conflict and migration. The project uses the approach of building resilience by strengthening IGAD's and its Member States' capacity to develop adequate proactive policies and interventions to build drought disaster resilience and the project builds on the measures GIZ conducted in support of IDDRSI during the first phase from May 2012 through to December 2015 and covers all IGAD Member States. The project focuses on improving internal capacity for IDDRSI support at the IGAD Secretariat and within its institutions, boosting IGAD's capacity to deliver IDDRSI support services and to facilitate Member State implementation of cross-border IDDRSI activities, strengthening specific IGAD capacities for managing natural resources within selected IDDRSI clusters, strengthening peace and security as an integral part of cross-border IDRSSI measures as well as assisting IGAD to build up the basic capacity it needs to deal with the drought resilience-migration nexus (3). The capacity built by this project will contribute to the smooth implementation of the DRESS-EA Project and help upscale the capacity building component of the project for implementation of concrete adaptation actions.

131. At the *Famine Early Warning Systems Network (FEWS NET),* we use a methodology known as scenario development to assist in projecting food insecurity and future food assistance needs. FEWS NET has adapted common scenario building concepts to help analysts make sense of the complex food security landscape. Our process provides a logical structure to think through the interactions among the many variables that affect food security. At FEWS NET, scenario development is the methodology we use to make projections about acute food insecurity outcomes. This approach is the basis of the analysis presented in our food security outlooks and updates. Scenario development allows FEWS NET to meet its core mandate of giving decision makers early warning about potential food security crises. (4)

132. The *Building Resilient Communities, Wetlands Ecosystems, and Associated Catchments in Uganda project* was approved in approved in December 2016 with the aim of enhancing Ugandan subsistence farmers' ability to deal with

climate impacts including drought. It is estimated that 4 million people who live in and around Uganda's wetlands rely on them for food security. The impact of climate change, coupled with other environmental stresses, is increasing the degradation of these wetlands and associated ecosystems.

133. The Project is intended to will assist the Government of Uganda to take climate change effects into account in managing wetlands and associated ecosystems including include increased climate variability and extreme weather events, such as droughts, floods, high temperatures and violent storms.

134. It will also help Uganda to restore critical wetlands to improve ecosystem services - such as replenishing groundwater, improving flood control, and enhancing the livelihoods of subsistence farming communities through fishing and agriculture as well as enhancing the skills of people to diversify their livelihoods and become more resilient to climate shocks. The project will improve the ability of communities in sensitive wetland areas to reduce climate risks and prepare them for climate-related disasters including through decentralized early warning systems. The Project targets the south-western and eastern regions of the country that are home to some most vulnerable people more than half of them women. (5)

135. The implementation of the DRESS-EA project will supplement the activities of this project as it will improve access to information of the most vulnerable people and help in the up-scaling capacity building of the government and local communities in the implementation of adaptation actions in the project focal areas (Karamoja region).

136. The *Drought resilience in northern Kenya Project* focuses on the counties of Marsabit and Turkana in northern Kenya with the aim of supporting the county governments to improve the overall conditions for increasing resilience to drought of the ecosystems and local communities.

137. The Project offers technical advice to the governments of these two agrarian counties on implementing the initiated reforms and on restructuring, training, back-up and direct consulting activities that enables state and non-governmental players to elaborate sustainable policies and strategies that enhance resilience to drought in the counties.

138. Different stakeholders work together to create and support structures for a better exchange of knowledge between the counties, the national government and other decision-makers and the project assist the county governments in knowledge-based and results-oriented planning, steering and financing of preventive measures. This facilitates the coordinated, effective implementation of state policies and programmes that will improve drought resilience among the inhabitants of Turkana and Marsabit.

139. In addition, the project supports those responsible in the agricultural institutions of the county governments in developing holistic approaches for increasing resilience to drought. The county governments cooperate with non-governmental organizations, the private sector and grassroots organizations with a view to developing and coordinating effective service systems to be implemented at the local level in selected agro-ecological areas with cooperatives and other user communities. Activities will focus on providing agricultural extension services, training, and organizational advice.

140. The project is working with the tried-and-tested practices and processes initiated by the predecessor project and developing them further. These include plans for the agricultural sector, which are being drawn up as the basis for follow-on measures, in cooperation with decision-makers in Turkana and Marsabit counties. The project supports training activities in order to strengthen the county governments' capacities for making decisions and taking action as well as supporting user-oriented training courses on geographical information systems (GIS) in the counties to bring about a lasting improvement in regional planning (6).

141. The development objective of the *Rural Community Development and Water Mobilization Project for Djibouti* is to increase access of rural communities to water and enhance their capacity to manage water and agro-pastoral resources in the project areas using a participatory approach to community-based development. The restructuring is to entail following changes: (i) include some additional small activities, for example, protection against floods of water infrastructure constructed under the project, monitoring of works, small equipment for the beneficiaries, etc.; include additional financing for the recruitment, within the project implementation unit (PIU) of a regional coordinator and support staff for Tadjourah region and amend the definition of the open-air reservoirs which were constructed with a capacity of about 20,000 m, without change in the unit cost; (ii) update the results framework to adequately measure all relevant objectives and achievements of the project; (iii) update the number and or the unit cost of some activities (cisterns, income generating activities, beneficiaries and staff capacity building program, etc.); (iv) take into account the actual cost of some expenses which were underestimated in the actual cost tables (incremental costs, income generating activities, etc.); and (v) split the unallocated amount between the three

categories of the project. The project abstract is drawn from the PAD, SAR or PGD and may not accurately reflect the project's current nature (7). The proposed project will supplement the activities of this project especially in areas of capacity building and increasing access to water resources by the local communities.

142. The '*Adapt for environment and climate resilience project' (ADAPT)*, being implemented in Sudan aims to drive change for a better future. It's led by the Ministry of Environment and Natural Resources, in coordination with the Ministries responsible for water resources, agriculture, forestry, and livestock. The project will help over one million people to build resilience and cope with climate shocks, improve policy and decision making through strengthened data, analysis and capability in government, help mobilize large-scale climate financing, and make humanitarian and development investments more environmentally sustainable and 'climate-smart'.

143. The project focuses on Championing and supporting better management and governance of water resources, better management, and governance of forests and rangelands and better understanding and adaptation to climate change. This will be achieved through by providing expert advice and guidance to key partners, improving science and make data available to inform decisions and strengthening institutions and policies. The project will strengthen environmental institutions and integrate sound environmental governance and climate change adaptation into policies and plans. It will leverage financing to increase the implementation of adaptation actions (8).

144. The DRESSEA project will complement these initiatives of the ADAPT project and where possible upscale the interventions that have proved to be working. The key experiences gained at the national level, sub-national and local levels will help in the implementation of the DRESS-EA Projects as both projects are focusing on increasing the resilience of ecosystems and communities.

H. Learning and knowledge management component

145. This component of the project will help facilitate experience sharing and cross-learning of innovative drought adaptation interventions in the Project focal countries. This will be achieved by generating knowledge on drought risk management, concrete drought adaptation actions. It will also consist in packaging it appropriately according to the target audiences/stakeholders and sharing it through electronic and print media and forums at regional, national, sub-national and local levels.

146. The project will support generation and documentation of case studies, good practices and lessons learned from the implementation of this project and other innovative case studies and successful drought management interventions. The Project will address challenges and create response strategies to help future design and scaling-up of project interventions, and policy/practice influencing in the focal countries and the IGAD region as a whole.

147. This will enable development/production of appropriate awareness materials i.e. print materials, posters, flyers, video documentaries, and others as well as briefs (technical and policy) to facilitate influencing practices or policies at regional, national, sub-national and local levels. The project will also organize and facilitate awareness raising events, forums, and platforms at all levels to facilitate joint learning and experience sharing among various stakeholders.

148. The project will organize and facilitate both inter and Intra-community and country exchange visits and tours to areas with successful drought management interventions to enable experience sharing among extension officers, farmers, pastoralists, and other key project stakeholders share experiences at regional and local levels. Such visits and tours will be organized targeting women and youth among the smallholder farmers and pastoralists in the region.

149. To emphasize the regional approach this component will be aligned to the IDDRSI strategic objective on enhancing generation, access, use and integrated management of research, knowledge, technology, and innovations in the IGAD region. The strategy highlights documentation and sharing of lessons learned and evidence-based good practices and promising technologies amongst key stakeholders for adoption and scaling up.

150. In a more specific way and based on project planned activities the knowledge management in the framework of the DRESS-EA Project is an important element to which a whole component has been dedicated (Component 4). In fact, accessing to current and detailed information on drought risks, climate trends and adaptation techniques is essential for project stakeholders such as government agencies, agricultural extension services and local communities to effectively and sustainably implement prioritized adaptation interventions.

151. In addition to Component 4 knowledge sharing and learning is a common element to all project's components. The knowledge mainstreaming will ensure the project ownership and the capacity of beneficiaries and users to manage, execute and handle all the project outcomes. Specific activities and outputs are almost totally dedicated to knowledge as presented in the following table.

Table 8: Knowledge activities of the project

Component 1: Development and enhancement of a regional Drought Early Warning System	Activity 1.1.2.1 Develop/Review EW information sharing frameworks at regional. National and sub-national levels	• Workshop and travel	• Local Governments / National Government • Communities
	Activity 1.1.2.3 Hold inter-ministerial and sectoral meetings for data sharing	• One inter-ministerial regional meeting • 2 sectoral national meetings per year in each country • 2 sub-national meetings per year	• Local Governments / National Government • Communities • Civil society
	Activity 1.1.2.4 Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)	• One meeting at regional level • 2 meetings at national level • 2 meetings at sub-national level	• Local Governments / National Government • Farmers • Pastoralist • Communities • Civil society
Component 2: Strengthening capacity of stakeholders to manage drought risks due to Climate Change effects	Activity 2.1.1.2 Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists	• translating DMPs, printing and dissemination	• Local Governments • Farmers • Pastoralist • Communities • Civil society
	Activity 2.1.1.3 Support integration of DMPs into the national and sub-national development plans	• Consultancy • 2 workshops	• Local Governments / National Government • Communities
	Activity 2.1.2.2 Develop capacity building plans for regional, national and sub-national levels	• Consultancy	• Local Governments / National Government
	Activity 2.1.2.4 Undertake exchange visits and learning tours for cross learning in areas with successful drought management innovations including ground water management initiatives	• Exchange visists and learning tours	• Local Governments • Farmers • Pastoralist • Communities • Civil society
	Activity 2.1.2.5 Train staff managing EW information centers	• Initial and follow up training	• Technical Staff
	Activity 2.1.2.6 Train extension staff and artisans in drought adaptation interventions	• 3 annual trainings	• Extension staff • Artisans
	Activity 2.1.2.7 Facilitate community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	• 2 quarterly community trainings	• Communities • Farmers • Pastoralists
	Activity 2.1.2.8 Support farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services	• Construction of 4 learning centers for farmers and pastoralists	• Farmers • Pastoral groups
Component 3: Drought and Climate Change adaptation actions	Activity 3.1.4.4 Support farmers and pastoralists to prepare high value silage and hay for livestock during dry spells	• Farmer trainings	• Farmers • Pastoralists
	Activity 3.1.4.5 Support formation/facilitate existing livestock associations/groups/cooperatives at community level	• Meetings and workshops	• Livestock associations/ groups/cooperatives
	Activity 3.1.5.4 Create linkages between farmer and pastoralists associations/cooperatives at regional, national and sub-national levels to enable sharing of market information	• Meetings and workshops	• Farmer • Pastoralists • Associations
	Activity 3.1.6.1 Support women and youth groups with in puts for IGAs including (e.g. growing of sisal and Aloe vera to support rope production and art crafts; bee keeping; briquette making; keeping of local poultry (e.g.Kroilers) and community tourism	• Meetings and workshops	• Women • Youth groups • Communities

Component 4: Knowledge management and awareness creation	Activity 4.1.1.1 Document lessons and best practices from project interventions	• Consultancy • Regional compilation of lessons and best practices	• Local Governments / National Government • Communities • Farmer • Pastoralists • Associations
	Activity 4.1.1.2 Generate and package information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders	• Printing the materials	• Communities • Farmer • Pastoralists • Associations
	Activity 4.1.1.3 Disseminate/share knowledge and information through use of existing and popular platforms e.g. electronic and print media, telecom that are easily accessible by the stakeholders.	• Various communication platforms and channels	• Local Governments / National Government • Communities • Farmer • Pastoralists • Associations
	Activity 4.1.2.1 Support existing channels/networks for information generation and dissemination at regional level (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms)	• Meetings and workshops	• Communities • Farmer • Pastoralists • Associations
	Activity 4.1.2.2 Engage policy makers in dissemination of drought management information and best practices	• Meetings, workshops and travel	• Local Governments / National Government • Communities
	Activity 4.1.2.3 Support drought management working groups to share and disseminate the information	• Meetings, workshops and travel	• Local Governments / National Government • Communities
	Activity 4.1.2.4 Develop Strategies to empower women and other vulnerable groups in drought management initiatives	• Studies	• Local Governments / National Government • Communities • Women

I. Consultative process

152. The consultative process initially started with meetings and discussions at the Global Water Partnership Eastern Africa (GWPEA), a regional organization covering over 9 countries in the region Uganda, Kenya, Egypt, Eritrea, Somalia, Ethiopia, Sudan, Rwanda, and Burundi offices at Nile Basin Initiative Offices in Uganda. Earlier consultative meetings were held on 15th – 16th December 2016, Golf Course Hotel in Kampala and 4th – 9th July 2017 at the Common Wealth Resort, Munyonyo, Kampala, Uganda. It was agreed then at this meeting with stakeholders drawn from the focal countries to prepare a pre-concept note for submission to Sahara and Sahel Observatory (OSS) for review and consideration as a Regional Implementing Entity of the Adaptation Fund.

153. Later at the regional level, following the approval of the DRESS-EA pre-concept by the Adaptation Fund, further consultations, with countries representatives were made on March 15th – 16th 2018, in Entebbe, Uganda. The consultative meeting was also drawn from the GWPEA as well as from the OSS, in addition to countries. The workshop aimed at:

- Informing partners and beneficiary populations about the project scope and objectives;
- Listening to participants' expectations and needs to take them into consideration in the project activities design.

154. Similarly, following endorsement of the DRESS-EA Concept Note by the Adaptation Fund and the approval of the Project Formulation Grant to help developing this full proposal a continuous participatory approach was deployed and spearheaded by the OSS and Global Water Partnership Eastern Africa (GWPEA). In fact, according to the AF requirements and in order to ensure the project ownership and success during its execution a series of consultations, meetings and field visits have been conducted.

National and Local Consultations

155. More comprehensive consultations were undertaken at both national and regional levels. The national consultative meetings were held in each of the four countries (Djibouti 10th – 12th February 2019; Kenya 19th – 22nd February 2019, Sudan 2nd to 4th March 2019 and Uganda 11th – 13th March 2019). The Regional consultative meeting was held in Uganda on 15th March 2019 where all countries representatives took part.


Figure 15: Consultations at the Directorate of Rural Hydraulics in Djibouti on February 11th 2019 and 12th February 2019 respectively.

156. The main purpose of these public consultation sessions was to seek the beneficiaries' points of view and to collect information for a better design of the project with a focus on involving vulnerable groups, ethnic/indigenous groups, farmers, fishermen, women, and youth. This participatory approach aimed at (i) the project appropriation by the beneficiaries during preparation and planning stage; (ii) learning about the concerns of all stakeholders, including vulnerable groups (women, youth, children, heads of localities etc.) in the design and implementation of the project; (iii) exchanging views on the financing and sustainability of the project; (iv) informing the participants about the project's related risks and mitigation measures, and (v) the project grievance mechanism and the contact person and authority at local level.

157. For a better ownership of the project outcomes, national consultative meetings were organized with the local authorities and local government representatives aiming also at:

i. Providing information to key stakeholders on the Adaptation Fund and the Full proposal development processes;
ii. Facilitating the integration of inputs by key stakeholders and triangulating the information collected from stakeholders and literature.
iii. Concretizing on gathering final opinion on the target sites in each country and to clarify on the DRESS-EA project activities
iv. Creating awareness about the project to wider stakeholder membership, seek endorsement from the focal country authorities, seek acceptability and consent among the likely beneficiary populations and
v. Understanding the needs and expectations of the various parties in order to aid smooth project implementation in the region.

158. Since the presence of indigenous people in the four countries project sites and in accordance with the Adaptation fund requirements, during the project preparation the Free, Prior and Informed Consent (FPIC) procedures has been applied. The FPIC aims to avoid to the maximum possible the extent of adverse impacts on indigenous peoples. Consultation of stakeholders on the project interventions was done in the targeted countries i.e. Djibouti, Kenya, Sudan and Uganda. Moreover, these consultations were held in the localities where the project interventions are earmarked. This provided an opportunity for the stakeholders to, provide additional input by freely airing out their views and opinions. In addition, after the stakeholder consultations in the community localities, the community leaders accented to the consultation process through signing a consent letters (annexed to the consultative reports attached to the proposal).

159. Indeed, and regarding the Involvement of the Indigenous people in the project consultative process, all the workshops meetings and filed visits organized during project preparation representatives from the ethnic groups took part to these meetings. The main objective of this procedure is to ensure that all beneficiaries are well informed about the project activities, impacts, proposed mitigation measures and the grievance mechanism. The exchanges have also concerned the appropriate mitigation measures and alternatives to project design to minimize impacts and appropriate compensation that will be determined with the full and effective participation of affected indigenous peoples, including indigenous women, youth, the elderly and disabled people.

160. Concretely and according to the FPIC procedure, during the national consultations, field level visits to the localities where the project will be implemented were made, to provide vital information for preparing the Environmental and Social Management Plan Framework (ESMP). The ESMP is also attached to this proposal. Details of the proceedings of consultations, letters of consent endorsed by the representatives of local communities and indigenous people, discussions and lists of the people consulted are indicated in a single report attached to the present proposal.

161. The consultation process used several methodologies. These included key informant interviews, focused group discussions and reconnaissance surveys. Individual meetings were held with representatives of the countries from the EE and telephone calls to stakeholders who we're not available for the meetings.

162. The consultation workshops were structured around the following points:

- Involvement and improvement of the local populations' and indigenous people living conditions;

- Key stakeholders, their roles, responsibilities, and contribution during the project implementation;
- Strengthening the project management structures;
- Reinforcement of awareness and communication activities among the various stakeholders;
- Role of women and young people in the project implementation;
- Environmental and Social and Gender risks and mitigation measures;
- Grievance mechanism and communication channels;

163. During the local consultative workshops attended by communities' members and representatives including, women, youth and elders, from several ethnic groups (vulnerable and indigenous people) discussions were structured around the following points:

- Introduction of the project objective and activities as well as its expected outcomes that will directly benefit to the population;
- Collection of populations views and opinions regarding the several activities planned;
- Description of the project risks and the expected impacts and their relevant mitigation measures;
- Role of women and youth in the project implementation;
- Description of the Environmental and Social and Gender risks and mitigation measures;
- Grievance mechanism and communication channels;

164. After the several exchanges on the above-mentioned points the consultant with the support of the local government representative proceeded with the explanation of the consent procedures. They presented the content of the consent letter and the scope of the commitment that will result. It is also important to highlight the fact that the consultancies have been conducted in local language so that everyone who was attending has the same opportunity of understanding and expressing his objection is any. Finally, and as a proof of their involvement and approval of the project, letters of consent have been signed and delivered by the communities' representatives (Cf. Consultative Workshops Report: Annex 3).

Regional Consultation

165. Care was taken to ensure participation and collaboration of all key stakeholders right from the pre-concept stage, concept level, up to full proposal stage and will be followed till the implementation stage. Among the key stakeholders that were consulted during the consultative meetings in the respective countries and final regional workshop held in Entebbe, were government officials from the Directorate of Rural Hydraulics for Djibouti, the Ministry of Environment and Forestry for Kenya, Ministry of Water Resources, Irrigation and Electricity for Sudan and the Ministry of Water and Environment for Uganda as well as officials from OSS and those at lower government levels. The national and regional workshop essentially allowed the participation of other stakeholders including non-governmental organizations (NGOs), the private sector, development partners, research/academics as well as farmers and pastoralists. This approach was intended to create ownership by the various stakeholders and ensure sustainability of project interventions by creating institutionalized systems. This is also expected to establish a mechanism for scaling-up similar approaches and interventions in the future once the project is approved and funded. The regional consultative workshop was held on 15th March 2019. The regional workshop aimed at sharing the results of the local and national consultative meetings, harmonize positions and integrate inputs from country representatives in an open and transparent manner and answer the remain questions to ably submit the proposal to the Adaptation Fund. The proceedings are also indicated in the consultative report attached (Annex 3) to the proposal and the main outcomes are as follow:

- Updated proposal;
- Project implementation arrangement validated;
- Specific Grievance Mechanism approved;
- Project priority intervention areas validated;
- Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the region harmonized;
- New activities and specific intervention areas incorporated;
- Integration of activity ideas, recommendations and comments from stakeholders into the draft proposal.

Figure 16: Consultative meeting in progress and a group photo after the meeting in Kitui Kenya on 22nd February 2019

Figure 17: Consultative meeting in Sudan in Kosti, ElSalam and at the Ministry Headquarters on 3rd and 4th March 2019 respectively

Figure 18: Community members of Rupa S/c and their representatives and OSS signing the letter of consent to participate in DRESS-*EA project, Uganda on 13th March 2019.*

Figure 19 : Presentations from OSS and Djibouti respectively during the regional consultative workshop in Entebbe, Uganda on March 15th, 2019.

166. The process of consultations at the regional level with the different stakeholders at this stage has mainly focused on the project nature and its specific role in enhancing the resilience of the most vulnerable communities. During the consultative process activities and adaptation measures to be included in the project, defined key stakeholders, their roles, responsibilities, and contributions during project implementation were discussed; identified project management structures and issues of sustainability and ownership, especially by communities and local government. Others have included recognition of the role of women and youth in the implementation of the project, coordinating and collaborating with other existing projects, identification of priority problems/issues and possible solutions, identification of risks and/or possible conflicts and resolution mechanisms as well as projects/initiatives for possible synergies.

167. Finally, the participatory and consultative process as described above will not only be applied during project preparation but will also constitute a project approach during implementation until closure. All the project components include specific consultation workshops and meetings that will ensure the activities ownership and the achievement of the expected outcomes.

168. In a more specific way and as part of the consultation process to be put in place during project implementation, it is important to take into account the seasonality of the activities of the socio-professional groups. Indeed, the transhumant breeders, the gatherers, the farmers depend largely on their activities' seasonality. In fact, this challenge will be mainly faced when dealing with transhumant. The project consultations and population-based activities will consider this issue and plan the execution according to all these aspects.

Gender Consideration

169. In addition to all identified beneficiaries and the targeted populations at the local and national level, vulnerable groups and gender considerations were taken care of in compliance with the Environmental and Social Policy of the Adaptation Fund. The project consultation process was overall inclusive and appropriately considered gender as a key issue towards planned interventions. To ensure effective implementation of the project components, detailed information was deliberately collected from populations/community categories including men and women and ensuring representation of the elderly, disabled, children, youth and socio-economically disadvantaged groups.

170. Among the Gender-sensitive tools, gender analysis was used to collect the data. The Gender Analysis tool creates a "gender looking-glass" through which the community can be examined. The consulting team made deliberate efforts to interact with the various groups of men and women (different social-cultural groups, age, and locations) in addition to the end users at the community level who are the most vulnerable. In order to allow an effective gender mainstreaming into decision making, the project proposes to ensure the following:

i) Gender equality and women empowerment by significantly involving women and using appropriate gender tools such as gender mapping and analysis during planning, implementation, monitoring, and evaluation of the project.

ii) The project will also ensure that women play an adequate part in the four components of the project i.e. early warning, capacity building, drought adaptation actions and knowledge management by deliberately targeting 40% of the beneficiaries/participants being women. Relevant benefits expected by women and their roles will be emphasized, and the information presented and transmitted to the women in this regard will be made accessible despite the challenges they face. In order to ensure gender mainstreaming and responsiveness from the project design step to the implementation phase, the project aims to reach 50% of women among the beneficiaries. It is also important to ensure that at least 40% of women are involved and actively participate in the various activities under the 4 components of the project. For instance, in capacity building meetings or workshops, management committees such as the water management committees, drought management information sharing platforms, developing and formulating by-laws and ordinances for groundwater sources management in communities within the four selected countries, women should constitute at least 40% of each target group. At every stage of providing inputs such as for early warning devices, soil and water conservation, climate-smart agricultural practices, range, and livestock management 50% of the women will be the sole beneficiaries.

iii) Examples of the specific activities in which 50% women participation will be targeted include.

- Supporting or equipping project beneficiaries (pastoralist, farmers and extension agents) to access EW information
- Holding inter-ministerial and sectoral meetings for data sharing
- Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)
- Supporting regular stakeholder EW information feedback platforms for farmers and pastoralists
- Holding quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders
- Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists
- Supporting formulation of bye-laws and ordinances at sub-national and lower political units. The support required is facilitating the organization of a workshop for formulating as well as deliberating on the specific bye-laws.
- Undertaking exchange visits and learning tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives
- Facilitating community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach
- Supporting farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services. In this activity farmers and pastoralists will be provided with inputs
- Supporting protection of water wells and springs to ensure quality, quantity and efficient water use by providing inputs, for instance, live markers around the wells.
- Training the established water management committees to protect water wells and springs to ensure quality, quantity and efficient water use
- Supporting farmers and pastoralists to prepare high-value silage and hay for livestock during dry spells.
- Training communities in preparing high-value silage and hay for livestock to increase production of livestock products.
- Training in preparation of nutritious silage and hay is a function of its exposure to appropriate weather condition, methods of collection of materials from the field, using optimum temperatures for curing.

iv) The involvement of women in the activities that bring them to the forefront of making constructive and impactful decisions. The project design integrates gender considerations in the regional context and will involve gender-sensitive approaches as a way of ensuring active participation. For example, using women representatives at the various existing levels will add value and strengthen the consultation and decision-making process. Mainly, this is because women representatives are already in leadership positions and have the experience to share from past or on-going interventions.

v) Specific gender responsive consultations on Income Generating Activities (IGAs) will also be deliberately emphasized for women. These are growing of sisal and *Aloe vera*, art crafts, pottery, poultry, energy saving stoves and briquettes making. It is well known that women manage homes daily with numerous domestic chores. Therefore, consulting and eventually promoting IGAs that stay home women and mothers can engage in will be a vital innovative gender responsive consideration in the proposed project. Also, under Activity 4.1.2.4: on developing Strategies to empower women and other vulnerable groups in drought management initiatives, through a study will provide adequate information regarding gender considerations even beyond the lifespan of the project.

vi) At community level, collecting water is one of the roles of women. In the process of collecting water, it is evident that women are more knowledgeable and vulnerable to water issues ranging from utilization to management. Therefore, for this project women will be involved in groundwater management initiatives and protection of water wells by : (i) supplying or collecting and availing some groundwater and water well establishment materials; (ii) day-to-day monitoring of ground water resources and water wells ; (iii) maintenance and protection of ground water and water wells ; (iv) participating in all forms of training regarding ground water assessments and maintenance as well as establishment and maintenance of water wells. Their involvement in these activities, women will greatly contribute to ensuring sustainable quantities and quality water resources.

J. Full cost of adaptation reasoning

Increased use of cost-effective EWS by stakeholders: USD 2,387,100

171. Smallholder farmers and pastoralists face challenges of accessing timely and accurate climate information for planning and responding to drought risks. The current EWS are inadequate causing crop failure, the death of livestock, conflicts and food insecurity.

172. There is actually need to strengthen the capacity of existing EWS in the focal areas to be able to generate, analyze, package and disseminate timely early warning information to the farmers and pastoralists. This will enable them to plan their activities taking into account this information and increasing their resilience to drought.

173. The project will help to develop efficient and effective EWS systems by assessing the status of EWS in the target countries, equipping and upgrading selected weather stations, constructing, renovating and equipping EW information centers. DRESS-EA project will support the integration of traditional EWS with modern EW technologies, such as remote sensing derived products, time series of bioclimatic variables, as well as enabling project beneficiaries to access EW information (e.g. devices including, brochure, SMS, Radio etc.). It will also support the development of emergency drought management and response plans so that possibilities outside the drought management framework are will responded to.

174. The project will also strengthen institutional linkages for EW information where they exist and establish new ones where they don't exist. This will focus on: i) developing or reviewing EW information sharing frameworks at regional, national and sub-national levels, ii) developing and implementing strategy to operationalize the frameworks, iii) holding inter-ministerial and sectorial meetings for data sharing, iv) supporting national, regional and local EW information sharing Forums (including farmers and pastoralist associations) and v) supporting Incorporation of EW information into planning and budgeting processes of targeted countries.

175. In addition, a feedback mechanism for EW information will be developed through supporting regular stakeholder EW information feedback platforms for farmers and pastoralists. This feedback mechanism will consist on holding quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders, conducting KAP surveys on EW information as well as developing feedback user-friendly tools on accessing, utilizing and reporting EW information to mandated institutions.

Drought resilience capacity of key stakeholders at regional, national and local levels strengthened: USD 1,310,000

176. There is an inadequate capacity to integrate drought risk management interventions into development plans; concrete drought adaptation actions and responses at the community level with limited budget allocation for drought risk management at national level. Given this situation where Communities' drought coping mechanism is weak, the project plans to train various stakeholders. In this respect, the Training of Trainers (TOT) model (Table 3) will be applied. A training plan including the specific objectives, modules, methods and the persons to be trained is indicated in section A, under component two of this proposal. The training will cause a multiplier effect of the project interventions. Overall, the key stakeholders to be trained include: Regional Staff i.e. those involved in capacity building at regional level, gender and youth focal points and staff involved in development projects; National staff of the targeted countries- in the responsible ministries; Sub-national (local government staff and staff from selected civil society organizations working on similar interventions in the project areas of the countries.

177. To further increase uptake of project interventions, the project will support the establishment of Farmer and Pastoral Field Schools (F&PFS). These will be structures at the local level and a vehicle for inclusive participation of communities. The FFS and PFS are aimed at creating a cohesive structure at local levels so they can share and learn from each other. This cross-learning will promote sustainability of project interventions.

178. This component aims at building the capacity of stakeholders to enhance their drought resilience at regional, national and local levels by improving the adaptive capacity of institutions, farmers, and pastoralists in drought management. This will be done through i) undertaking capacity needs assessment to identify gaps and hindrances to effective drought management, ii) developing capacity building plans for regional, national and sub-national levels, iii) developing capacity building curriculum and tools, iv) undertaking exchange visits and tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives and v) supporting establishment and management of field learning centers. In addition to capacity building activities, the project will support; management of EW information centers, training, extension staff and artisans in drought adaptation interventions as well as facilitating community training workshops for farmers and pastoralists in drought risk management measures.

179. Furthermore, the project aims to develop or review drought management plans at regional, national and sub-national levels. It targets popularizing and integrating the drought management plans into the national strategies and development plans. The project will also lead to the formulation of bye-laws and ordinances at sub-national and lower political units. Regional and national drought management frameworks will be reviewed and strengthened and new ones developed where necessary, including regional and national drought management platforms to coordinate partner efforts. Finally, stock route agreements will be formulated and implemented to reduce conflicts among pastoralists.

Increased uptake and usage of drought adaptation actions: USD 6,279,920

180. Inappropriate and limited drought adaptation technologies are causing low crop and livestock food production levels leading to food insecurity and low incomes. Severe droughts seriously undermine crop and livestock production affecting yields and incomes of smallholder farmers and pastoralists. It affects the amount of water available for crop and animal production, the quality of rangelands and pastures and productivity of soils for crop production.

181. These will be addressed through: improving, developing and introducing innovative adaptation actions for soil and water conservation, water harvesting and storage structures, restoring and improving underground water sources, promoting adaptive agricultural practices in order to improve crop production, enhancing adaptive livestock and rangeland practices and creating an enabling environment for smallholder farmers and pastoralists adaptive activities. The Project will also support smallholder and pastoralists groups to undertake income generating activities (IGAs) including growing of sisal and *Aloe vera*, art crafts; beekeeping; briquette making; poultry and where applicable community tourism as well as provide competitive small grants targeting smallholder farmers and pastoralist associations to undertake IGAs or enhance their drought adaptation actions.

Increased awareness on drought risk management: USD 592,000

182. There is limited awareness on drought risks and adaptation actions amongst stakeholders leading to poor planning and responses to drought risks and disasters with low crop and livestock yields hence food insecurity and low incomes.

183. The project will support knowledge management and awareness creation through documentation of good practices and lessons on drought management. This will involve generating, packaging and disseminating EW information, documentation of lessons and best practices from project interventions. The knowledge and awareness raising component will allow packaging information dissemination materials in appropriate forms to ease uptake (e.g. policy briefs, brochures) and sharing and dissemination of knowledge and information through the use of existing and popular platforms e.g. electronic and print media, telecom that is easily accessible by the stakeholders.

184. In addition, the project will support existing channels/networks for information generation and dissemination (e.g. IDDRISI platform and national platforms), engage policymakers in the dissemination of drought management information and best practices as well as supporting drought management working groups to share and disseminate the information.

K. Project sustainability

185. The DRESS-EA project is built around creating and promoting activities that induce durable benefits at various aspects. To do so, the project sustainability will be reached through community participation which is built upon the basis of empowering and building capacity of different stakeholders. All project components are closely tied to each other and an entire component will be devoted specifically to train local staff at various levels. In addition, the planned interventions are structured in a progressive manner in order to provide conditions necessary for ensuring sustainability through all beneficiaries at all levels throughout the period of execution of the project. It has to be noted, that given the existing status of involvement and commitment, it is mandatory to secure commitments, appropriation and quality of the project's outcomes by all parties. In the selected countries, water is indeed an important transboundary issue that needs concrete involvement of decision making, and activities should be entrusted to governments through ministries and directorates...etc. This regional project will then ensure that the transboundary aspect of the drought issue will be tackled via well-coordinated efforts between the various countries to manage the water resources properly -- ownership in the future and prolong the project efforts. Financially, the project closure will be handled via the appropriation of best practices of economic means such loans and small grants. Trained and sensitized communities will keep the project achievements durable. National institutions with deep involvement into the project will ensure activities to be maintained for the benefit of the local communities. This will be matter of decision makers where transboundary benefits will be taken into consideration. The project will finally involve drought and water managements committees at local, national and regional levels whose role will be the ability to control and coordinate similar. This project will allow through its planned activities, the creation of an inter-ministerial platform which will provide political support on the water issues within the region along and after the project duration.

186. As already introduced, the design of the project has considered the sustainability of all project interventions in all aspects including environmental, economic, technical, social and institutional sustainability. The design of the project has considered the sustainability of all project interventions in all aspects including environmental, economic, technical, social and institutional sustainability as follows:

187. ***Environmental sustainability:*** The project will ensure environmental sustainability through strengthening the resilience of smallholder farmers and pastoralists through the EWS and the adaptive infrastructure to be developed, will on the one hand, allow to cope with drought-related crisis situations and on the other hand to avoid overexploitation of natural resources to compensate losses due to drought impacts. As regards to the project implementation, an Environmental and Social Management Framework (ESMF) will be developed and will act as a guide on handling environmental and social issues. For activities that are anticipated to have significant social and environmental impacts, independent Environmental and Social Impact Assessments (ESIAs) will be undertaken and approval sought from relevant Environmental Authorities depending on the laws of each of the focal countries. The ESMF has an environmental and social monitoring plan that will guide periodic monitoring and evaluation to track changes that could have adverse environmental and social impacts and ensure adequate mitigation.

188. ***Economic sustainability:*** This will be promoted through supporting existing and or new community groups with small competitive grants that enable them to scale up the innovative drought adaptation actions that generate additional incomes. To ensure economic sustainability especially of the targeted communities, the smallholder farmers and pastoralists the project will support women and youth groups with income generating activities, support improved crop and livestock production with improved and drought-tolerant crop varieties and animal breeds as well as organizing the farmers and pastoralists in cooperatives or strengthening the existing ones and linking them to markets to be able to sell their products. In addition, the project will support the farmers and pastoralists to add value to their animal and crop products so that they can be able to fetch higher market prices as well as prolonging

their shelf lives. All these will help the farmers and pastoralists to enhance their incomes, improve their livelihoods and ensure economic sustainability. However, to ensure that the infrastructure constructed by the project is economically/financially sustained and maintained a number of initiatives have been proposed. First of all, after project closure, Small scale infrastructure (i.e. weather monitoring stations, micro irrigation system, sand dams, solar irrigation system, watering points, bunds, water harvesting and storage facilities etc.) will be maintained by the farmer/pastoralist group committees. These committees will have some Memoranda of Understanding with local governments (including, County leaders, Wards or Local councils depending on the respective country) so that local people support little financial resources agreed upon by the groups to regularly maintain such infrastructure. Secondly, the project will train artisans amongst the community members and equip them with the knowledge and skill of repair and maintenance. The artisans to be trained will be carefully selected by the project in collaboration with the community leaders of the targeted sites. Training of artisans will be itemized based on the technology (i.e. infrastructures in place). This will enable the community to have a pool of artisans hence, minimizing shortage of them for a particular technology. In addition, the trained artisans will be linked to available local government service providers in the targeted areas. This way, they will be able to diversify their income which will enhance their motivation to continue undertaking repairs and maintenance within the community areas. Thirdly, the project intends to provide competitive small grants targeting smallholder farmers and pastoralists and their associations to undertake innovative water harvesting and storage infrastructure and innovative IGAs or drought adaptation actions. It is expected that the competitive small grants will empower gender group associations or committees to have some money saved from IGAs investments, so that group/association members contribute little financial resources to ensure sustained maintenance of small-scale infrastructure developed during the lifespan of the project. This initiative is expected to demonstrate sustainable maintenance of small-scale infrastructure. Local governments could as well provide such associations or committees with little financial resources to ensure sustainable maintenance and management of such small-scale infrastructure. This will mainly apply to water infrastructure where all water users will be encouraged to form user associations with executive committees that will be charged with taking care of the constructed water sources. They also ensure that such and other infrastructure are regularly maintained and remain in good conditions. Alternatively, farmer and pastoralist group/cooperative members could be required to pay a small and affordable fee for maintenance of their water sources and other infrastructure. Given this, the project will establish community infrastructure maintenance fund. The fund will be generated through community contributions on a regular basis (e.g. Monthly). The project will support the establishment of community committees to oversee the infrastructure investment and as well collect the contributions from the users. The monthly fee will be designed in such a way that its negligible and affordable by the community users. The return due to establishment of the community infrastructure maintenance fund significant because the fund requires less manpower and no costs in terms of collecting it is required. Therefore, its appropriate to a community that has meagre income. At this stage, the Local governments as stakeholders could be explicitly required to budget for maintenance of such infrastructure such that this activity is budgeted for every year, post the project period. In fact, small scale infrastructure is established in areas under the political jurisdiction of local governments. Whatever project investments and developments undertaken at local levels should at least be known by such leaders. Local leaders have a role to ensure that development initiatives are well maintained and secured through established groups. Local leadership is mandated to support such group infrastructures with security against vandalism and any form of destruction. The leadership could therefore use small budget line to support such activities such as supporting groups to maintain existing developments such that they do not go to waste. Additionally, the committee members could seek for Memoranda of Understanding with Local Council leadership to be support in maintaining their infrastructure. Also, The local government leadership will be part of the project execution. This implies that, while the local governments are developing their sub-national development plans, they will include the project activities into their development plans. This process enhances ownership of the interventions and as such the local governments will be duty bound to continue their operations. It's the ownership of the intervention that will motivate the local government to allocate budget to maintain the infrastructure even after project closure. In addition, the proposed project under Activity 4.1.2.4: Develop strategies to empower women and other vulnerable groups in drought management initiatives, through a study will provide adequate information regarding financial sustainability beyond the lifespan of the project.

189. ***Technical sustainability*:** The project design emphasizes development and upgrading new or existing EWS respectively for technological sustainability. It also proposes the capacity building of all stakeholders including technical staff handling collection analysis and dissemination of early warning information at regional, national and sub-national levels, extension staff as well as farmers and pastoralists especially in undertaking concrete adaptation

actions. This will ensure enhanced resident capacity to process and disseminate early warning and drought-related information to key stakeholders as well as the technical capacity to undertake concrete adaptation actions even long after the project has ended.

190. ***Social sustainability:*** The project design has put emphasis on working with farmer and pastoralist groups as well as women and youth groups but within these same communities. The project will build the capacity of the existing groups and where they don't exist facilitate their formation. The farmer field schools' approach, the grants, the marketing initiatives including cooperatives as well as the value addition initiatives will be based on these groups. These will enhance cohesion amongst these groups and as well as social sustainability that will ensure projects' results conservation and valorization even after its end date.

191. ***Institutional sustainability:*** The project design will ensure that *the* project will be implemented using the already existing government structures at regional, national and sub-national levels. At the regional level, the project will be executed by Global water partnership Eastern Africa based in Entebbe Uganda**.** At country level the project will be implemented using the structures of the focal ministries i.e. Ministry of Agriculture Water Fisheries and Livestock for Djibouti, the Ministry of Environment and Forests for Kenya, Ministry of Water Resources, Irrigation and Electricity for Sudan and the Ministry of Water and Environment for Uganda. This coupled with the capacity building of the officials who will be involved in project implementation will ensure that resident capacity will be built within the existing structures and ensure sustainability of project interventions after the project has ended. The development and integration of the drought management plans into country-specific and lower level development plans will also ensure that the activities initiated by the project will continue to receive funding beyond the project lifespan.

L. Environmental and Social impacts and risks

192. Like any project that involves activities with strong interactions with ecosystems and the population, DRESS EA project could have environmental and social impacts. This project was developed in compliance with 15 principles of the Adaptation Fund Environmental and Social Policies. It is important to identify at this stage, the possible negative impacts in order to foresee the necessary mitigating measures. The table below sums up the impacts/risks' evaluation against the AF Environmental and social principles. Appropriate mitigation measures for each identified impact / risk are detailed later in the section C part III.

Table 9: Adaptation Fund E&S checklist

Checklist of environmental and social principles	No additional assessment is required for conformity	Potential impacts and risks - additional assessment and management required for the conformity
Compliance with the law		X (*compliance with the national laws is supported by the delivery of conformity certificates by the four national authorities in charge of environmental and social issues*)
Access and Equity		X
Marginalized and vulnerable groups		X *(Gender Analysis study has been conducted during the preparation of the Full Proposal)*
Human rights	X	
Gender Equality and Women's empowerment		X *(Gender Analysis study has been conducted during the preparation of the Full Proposal)*
Core Labour Rights		X
Indigenous People		X (Consent letters signed by the representatives of the indigenous people has been delivered and further detailed analysis will be conducted)
Involuntary Resettlement		X
Protection of natural habitats		X
Biodiversity conservation		X
Climate change	X *(Climate Change vulnerability study has been conducted during the preparation of the Full Proposal)*	
Pollution prevention and resource efficiency		X
Public health		X
Physical and Cultural Heritage		X
Soil and land conservation		X

P1- Conformity with the law

193. The project proposal has been developed in alignment with a number of national and regional priorities, policies, plans, and national technical standards for sustainable development and adaptation to climate change. It will also take into account the international and national standards related to biodiversity, land conservation, water resources, ecosystem management and poverty alleviation.

194. With regards to the Environmental and Social Assessment, and following discussions conducted during the several consultations workshops, the national executing entities have submitted the ESIA to their national authorities for review and approval. This process is underway and the delivery of conformity certificates by the four national authorities in charge of environmental and social issues is ongoing.

195. At this stage of full proposal development, some activities/ sub-projects are still unidentified and so are their impacts such as the component 3 Income-Generating Activities (IGAs), therefore they may require EIA depending on the size and the location of their implementation. The risk screening procedure that will be applied should take into consideration the conformity of these activities with the four national laws and regulations law. In fact, during implementation this Unidentified Sub-Project will need to undergo a detailed screening, a consultation process, a safeguard measures development and a strict approval method developed.

196. The risk screening procedure that will be applied should take into account in addition to the conformity of these activities with the national laws the compliance with the Adaptation Fund 15 safeguards.

P2- Access and Equity

197. In general, the project will provide fair and equitable access to benefits for all beneficiaries including the most marginalized and vulnerable groups through the provision of water, sustainable livelihoods, solar energy, updated and accurate alert messages and effective knowledge.

198. Under Component 3 and during the implementation of socioeconomic activities to enhance communities' livelihoods, local authorities at each of the project sites and in the beneficiary, communes will ensure that sub-project activities will be equitable. Nevertheless, project beneficiaries will be in general rural people (pastoralists and smallholder farmers) who have difficulties to access to the decision-making process, this may limit their opportunities to benefit from projects outcomes. Additionally, there is a risk that all members of the beneficiary groups or community are not involved in the preparation and the implementation of their subprojects. Consequently, consultation workshops will be held to enhance the participatory decision making as well as ensure a close monitoring targeting all the project beneficiaries to enhance equal access of men; women, youth and the most vulnerable.

199. In addition, OSS, as a regional implementing entity and in accordance with its practices, makes available to all direct and indirect beneficiaries of the project a grievance mechanism that will inform about conflict situations and will ensure access and equity.

P3- Marginalized and vulnerable groups

200. The project will provide opportunities for strengthening the resilience of the local population, communities and indigenous people. However, marginalized and vulnerable groups that could be impacted by the project activities have been assessed and precisely defined and the information is provided in Part I "Project Background and context", paragraph 1.2.5 on Population and indigenous people. Further information is provided in the vulnerability assessment annexed to the proposal (Annex 5 P. 109). A gender global analysis has been established as well for a better understanding of the social construction.

201. Besides, according to the project components, marginalized and vulnerable groups will be encouraged to participate in the decision-making processes at the local and communal level. In fact, during the several consultation workshops, representatives from the several target groups were invited to take part in some activities design. Additionally, as detailed in the component 3, they will be supported to improve their livelihoods by supporting them to undertake concrete innovative and appropriate sustainable land, water, crops and livestock management measures or technologies. Some of the specific climate change and drought adaptation interventions include developing soil and water conservation, water harvesting and storage structures, mini-irrigation systems to support crops, underground water sources, drought resistant pastures and crops promotion and IGAs enhancement among other things. So, impacts on these groups will be positive particularly women and youth.

202. During the first steps of project implementation, additional assessment (gender, land right, etc.) will be carried out, to avoid exclusion of marginalized groups and to minimize potential impacts related to the project activities.

203. Nevertheless, although the project will have no negative impact on the marginalized and vulnerable groups, some risks can be identified related to the insufficient knowledge and access/use of technological devices such as mobile phones or lack of good cellular connectivity specially required in component 1 on Early Warning System design and implementation. In order to avoid the exclusion of these communities and to broadcast the warning messages, local radio stations and traditional practices such as criers, maps and sirens will be put in place to reach them.

204. In addition, the component 3 will focus on improving livelihoods for farmers and pastoralists contributing to improve their resilience by constructing, among other things, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams) and mini-irrigation and water delivery systems. Nevertheless, there is a risk of reducing or prohibiting, because of the project, the access of certain populations to the resources on which they depend (pastures, water, fruit trees, crops, fishing grounds, forest, public services). Thus, it is planned to organize consultation meetings with local administrative and customary authorities and steering committees representing communities and indicate that any sub-projects limiting access to resources or sources of income will not be funded. All activities implementation must be decided in common with consultation of all concerned communities. In addition, OSS, as a regional implementing entity and in accordance with its practices, makes available to all direct and indirect beneficiaries of the project a grievance mechanism that will inform about conflict situations if any.

P4- Human rights

205. No further assessment is required. No activities are identified whose execution does not respect international human rights. The project objectives aim at promoting fundamental human rights for equitable access to services, water for irrigated agriculture, capacity building, and information.

206. The project will respect the human rights of all actors and local population in accordance with its objectives and scope.

207. Moreover, and particularly for this project, the regional approach will provide an adequate framework to ensure respect for human rights at the level of each country. The proposed project will promote the basic human rights of access to food, water, and information.

P5- Gender Equality and Women's empowerment

208. During project design, a gender analysis study has been conducted as a preparatory step to elaborate the project proposal. In fact, gender mainstreaming in project activities aims at analyzing gender (male/female) and youth (boys and girls) relationships as well as advocating the full development of all women and men. Therefore, gender equality is a prerequisite in the implementation of concrete adaptation actions and is the baseline for communication, training, and awareness raising activities to be undertaken within the framework of the project.

209. Indeed, component 2 aims at strengthening and improving the adaptive capacity of various stakeholders including women and youth that are affected and contribute to drought adaptation and resilience in various ways. Besides, project activities under the component 3 aim at establishing an innovative competitive grant scheme targeting household value in addition to food crops and food crop and livestock products among other things. The competitive small grants scheme will focus on encouraging and rewarding the efforts of the most vulnerable among smallholder farmers and pastoralists such as the women, youth and elderly.

210. So, women will be involved in the design and the decision-making processes. In addition, they will be considered in the livelihood improvement activities (e.g. IGAs) as well as the capacity building and information just like men. Thus, women will ensure their income, living conditions and the sustainability of the promoted activities.

211. Nevertheless, the cultural and social norms of the project area encourage women to question the dominance of men and claim their role in decision-making. There is therefore a risk that women may not benefit equitably from proposed adaptation measures, capacity building interventions and gender equality in employment due to male domination.

212. Furthermore, it is likely that the current stage of the project proposal development does not provide a comprehensive overview of the expected impacts of the project on the gender aspect, despite the conducted study. Thus, it is planned (i) to carry out Communication and sensitization of populations on the gender issue to ensure

gender equality in income-generating activities, (iii) to strengthen the representation of women and youths in the various consultation workshops, and (iii) make available a grievance mechanism.

P6- Core Labor Rights

213. As a global framework related to the fundamental rights of work, the four project's beneficiary countries have ratified the eight ILO Conventions. Additionally, during the project design stage were national and regional stakeholders have been involved, the core labor rights have been highlighted. So, the project will be implemented and managed in compliance with the international and the countries designated labor laws. As a result, compliance with fundamental labor rights will be ensured in all the proposed project activities and especially the community-based ones. In fact, the component 3 that encompasses the adaptation actions implementation where communities will provide the local labor force, core labor rights compliance will be mandatory.

214. Concretely, it is intended to establish contacts with representatives of the local communities responsible for carrying out some activities, where their mandate and their rights will be clearly explained. Besides, during activities execution, the national executing agencies will be in charge of the follow-up and monitoring of the worksites including activities progress and the respect of the labor and safety rights of workers. Nevertheless, it is likely that accidents or occupational hazards during the project preparation or implementation could occur. In addition, there is a risk of late or unpaid salaries or remuneration non- compliant with the countries labor legislations and laws. Finally, children's labor will be forbidden as well as remuneration inequity between men and women.

215. As regards to security at work, it is planned to (i) provide workers with protective clothing (nose and mouth masks, ear muffs, overalls, industrial boots and gloves) and helmets as applicable, (ii) Sensitize workers and populations to the risks related to the undertaken activities, and (iii) design and implement safety measures and emergency plans to contain accidents risks and ensure the application of safety standards by companies (equipment, signs, training, etc.). Finally, there will be a close follow-up and monitoring of the worksites by the national executing entities including schedules, activities progress, respect of the labor and safety rights of workers and conformity with national labor codes.

P7- Indigenous People

216. As part of the elaboration of the project's contextual framework and the environmental and social assessment of the project's intervention areas, the composition of local populations and communities was defined. Indeed, the 4 beneficiary countries of the project are concerned by the presence of indigenous peoples in the selected project sites, as presented in Part I Title 1.2.5. It is important to notice that the project beneficiary countries are members of the ILO Convention (Djibouti Member since 03.04.1978, Kenya Member since 13.01.1964, Sudan Member since 12.06.1956 and Uganda Member since 25.03.1963).

217. Based on this finding, it is important to point out that the involvement of representatives of the local communities and especially the indigenous peoples during the preparatory phase of the project has been at the center of the concerns of the executing and implementing entities. Indeed, based on the principle of Free, Prior and Informed Consent (FPIC), since the first preparatory activities of the project (workshop, meetings, field visits, etc) the active participation of the representatives of the indigenous peoples and the Ethnic Groups has been assured. They have been informed of the project details, the potential impacts, the mitigation measures and the grievance mechanism. They also expressed their needs and expectations (cf. consultative process). Moreover, as proof of their involvement and approval of the project, letters of consent has been signed by their representatives and delivered.

218. As regards to the project impacts on indigenous people, they will be the same as on all the other communities. There will be no major risk on their assets, resources, culture, land and rights. The main risks that could raise are related to the ways they use water resource, transhumance routes, livestock management, agricultural practice etc. Therefore, a detailed analysis will be carried out by local and national agencies to understand the traditional use of natural resources especially regarding to water and land use. This will be the major project challenge and to cope with this the participatory approach will be applied. They will be involved at all stages of the project implementation to allow a better ownership of the project outcomes by these populations. The traditional knowledge of indigenous people on Drought will be useful when preparing the Drought Management Plans and the early warnings and information dissemination.

P8- Involuntary resettlement

219. The project will not have any activity related to carrying out or removing local populations or even losing their land use rights. It will not include community resettlement activities. Their protection and conservation will rather be promoted by the project.

220. However, the construction of appropriate and innovative water harvesting and storage infrastructure as well as mini-irrigation and water delivery systems will occupy spaces and may affect private lands or related activities. Similar potential impact is also expected due to the management of rest areas for transhumant since this will occupy further spaces. The choice of these areas will include criteria that stipulate no population resettlement through giving priority to state-owned lands. In the case that there is no choice but to opt for private lands, compensation measures will be arranged.

P9- Protection of natural habitats

221. There are no potential direct risks to the protection of ecosystems and to the natural habitats through the project activities. Nevertheless, there is a possibility of indirect risks related to the implementation of solar-pumped boreholes, water harvesting and storage infrastructure (e.g simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, etc) as well as micro-irrigation systems can result in the vegetation and wildlife habitats destabilization in the implantation site. Also, the presence of labor and construction equipment, if this is necessary for carrying out the works or activities planned by the project, could have a temporary impact on the fauna and flora of certain intervention sites.

222. So, to face up these risks, a close follow-up of the project activities implementation must be arranged including (i) follow-up of the implementation of all activities related to the protection and management of ecosystems and natural habitats, (ii) monitor the activities related to the understanding/monitoring of the number and the size of the transhumant pastoralists herds, the grazing destinations (including protected areas) and the distribution of natural habitats types to provide information for decision-making, (iii) establishment of E&S Impact Assessment Studies as applicable according to the size of the construction to be undertaken, (iv) policies and laws to protect natural habitats will be screened with the stakeholders to ensure that the critical habitats are legally protected, and (v) sensitization sessions to local populations on good environmental practices and the protection of natural habitats.

P10- Biodiversity conservation

223. The protection of ecosystems and their biological diversity is one of the essential objectives of project's components 1, 2, 3 and 4. There are no potential direct risks to the protection of ecosystems and its biological diversity conservation through the project. It will rather provide opportunities to promote planning for biodiversity conservation activities, such as reforestation and capacity building to strengthen the efficient management of natural resources. The ecosystems and biodiversity assets considered are dryland ecosystems including savanna woodland belts. The biodiversity there in are provided and describe in Part one, section 1.2.8 on Biodiversity (See page 65) Nevertheless, as part of the implementation of some activity, the work of releasing rights of way from the targeted sites may affect the flora and fauna. These are mainly tree cutting and loss of bird habitat and wildlife in case of vegetation clearance for water harvesting and storage sites construction which may represent a form of disturbance.

224. Consequently, to mitigate these risks, it is intended to (i) follow-up and monitor the implementation of all activities related to the protection and management of ecosystems, (ii) minimize vegetation clearance As Low As Reasonably Practical (ALARP), (iii) pre-survey the proposed construction site areas to avoid sensitive habitats that have high diversity of indigenous plants, and (iv) promote awareness sessions, capacity building and peer learning to strengthen the efficient management of natural resources, including aquatic species, animals and forests. With regard to tree removal, it will be recommended to avoid cutting large trees with a diameter >20cm and compensatory reforestation will be executed where needed.

P11- Climate change

225. The project will increase the resilience of the ecosystems and the adaptation capacity of the local population. However, climate change vulnerability study has been conducted during the preparation of the Full Proposal. According to this study, the adverse effects of climate change are being felt moderately both on the natural ecosystems and on the livelihoods of communities. None of the proposed project activities has been identified as

potential source of greenhouse gases emission. On the contrary, the component 1 is dedicated to establish the early warning system to prevent natural disasters risks and impacts whereas through its component 3, the project aims at increasing the adaptive capacity of the local population and the resilience of ecosystems to climate change adverse effects. Finally, the component 4 is devoted to information and stakeholder's capacity building on climate change.

226. Nevertheless, a potential change of the land use due to the field clearing to construct innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, etc.) they may generate the risk of the sequestration decrease. So, it is intended to promote reforestation to offset these lands.

P12- Pollution prevention and resource efficiency

227. The project will contribute to the energy efficiency through the interventions on alternatives energy sources such as solar and the introduction of the improved economic stoves. Additionally, it will enhance the efficient use of water through the small irrigation techniques and the water storage constructions establishment. Moreover, projects activities advocate the prevention of air, water, and soil pollution by controlling bushfires through the EWS technology and monitoring the water harvesting through the component 3 that undertakes these activities more in detail. Finally, the project will create awareness, strengthen technical capacities and provide support on water management for users at different levels (component 4). However, despite the importance of its interventions, the project proposal has not been identified as huge energy demanding or big consumers of natural resources and therefore would require measures for their efficient use. Nevertheless, potential contamination of water reservoir through introduction of impurities, wastewater and solid waste is possible. That's why, it will be important to conduct regular water quality monitoring and maintenance of the water supply system as well as ensure the monitoring of water quality by chemical analysis, improve the awareness on water resource management and conservation through consultation workshops, and finally separate the infrastructures for human and animal use and provide a specific installation for the watering of livestock near the tanks. Besides, increase in dust levels and air pollution could occur due to gas emissions from machinery during field work or consultants and various stakeholders' vehicles during workshops and field visits. To mitigate these risks, it is intended to limit levels of dust through good practice such as watering of access routes, construction sites, and other disturbed sites and cover lorries transporting construction materials, (ii) reduce gaseous emissions by selection of appropriate machinery and regular servicing of vehicles and (iii) Incite to use a good quality fuel meeting the standards.

228. With regards to the micro-irrigation systems establishment, vandalism of water pipelines infrastructure, Wastage of water and leakages at consumer points as well as over abstraction of water can be risks. So, creation of awareness on water Resource management and conservation through Consultation workshops, creation and implementation of a Social Engagement Plan – SEP, monitoring of the irrigation system installed as well as the irrigation schedule should be undertaken.

229. Finally, the execution of the project different activities may generate waste related to the presence of the workers, construction engines, and equipment, etc. To mitigate these risks, it will be recommended to proceed to waste management plans in the construction sites, think to waste recycling / composting in the USPs.

P13- Public health

230. The project will not have a negative impact on public health. On the contrary, it will contribute to improving the sanitary conditions of communities by monitoring ecosystems, water, and soil quality, to prevent the population from natural disasters through the EWS and to improve their incomes for easier access to health facilities. It will as well reduce smoke out traditional cooking stoves by producing and processing improved economic ones such as described in the component 3. Nevertheless, water-related diseases (such as Malaria) may increase simultaneously with the construction of water storage constructions. So, it is mandatory to raise awareness and support mechanisms to prevent and control spread of HIV/AIDS among the program workers and local communities as well as to implement disease awareness and management programme for Malaria and Bilharzia. Additionally, there is a risk of Noise and odor nuisance. To face this risk, it is intended to (i) select appropriate machinery and regular servicing of machinery and vehicles, (ii) use and ensure the application of security measures by companies such as ear plugs and ear muffs among workers when noise levels exceed 80 dBA for 8 hours and limit the hours of exposure of workers, and (iii) apply a noise mitigation policy for all operations in accordance with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution).

231. However, construction activities may increase the dust levels. So, workers will be provided with appropriate dust protective gear including masks and overalls. With regards to the persons safety in maintaining the tanks or dams (in

particular risk of fall of man or cattle), security will be ensured at the reservoirs especially at the dams' area by providing adequate protective equipment (e.g protective mesh). Additionally, there is a risk of disease transmission by the transhumant pastoralists and/or their herd. Thus, Veterinary support in order to prevent livestock and transhumant herd related disease transmission is crucial.

232. Finally, there is a risk of health problems due to tank water low quality or the proliferation of insects near the water points. Thus, it will be recommended to (i) not collect the first runoff that is often heavily loaded or provide a decanter for tanks to improve the water quality, (ii) train communities that tank water is not consumed by the population without adequate treatment (after boiling or treatment), and (iii) Provide family sanitary kits (filters and disinfectants).

P14- Physical and Cultural Heritage

233. The project will have no activity related to the destruction of physical and cultural heritage. Their protection/conservation will rather be encouraged by the project. Nevertheless, it is not excluded that some unidentified subprojects activity could have an effect on physical and cultural heritage. That's why, participatory workshops to identify areas of physical and cultural significance to prevent activities/ subprojects implementation are relevant.

P15 -Soil and land conservation

234. The project will promote the conservation of soil and land resources as detailed in the component 3, especially through the improvement of agricultural good practices such as reforestation, restoration and rehabilitation of degraded lands. Besides, component 4 undertakes activities that aims at building farmers and technicians' capacities in order to enhance environmental awareness and soil and land better management solutions. Furthermore, livelihood diversification through the promotion of several IGA will help reduce farmers' pressure on forest soils. However, there is a risk of increased soil erosion. So, where applicable, it will be recommended to install specific measures to combat erosion (dry rock, gabions, stone bunds) and plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found appropriate. There is also a risk of soil compaction by the machinery during construction or maintenance. Thus, to face up to this risk, sustainable techniques such as agroforestry, among others, are to be boosted in order to restore damaged lands. It is also intended to promote awareness sessions with the local population to strengthen the effective management of soil and land. Finally, the project plans to carry out a follow-up and monitoring of the implementation of all activities related to the soil and lands conservation.

235. Gender considerations will be made at every stage and intervention of the proposed project gender will be a major consideration in for instance capacity building meetings or workshops, management committees such as the water management committees, drought management information sharing platforms, developing and formulating by-laws and ordinances for groundwater sources management in communities within the four selected countries, women should constitute at least 40% of each target group. Also, at every stage of providing inputs such as for early warning devices, soil and water conservation, climate-smart agricultural practices, range, and livestock management at least 40% of the women will be the sole beneficiaries. A gender analysis for project interventions as well as the action plan are present in Annex 4.

III. PART III: IMPLEMENTATION ARRANGEMENTS

A. Project management arrangements

Implementing Entity

236. The project will be implemented by the Sahara and Sahel Observatory (OSS) who will serve as the Regional Implementing Entity (RIE) and will be in charge of all financial, monitoring and reporting aspects to the Adaptation Fund. The OSS will also provide administrative and management support to the regional executing entity and will be responsible for reporting project related information to the Adaptation Fund.

Executing Entity

237. The project execution will involve stakeholders at the regional, national and local level, as follow:

At the regional level

238. Global Water Partnership Eastern Africa (GWPEA) with significant experience coordinating regional development projects will execute the project. GWPEA as a Regional Executing Entity will benefit the DRESS-EA project through mobilizing GWP's extensive experience in demonstrating, documenting and partnership building on water resources management, climate resilience, and drought management. Specifically, GWPEA will support the national Executing Entities in terms of capacity building and knowledge management, creating a cross-learning environment and strengthening the regional partnership building aspect.

239. The role of GWPEA will be to provide management support (technical and financial) and as well consolidate reports from the executing countries. In addition, GWPEA will support monitoring interventions and specifically, ensure that the regional aspect of the project is well articulated and fulfilled. To guarantee the regional aspect, the project entails the following rules/steps; first, Cooperation/coordination in data and information sharing; secondly, sharing available technology and expertise; thirdly, minimizing and /or eliminating duplication of efforts and fourthly, contributing to regional frameworks in the IGAD region.

At national level

240. Four National Executing Entities (NEE) will execute the project. The NEE for the project will be i) the Ministry of Agriculture, Water Fisheries and Livestock of Djibouti, ii) Ministry of Environment and Natural Resources-Climate Change Directorate for Kenya, iii) Ministry of Water Resources and Electricity of Sudan and iv) Ministry of Water and Environment- Directorate of Water Resources Management of Uganda. The NEE will be responsible to consolidate the results from the project sites within their respective countries for onward transmission to the Regional Executing Entity. In order to ensure cross-fertilization of project interventions and increase their ownership by stakeholders, the NEE will execute the project in partnership with strategic stakeholders. Each of the Executing Entities has lower established governance units through which project activities will be executed.

241. The NEE will collaborate with institutions in the respective countries during the project activity execution. These include the Designated National Authorities; Ministries, Departments and Agencies (MDA) that are mandated to support climate resilience and livelihood improvement- these include Ministries of Agriculture, Ministry of Water and ministries in charge of disasters/drought in the country. In some instances, higher political offices e.g. Office of the Prime Minister (OPM) in Uganda as an overseer and overall coordinator of government ministries may be involved. Furthermore, the project will engage with stakeholders at the sub-national and local levels.

242. For example, the local government, lower political units, and community structures/committees. Table 10 summarizes executing entities by country and their respective potential partners.

At the local level

243. The project execution offices will be based at local government offices of the selected project sites in the respective countries. The project execution offices will closely collaborate with local government structures in the execution of the project interventions following the local authorities planning guidelines.

Table 10: National Executing Entities

Country	Ministries	National Executing Entity/ Institutions to partner	Role of the institution as a partner
Djibouti	Ministère de l'Agriculture, de l'élevage et de la mer chargé de l'hydraulique	Directorate of Rural Hydraulics Executive Secretariat for Risk and Disaster Management (SEGRC)	Advises the national committee on natural disaster
Kenya	Ministry of Environment and Forestry	Climate Change Directorate Kenya Meteorological Department Ministry of Water and Irrigation	
Sudan	Ministry of Water Resources, Irrigation and Electricity	Ministry of Environment and Physical Development Higher Council for Environment and Natural Resources	
Uganda	Ministry of Water and Environment	Directorate of Water Resources Management DWRM National Environment Management Authority Department of Disaster Preparedness and Management- Office of the Prime Minister Uganda National Meteorology Authority Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) District Disaster Management Committees (DDMC)	Coordinates and response to drought-related emergencies including supporting a number of community-based programs

244. Other partners such as IGAD Secretariat/ICPAC (IGAD Climate and Prediction Application Center) will be involved in providing political support and technical backstopping respectively. IGAD secretariat is coordinating drought activities in the region through the "IGAD Drought Disaster Resilience and Suitability Initiative (IDDRSI) framework.

245. The DRESS-EA project objectives are consistent with the overall objective of IDDRSI and will, therefore; contribute to the framework goal, which is attaining drought disaster resilient communities, institutions, and ecosystem in ASALs38 of IGAD by 2027. ICPAC is the technical arm of IGAD through which the DRESS-EA project will benefit from enormous data/information and experience in seasonal forecasting and drought characterization.

246. The project organogram below indicates the management structures for the project and how these will interact with each other and at the different levels.

247. The roles and responsibilities of each entity are presented in Figure 20.

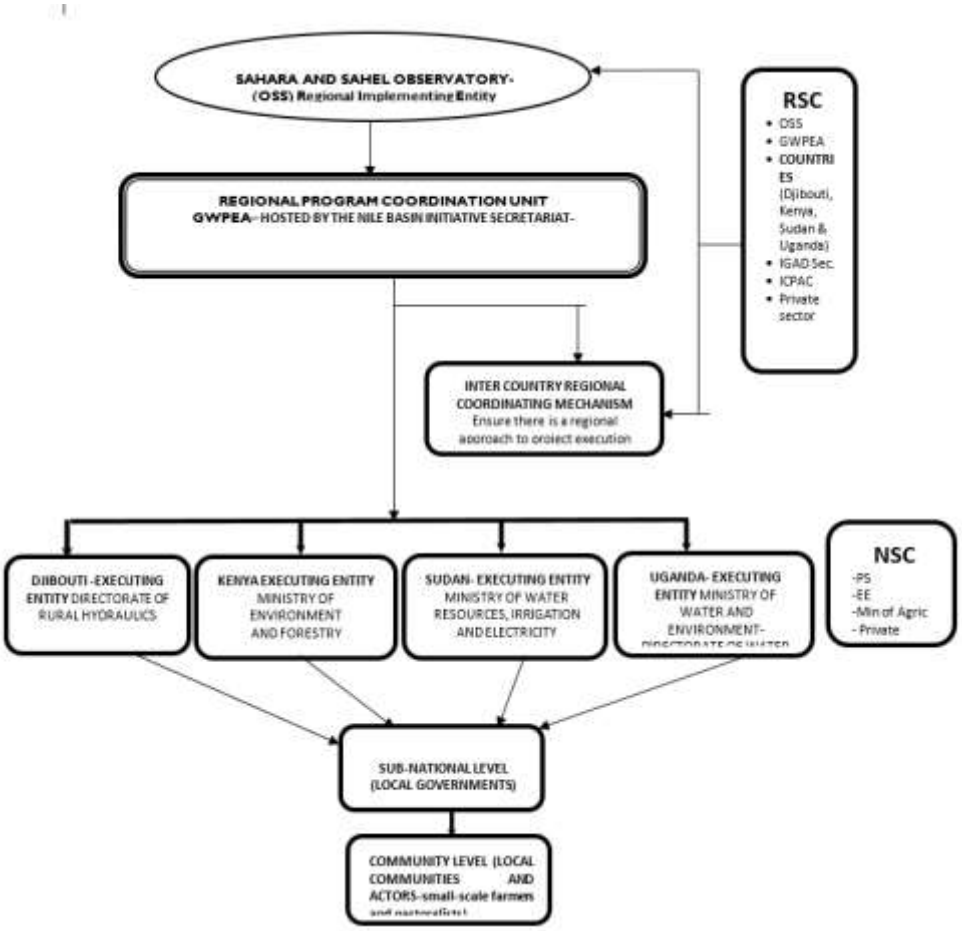


Figure 20: Project Implementation arrangements

Table 11: The key implementing and executing entities and their roles

No	Entities	Role and functions
1	**Sahara and Sahel Observatory (OSS)**: Regional Implementing Entity (RIE)	• Oversee overall financial and monitoring aspects of the DRESS-EA project • Reporting of project consolidated results to the Adaptation Fund • Approval of project annual work plan and budget at the regional level • Approval of annual financial and technical reports • Provide administrative and management support to the regional executing entity
2	**Global Water Partnership Eastern Africa (GWP-EA):** Regional Executing Entity – (REE)	• Project management and execution at the regional level (IGAD region) • Ensure compliance with the project regional dimension • Provide Technical Advice, guidance and support to the project • Communication, networking and partnership building • Supporting executing entities during operationalization of activities at country level • Support in policy influencing at the regional level/ also at country level through Country Water partnerships[39] • Monitoring and evaluation at the regional level and M&E data collecting from NEEs • Providing technical and financial reports to OSS based on national reports • Will be constituted a Regional Implementation Unit (RIU) composed of a Regional Project Manager, Finance Officer, Communication Officer, Monitoring, and Evaluation Officer. The roles of the RIU include: **Regional Project Manager** • Program management (Ensure that project activities are on track and that key results are achieved) • Provide guidance on linkage and consistency of project activities in countries • Communication, networking and Partnership building • Supporting countries in project implementation **Finance Officer**

		• Support in project financial management • Monitor budgeting and financial expenditures • Ensure correct financial reporting of the executing entities **Communication Officer** • Develop project communication materials • Ensure project publicity and visibility • Networking and partnership building on the international level **Monitoring and Evaluation Officer.** • Design the project's M&E system in consultation with the stakeholders • Review and revise the project M&E tools • Design additional M&E tools, as and when required • Maintain an up-to-date catalog of all project M&E tools and forms • Ensure that all project reports are sent to the correct people and maintain distribution lists for various reports • Conduct secondary verification of all results data received from partners countries and or stakeholders, including conducting verification visits, as appropriate. • Ensure that partners submit reports within the agreed time schedule • Ensure quality of narrative reports prepared by DRESS-EA project partners • Monitor quality of activities within the project by conducting site visits, as appropriate • Analyze the project's M&E data and make recommendations to the project management team
3	Executing countries: Djibouti, Kenya, Sudan and Uganda)	• Support project management and execution at the national level, • Ensuring the project creates a positive impact on the beneficiaries • Consolidation the results from the project sites and link with the REE • Ensure cross-fertilization of project interventions and increase their ownership at the national level • Monitoring and evaluation at national level • Providing technical and financial reports to REE (GWPEA)
4	Local governments (sub-National Level)	• Create a conducive environment for the program execution especially by mobilizing communities and technical experts at the sub-national level • Provide political support and advocacy • Ensure ownership and sustainability
5	Community structures	• Key partners and implementers of the program at the local level • Labor and local material contribution for program activities (in-kind contribution to the project) • Ownership and sustainability by establishing community management structures
Other: Regional level		
6	Regional Steering Committee	• Meet twice a year and provide strategic direction for the project at the regional level. • Meetings will be organized back-to-back with other technical meetings
7	Regional Technical Advisory Committee/ Inter-Country Coordinating Committee	The committee will be constituted by the technical experts from the executing entities- and will include Djibouti, Kenya, Sudan and Uganda. Also, GWPEA and ICPAC will be part of the committee. • Meet twice a year • Provide technical guidance to the project • Provide technical support to the implementation of the project • Ensure that the regional aspect of the project is realized
Other-Country level/National Executing Entities		
8	National Project Steering Committee	The NPSC will meet twice a year and will be composed of multi-sectoral stakeholders including Ministry of Agriculture, National Environment Authorities/agencies, National Designated Authorities, climate change departments or directorate, ministry in charge of disasters or droughts. Each of the executing countries will have steering committee structure based on the nomenclature of the ministries, departments, and agencies in the country. • Provide strategic direction for the project at the country level • Meetings will be organized back-to-back with other technical meetings
9	Project Management - Program management at country level-	• Provide guidance on linkage and consistency of project activities in the countries • Communication, networking and Partnership building • Supporting countries in project implementation Overall, project management at country level will be as follows: A Project Manager will be appointed and stationed at the project focal point in the country (for example- for Djibouti, the project manager will be someone appointed from the Ministry of Agriculture Water Fisheries and Livestock to ensure liaison on project activities among and between the ministry and other institutions and stakeholders such as at sub-national level, field offices, and targeted communities. The project will be implemented within the government/ministry framework to avoid duplication. But also, the project interventions are directly contributing to the government overarching goal, therefore, this structure ensures ownership.

248. **N.B:** IGAD secretariat and ICPAC will be strategic partners. The role of IGAD secretariat will be to ensure collaboration for regional program activities such as capacity building, information sharing, partnership building and policy support. While ICPAC will support technical backstopping. This will include enhancement of capacity on early warning information and sharing experiences in seasonal forecasting and drought characterization.

249. The overall highest decision-making body of the DRESS-EA project is the Regional Steering Committee (RSC) composed of key stakeholders mentioned in Table 11. The RSC will meet twice a year. The RSC is a policy and oversight committee that will supervise the project at the regional level. It is composed of two members from each of the executing countries (Djibouti, Kenya, Sudan and Uganda), one committee member will represent the project from the Country executing entity and another representative will come from the sub-national levels- where activities are undertaken on the ground. Overall, the composition of the RSC will be 13 and is shown in Table 12, one from the Regional Executing Entity REE (GWPEA) and one from the Regional Implementing Entity (OSS). Also, the RSC will be composed of one member each from Regional Economic Community representation (IGAD) and its technical wing (ICPAC) and from the private sector. Therefore, the total RSC membership will be Thirteen (13).

Table 12: Summary of RSC DRESS-EA composition

No	Institution Committee composition	Number
1	RIE- OSS	1
2	REE-GWPEA	1
3	Djibouti (one committee member from the Executing entity and another from the sub-national level)	2
4	Kenya- same as above	2
5	Sudan- same as above	2
6	Uganda- same as above	2
7	IGAD Secretariat	1
8	ICPAC	1
9	Private Sector	1
	Total	**13**

250. At the country level, each executing entity will have a Project National Steering Committee (PNSC). The PNSC will be composed of representative stakeholders from the following institutions*:* Executing Entity (secretary to the committee), NDA, National Environment Agency, Ministry of Agriculture, Climate Change Directorate, and Ministry in charge of Drought/disasters. To involve support and contribution from the private sector, it is proposed that the PNSC includes a private sector member on the steering. To ensure gender equality, the composition of the Project National Steering committee will have at least 40% representation by women. This will empower women by providing them with an opportunity in decision making.

B. Financial and risk management measures

251. The fact that the project is multinational in nature, its anticipated that there will be both financial and project management risks during its implementation. Due to different political and geographical context of the countries, it is expected that they may face challenges /risks that are either similar or different. Overall, the anticipated project risks are summarized by country in the table below:

Table 13: Project Risks and their Mitigation measures

Risk	Country	Rating	Risk Mitigation Measure
Political conflicts in some countries.	Sudan	Medium	-The project will identify and work in relatively safe regions of the country -From the financial perspective, funds will be disbursed in small tranches to reduce the risk of having large project funds being trapped in a political conflict. - Each disbursement must be justified in order to proceed with the next disbursement.
Inter-clan/tribe conflicts in pastoral areas	Djibouti, Kenya, Sudan, Uganda	high	-Involvement of traditional leaders in planning, implementation, monitoring and evaluation processes of the project -Massive sensitization on the relevance of the project at the project initiation stage. This will be done through portable mobile loudspeakers to raise awareness.
Low collaboration amongst the relevant technical institutions	Djibouti, Kenya, Sudan Uganda	Low	-The relevant institutions have been identified and more will be identified during the project baseline development stage. The

			institutions will be engaged in the early stages of project implementation, during progress reviews, reporting, and another vital process
Local communities (small-scale farmers and pastoralists) with limited participation and willingness to promote project initiatives	Djibouti, Kenya, Sudan Uganda	Low	-The project plans sensitization at local community level and ensuring active involvement of community leaders especially the target audiences i.e. the farmers and pastoralists. -Community-Based Organizations (CBO) in the targeted sites will be sensitized on the project relevance and they will be engaged with the purpose to create linkages in project implementation
Poor monitoring and evaluation and delayed delivery of outputs	Djibouti, Kenya, Sudan Uganda	Low	-The project will develop a detailed participatory M&E framework with the key project partners -Regular follow-ups and timely continuous monitoring and evaluation
Limited capacity, especially in areas of water security and integrated drought management in the targeted sites	Djibouti, Kenya, Sudan Uganda	Medium	-Capacity building components within the project to have aspects of water security and integrated drought management. This will be done by training targeted audiences in Integrated Water Resources Management tools for drought risk management. -Linkages of project beneficiaries to on-going capacity development efforts of resilience building in the region and countries. In this way, project beneficiaries will be connected to successful on-going capacity building initiatives in the region and focal countries that will be identified.
Management of funds by countries- accountability etc.	Djibouti, Kenya, Sudan, Uganda	Low	-The project will undertake training in financial management targeting the financial managers and project managers in the countries. -Training on finance to non-finance personnel will be organized to provide basic knowledge in the financial handling of project funds. It is proposed that the slot to support financial management will be incorporated as part of M&E
High expectations by the targeted audiences (small-scale farmers and pastoralists)	Djibouti, Kenya, Sudan Uganda	High	More awareness raising tailored to the targeted audiences- on the objectives and expected outputs and outcomes of the project.
Dependence on handouts- NGO's in the project site providing free materials without ensuring ownership	Djibouti, Kenya, Sudan Uganda	Medium	- The project requires to establish multi-stakeholder's forum in the targeted sites and share the mode of operations and codes of conduct in service delivery. - Project to support meetings with the purpose to harmonize the emerging challenges that may result from supporting communities through the provision of handouts. There are some projects/institutions in the targeted sites supporting similar interventions and to provide 100% of support including what would be the in-kind contribution of targeted communities. This can potentially promote laziness amongst the communities. The project proposes to collaborate with existing such institutions with aim of streamlining the support to communities, encouraging them to be more productive using the project catalytic funds
Project financial management	Djibouti, Kenya, Sudan Uganda	Medium	-Strengthen the project financial management and accountability systems through using the proper and approved procedures- in compliance with Adaptation Fund and OSS regulations and standards. -Separation of roles in financial management will strictly be enforced and adhered to.
Communication in the project	Djibouti, Kenya, Sudan Uganda	Low	-The project will ensure that some of the project staff within National Executing Entities are fluent in the local language of the project areas. -As a bilingual organization, OSS can facilitate the exchange and sharing of information between the Francophone country (Djibouti) and the Anglophone countries (Kenya, Sudan, Uganda) of the project.

C. Environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

252. During the development of the Project full proposal a first and global environmental and social impacts and risks assessment has been developed according to the national standards (the fourth beneficiary countries). Approval letters are provided by national environment authorities (Annex 7). The DRESS-EA project environmental and social risks analysis indicate limited significant environmental or social impacts as per the Environmental and Social Policy of the Adaptation Fund. The impacts levels are evaluated to be low or medium risks. Thus, the project is classified under Category B of risk. This means that the project activities have small-scale impacts, limited to the project area and easily mitigated through good environmental and social management practices.

253. Besides, the project will undertake environmental and social impact assessment reviews as applicable (depending on the scale of the project activities to be undertaken).

Environmental and Social Impact Assessment and Risk Management for Unidentified Sub-Projects

254. The ESIA of the project activities has been established to ensure that the potential impacts are identified, their significance is assessed, and appropriate mitigation measures are proposed to minimize or eliminate such impacts during a fair and visible time frame with the consideration of the investment which has to be taken. Nevertheless, the project includes a number of activities that have not yet been identified to the stage where effective ESP risks identification is possible (so called unidentified sub-projects USPs). These USP are related mainly to the IGA including agricultural or related field activities such as agroforestry, livestock farming that will not generate major negative impacts.

255. Given this, additional environmental and social impact assessment for each sub-project will be required and ensured by the REE. The screening system will ensure that each sub-project adheres to the environmental and social principles of the AF and of the OSS E&S Policies as well as national policies and procedures.

256. In fact, during project implementation and when the USPs will be clearly identified once the E&S and Gender screening will be conducted, a focus on the relevant national technical standard will be made. It is however important to note that the USPs will be only activities related to similar ones that are already known at this stage of project development. Most of the expected project' USPs will be dealing with agriculture activities such as breeding small ruminants, Medicinal and aromatic plants distillation, etc. Given this, the technical standards presented above and which are relevant with the project activities will be applied for the USPs if relevant and additional Standards could be identified and referred to if required according to the USP's specificities.

257. Furthermore, assessed sub-projects that may present significant environmental and social risks will not be implemented unless a comprehensive risk management plan is developed and where the impacts and risks are important, no sub-project or activity will be carried out without the approval of the relevant national authorities.

258. For each sub-project, ESIA will be carried out to predict and assess the potential environmental and social impacts and design appropriate mitigation, management and monitoring measures. The process will be in compliance with national standards, AF and OSS Policies and will include the following steps:

- **Screening**: a high-level analysis to determine whether a full ESIA is necessary or not. It is an important tool for predicting and understanding potential sub-project/activity impacts, as it can help determine whether the sub-project/activity will be a significant issue for the project or not;
- **Scoping**: If a full ESIA is required, scoping establishes the studies that will be required as part of the ESIA process including the identification of data availability and gaps. It determines the appropriate spatial and temporal scopes for the assessment and suggests suitable survey and research methodologies;
- **Impact Prediction and Evaluation**: is the heart of the ESIA and involves analyzing the impacts identified in the scoping to determine their nature, temporal and spatial scale, extent and effect. Impact analysis requires input from relevant experts, including ecologists, biologists, sociologists and economists. Once the potential impacts are fully understood, it is necessary to judge the significance of each impact, to determine whether it is acceptable, requires mitigation or is unacceptable. Consultations with local stakeholders is vital at this stage, and particular attention should be given to vulnerable and disadvantaged communities and risks arising from involuntary resettlement. Successfully identifying and addressing significant impacts at this stage can be key to obtaining both a formal and informal license to operate;
- **Mitigation**: aims to eliminate or reduce negative sub-project/activity impacts through suggesting appropriate measures;
- **Social and Environmental Management Plan (SEMP) and monitoring**: Also called an Environmental Action Plan (EAP), it defines resources, roles and responsibilities required to manage sub-project/activity impacts and implement mitigation measures. The SEMP forms a link between the ESIA and the Social and Environmental Management System/entity. The central elements of a SEMP should include a detailed description of the activities planned to mitigate impacts, a time line and identification of resources to ensure the SEMP can be delivered, and

a communication plan that indicates how progress in the implementation of the SEMP will be disclosed. The SEMP should also define monitoring requirements or indicators to determine whether mitigation is successful;

- **Evaluation**: Also called The Environmental Impact Statement (EIS), is the physical report on the ESIA process and findings. The EIS should provide a clear review of potential impacts and how they have been/will be mitigated. The report often forms the basis of public consultation activities and is the document that is presented to regulatory authorities as the basis for decision making.

259. However, as part of AF quality assurance role, AF requires adherence to the ESP for Project activities implemented using funds channeled through AF accounts. So, all proposed Projects are required to be screened according to the 15 principles as given in the table below.

Table 14: Checklist for preliminary risk screening and project categorization according to the AF principles

Checklist of environmental and social principles	No additional assessment is required for conformity	Potential impacts and risks - additional assessment and management required for the conformity
Compliance with the law		
Access and Equity		
Marginalized and vulnerable groups		
Human rights		
Gender Equality and Women's empowerment		
Core Labour Rights		
Indigenous People		
Involuntary Resettlement		
Protection of natural habitats		
Biodiversity conservation		
Climate change		
Pollution prevention and resource efficiency		
Public health		
Physical and Cultural Heritage		
Soil and land conservation		

260. Besides, OSS, as the project implementation entity, is also provided of its specific E&S policies describing principles and procedures for the environmental, social and gender impacts screening/assessment during the preparation and implementation of projects. In addition, the USPs environmental screening and potential ESIA should be in line with national laws and regulations as the activities will be executed at national level. If some of the USPs require detailed assessments the involvement of National authorities in charge of environment will be necessary.

OSS Environmental and Social Safeguard

Environmental and Social Safeguard of DRESS-EA project is ensured through OSS policies and procedures which are based on the International Finance Corporation (IFC) Environmental and Social sustainability Framework. This ensures that potential risks and impacts are iteratively identified, mitigated and monitored throughout the life-cycle of the Project. The Environment and Social risk management is completed through two main stages: 1- Preliminary Risk Screening with respect to the ten Performance Standards (PS) prescribed in OSS E&S policy that all projects should comply with. This phase is implemented during project preparation and leads to a categorization of the project according to its risk level.

In compliance with OSS Environmental and Social policy, a preliminary risk screening was conducted from the earliest stages of DRESS-EA project preparation. Pre-screening of the concept note and early drafts of the project document using OSS' procedure for risk and project categorization helped to ensure that social and environmental sustainability issues are considered and integrated into the project' design. 2- On-going Risk Screening of the project interventions during the implementation phase. Activity-wise risk management is governed by OSS' risk management procedure which is in line with the internationally recognized standards, and more specifically the ISO 31000:2009, Risk management — Principles and guidelines. In addition to the preliminary and overall risk screening conducted at the preparation phase, operational procedures will be implemented to ensure a continuous screening of all project activities and interventions for the identification of arising risks and impacts. If these impacts or risks are determined significant, activity-wise environmental and social assessment will be conducted which, in turn, will lead to the identification of activity' specific environmental and social management measures that need to be incorporated into the project. Identification, treatment and monitoring of identified risk and mitigation measures for DRESS-EA project will be managed using a Risk Register. The process will be governed by the Risk Management Procedure of the AF and OSS.

261. Moreover, in monitoring of the mitigation measures, corrective actions identified to manage activities with significant Environmental and social impact will be monitored using operational rules set out in the monitoring and review procedure of OSS. In this respect, OSS will monitor and review the implementation of corrective action plans, which range from simple mitigation measures to detailed management plans with actions that can be measured

quantitatively or qualitatively. Then, once the ESIA is conducted, a detailed ESMP will be developed in each sub-project site and will include a mitigation and monitoring plans, institutional arrangements, with capacity building and associated costs. It will specify how, at what stage and by whom during project implementation for each sub-project risks of negative environmental and social impacts will be identified according to the 15 principles of the AF' ESP.

Institutional arrangements for ESIA

Implementing Entity

262. The E&S committee of the OSS, the Implementing Entity, will be responsible for ensuring the implementation of the ESMP and the application of the methodology described here above.

263. Besides, for the USPs, this committee will be in charge of deciding whether ESIA studies are necessary or not when risks happen and this according to its Environmental and Social principles as well as those of the AF. Additionally, National Environmental Authorities may be involved to deliver conformity certificates (if applicable) and/or just for seeking opinion and comments.

264. Finally, OSS will ensure the effective implementation of the mitigation measures identified in the ESMP during its supervision missions. Nevertheless, it could organize specific assignments to assess the complaints submitted by local communities.

Regional Executing Entity (REE)

265. The regional monitoring of the project activities will be carried out by the GWP-EA. This REE will be responsible for the supervision of the National Executing Entities activities related to monitoring the ESMP at local level. On a quarterly basis, the REE will gather the reports from the National Executing Entities, who will rely on a bottom up feedback system based also on community inputs. In order to ensure a relevant monitoring regular field visits to inspect and verify on the one hand the efficiency of the mitigation measures and on the other hand to check the extent of the foreseen impacts. A yearly monitoring report will be developed and submitted to OSS as a RIE.

266. Given that the project is regional, the impacts may also be regional and the limited competencies of the national entities could make the monitoring of these impacts inadequately implemented. The GWP-EA as REE will be responsible of taking this dimension into account in order to identify these impacts and ensure that each country makes the necessary follow-up. Also, the REE will take the measures to ensure that the regional dimension is taken into account in the assessment of the USPs if required. The implementation of these transboundary measures will be reviewed during the analyses of the quarterly reports sent by the national entities. If the monitoring is not adequately ensured, the GWP-EA will inform the national entities and the RIE to take the necessary measures in a concerted manner. In addition, the REE and the RIE will carry out regular field missions for close monitoring of risks, impacts and mitigation measures, especially those with a regional connotation. In this context, the involvement of all implementing and executing entities is necessary to ensure adequate monitoring of mitigation measures at the local, national and regional levels. Their involvement mainly necessary for monitoring the cross-border impacts that are the most difficult to follow. A half-yearly monitoring report will be developed by the REE and submitted to OSS as a RIE.

National Executing Entities (NEE)

267. The NEE will be responsible for coordinating and monitoring environmental and social indicators. The NEE will be also in charge of analyzing data, managing local information systems and supervising the baseline establishment at project starting phase. As regards to the unidentified sub-projects the NEE will be responsible for conducting the ESIA according to the national standards and laws and will then work closely with local authorities to develop the relevant ESMPs for each intervention sites. Finally, the NEE will prepare quarterly based reports and submit them to the REE.

Local Communities

268. The ESIA monitoring will also include a community-based component. In fact, the project plans to carry out training and capacity building sessions for the benefit of local agents and communities, in data collection and monitoring.

269. During all the consultative workshops and meetings related to activities execution, capacity building and training the representatives of ethnic groups and indigenous people will be involved in an active way. They will be informed about the activity risks and will be involved in the implementation and monitoring of mitigation measures.

Grievance mechanism

Project description

270. During project preparation, consultations and studies were carried out to take into account the needs of local populations and to prevent environmental and social risks that could be linked to the implementation of the planned activities. In order to prevent and manage potential grievances that may arise during and after its implementation, the DRESS-EA project will make available a grievance mechanism. This mechanism provides an access point for individuals, communities and other relevant stakeholders to submit complaints. It will also record and process all complaints relating to the project's activities, results or impacts. The proposed mechanism is intended to be rapid, effective, participatory and accessible to all stakeholders including the vulnerable and marginalized groups, to prevent or resolve conflicts through negotiation, dialogue, joint investigation, etc. It will handle complaints related to the compliance of the project activities and impacts with environmental and social safeguards and gender aspects as well as fiduciary and legal ones (grant agreements, contracts, etc.).

271. Given the location of the project's intervention areas far from the usual facilities and means of communication, the existence of the project's grievance mechanism was disseminated. Indeed, during the preparation phase of the project document during the various consultation meetings with the local authorities as well as with the populations, the emphasis was placed on two essential aspects, namely:

- The environmental and social risks related to project implementation as well as the planned mitigation measures and their relevance;
- The opportunity to speak out and complain about the project activities and its stakeholders if impacts are felt;

272. The exchanges with the local populations were all conducted in the presence of local authorities, village chiefs and tribal or ethnic group's chiefs with their strong involvement in all the discussions. This will allow communities to address these same persons in the event of any grievances. As agreed during consultation with indigenous people, the project will put in place publicly advertised procedures, identifying the means for submitting grievances, setting out the length of time users can expect to wait for acknowledgment, response, and resolution of their grievances, descriptions of the transparency of the procedures, and the governing and decision-making structures.

273. The mechanism will be presented during the launching workshops and during the consultative public workshops and meetings at the local level to allow a large diffusion. The feature of this mechanism is that it will be built on those already existing at the national level and whose management is well apprehended by the population and the authorities.

Objectives

274. This mechanism aims at providing individuals or communities affected or likely to be affected by the project activities with accessible, timely, effective and culturally appropriate opportunities to submit their grievances in accordance with the planned commitments. It will identify and propose fair and appropriate solutions in response to the complaints raised.

Principles

275. The various stakeholders in charge of the grievance management must rigorously respect the fundamental principles of the complaint mechanism described in the table below.

Principles	Implementing measures	Indicators
Security and confidentiality	- Protect the anonymity of complainants if necessary, - Ensure the confidentiality in the event of sensitive complaints, - Limit the number of people with access to sensitive information	No retaliation for denunciations
Accessibility and context	- Widely disseminate the mechanism to target groups, overcoming barriers as linguistic, geographical, intellectual and other - Clearly explain the complaint procedures, - Diversify the possibilities for filling plaints, - Assist people with special access problems...	Variety of sources of complaints, Rate of eligible complaints
Predictability	- Respond promptly to all complainants, - Present a clear process, with deadlines for each step	Average processing time, Response rate
Impartiality	- Ensure the impartiality of those involved in investigations - Ensure that no person with a direct interest in the outcome of the investigation is involved in the handling of the complaint concerned	Challenges of members of the
Transparency	- Inform the parties concerned about the progress and results of the complaint processing	Management team

Specificities of the DRESS-EA project Grievance Mechanism

276. The grievance mechanism put in place for the project is easy to use and takes into account the particularities of the beneficiary communities. Since the project is regional and some countries, such as Uganda and Kenya, already have operational mechanisms, it is important to take it into account in the framework of the project to ensure the ownership of these mechanisms by the countries. In addition to the language barrier, the particularities of certain peoples mean that the most appropriate communication channel is the local authority. These communities do not have the possibility to send the information back to the REE and the RIE and Adaptation Fund without going through the local authorities. For those who do not have a national mechanism (Sudan and Djibouti) they will use that of the project which will be based on the involvement of local authorities for the same reasons mentioned above. In addition, the project specific grievance mechanism will be communicated during all consultative workshops and meetings at all levels. This has been done during the national and regional consultative workshops at the full proposal development stage.

How it works

277. The proposed grievance mechanism for the project will involve the different institutional levels concerned. At the regional level, the project grievance mechanism will be coordinated by both the GWPEA as a Regional Executing Entity and the OSS as a Regional Implementing Entity through its Environmental and Social Committee.

278. **At national level** where the project will be executed, the project specific grievance mechanism will be mainly based on the countries existing mechanisms and communication channels in addition to some project specific components. The project specific grievance mechanism has been presented to the various stakeholders and will be again disseminated and shared since the project launch. This approach will ensure the ownership of this mechanism and the continuity of a process that in some countries is already operational (Uganda and Kenya) as well as the development of a project specific grievance mechanism. **At local level** the project specific grievance mechanism will present different ways in which population including indigenous peoples, women, and youth can submit their grievances, and taking into account language barriers/limitations and the need for anonymity if a complainant fears retaliation or submission by an authorized representative or civil society organization.

279. As an implementing entity, the OSS will use its grievance mechanism to manage complaints that arise during the preparation, the execution and after the project completion. Affected communities or other stakeholders who will be affected by the project may file complaints directly to the OSS or through the GWPEA secretariat or through the national project management unit. They may also be sent to the Secretariat of the Adaptation Fund, if necessary. The full addresses of the three entities are listed below:

Sahara and Sahel Observatory Boulevard du Leader Yasser Arafat BP 31 Tunis Carthage 1080 Tunisia Tel: (+216) 71 206 633/634 Fax: (+216) 71 206 636 Email: doleances@oss.org.tn or boc@oss.org.tn	Global Water Partnership – East Africa Regional Secretariat POBOX 192 Entebbe, Uganda Tel : +256 (414) 321 424 /+256 (417) 705000 Email : info@gwpea.org	Adaptation Fund Board Secretariat Mail stop: MSN P-4-4-400 1818 H Street NW Washington DC 20433 USA Tel : 001-202-478-7347 Email : afbsec@adaptation-fund.org

National specificities for handling complaints

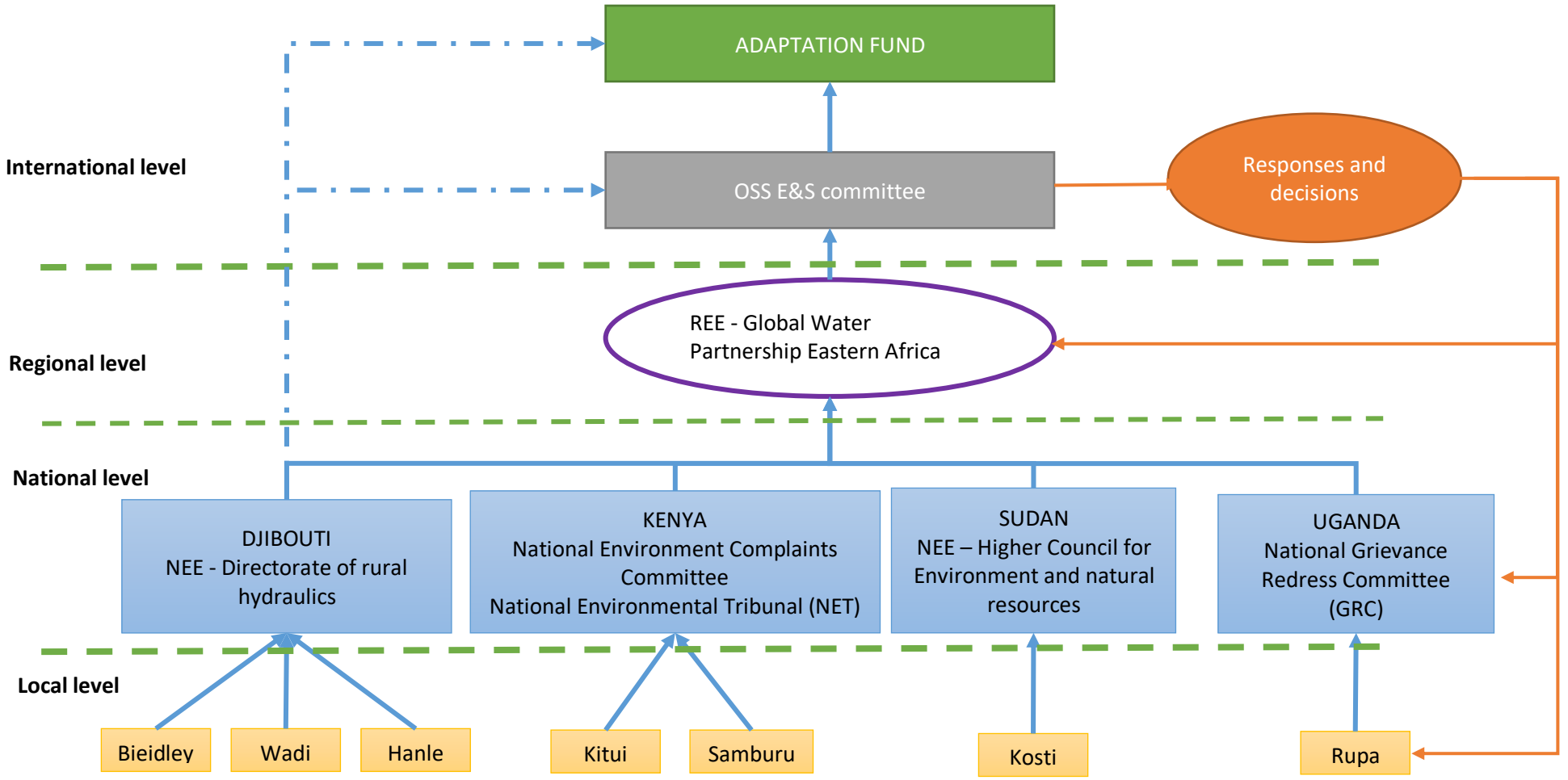
Grievances can be handled depending on the community in which the complainant emanates from. In **Djibouti** for instance, most members belong to different community groups such as savings and credit cooperatives. Errant members or members with grievances report their issues to the executive committee. The executive committee is composed of leaders including the Chairman, Secretary, Treasurer and other representatives. It is this structure that attends to specific grievances guided by the governing rules or Memoranda of understanding within the organization or cooperative structure. For members outside community groups or cooperatives, grievances are reported to the Elders' council that summons the conflicting parties to a meeting or session. It is during such a session that conflicts are resolved. Beyond the Elders' council, grievances are handled at local government structures that are linked directly to the Ministries and Directorates.

In **Kenya**, conflict resolution starts from the traditional leaders headed by the elders that listen and arbitrate between the grieving parties until an amicable solution is reached. For unresolved conflicts, the grieving parties can file their complaints to the Administrative Chief at the County Offices. Beyond this level complaints go the courts and can be determined by the Judges. Ministries also direct complaints to the courts once efforts to resolve conflicts have failed at the lower/community levels.

In **Sudan**, grievances are handled in accordance with the local government administrative structure.

In **Uganda**, generally, complaints are first reported to the local council (village level). Once the issues are not addressed or the grieving parties are not satisfied with the verdicts and advice, they proceed to local council two (parish level), then to local council three (LC III) at the Sub county level. Eventually to the district and then to the courts governed by Magistrates or Judges depending on the gravity of the conflict or case/grievance. However, specifically to the Karamoja region, there exists Elders' club /council with clan heads. These constitute the first line of filing, and handling grievances. Once such grievances are not handled at the Elders' level, they proceed to the lower local governments, LC I, LC II, LC III, district and courts accordingly.

Organizational framework



What to do

280. The project grievance mechanism will go through 5 main stages, as follows:

➢ Filing out a complaint: Anyone or communities affected by project activities can fill in their complaint or claim in several forms and in several ways. In accordance with the principle of accessibility and depending on the context, the method of filing complaints will be diversified.

i) At the national or regional level, complaints will be addressed directly to the OSS or to the adaptation fund via the contacts presented above and via social networks.

ii) At the local level, complaints can be addressed to local authorities (mayors, prefects, etc.) or customary authorities (village councilor, village chief, etc.), which will refer them to local technical services or local complaint management units. Complainants can also fill in their complaint directly with local complaint management units or NEEs. Contacts of local complaint management units and NEEs will be made public at the beginning of the project execution. The mechanism will use all possible means and channels (traditional and modern) to receive complaints or claims (anonymous or not). These will include, among others:

- Telephone call;
- School when children go there;
- Word of mouth, crier, and exchanges in local markets;
- Broadcasting through local and community radio stations;
- Self-referral to the Complaints Management Committee during supervision missions,
- Facts noted during meetings or a field visit...;
- Mail via complaint boxes in the localities concerned by the project;
- Social networks or the OSS website, if applicable.

➢ Receipt and registration of complaints: this is ensured by the NEEs which is responsible for receiving all complaints related to the project activities and impacts. Complaints received will be recorded upon receipt and the traceability procedure will be established. They are generally classified into 2 groups:

- Non-sensitive complaints related to the implementation process, including choices, methods, and results achieved, etc.;
- Sensitive complaints generally related to personal misconduct such as corruption, sexual abuse, discrimination, etc.;

The NEEs will send an acknowledgment letter within a maximum of one week. In this letter, the recipient will be informed of the next steps and if necessary, he/she will be asked to provide clarifications or additional information for a better understanding of the problem.

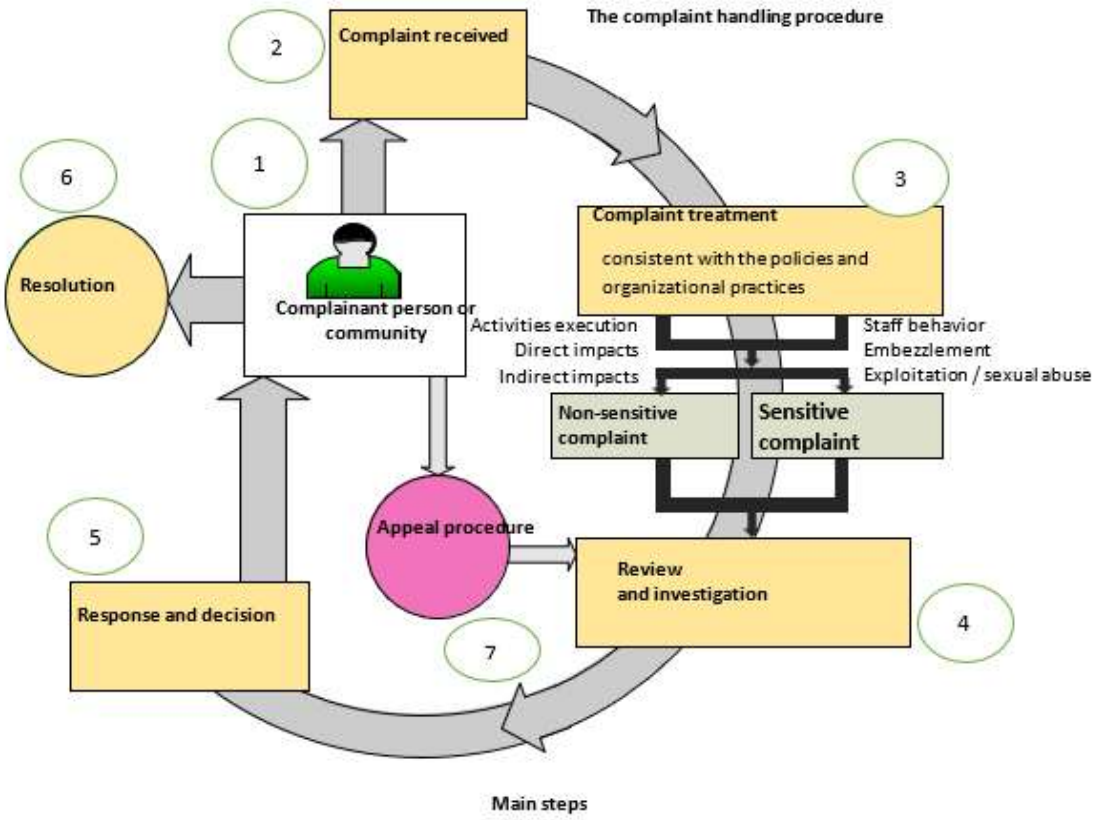
➢ Complaint handling: involves verifying the eligibility of the complaint to the mechanism and ensuring that the complaint is related to the project's activities or commitments. The aim will be to establish the link between the facts denounced and the project's activities and impacts. The eligibility assessment will also determine whether the case should be dealt with under the Project specific grievance mechanism or referred to other mechanisms (whistleblowing, etc.).

In the case of unfounded complaints, due to a lack of necessary information or the result of rumors or malicious persons, which may harm the proper conduct of the project, it is essential to conduct the necessary investigations to preserve the project reputation. This task is the responsibility of the national and the regional management units.

281. In the case of well-founded complaints, two kind of responses can be applied:

(i) direct response and action by the Complaints Management Committee to resolve the complaint.

(ii) broad and thorough audit is required, and joint investigations, dialogues, and negotiations could be conducted to reach a substantial resolution. This may involve extending the team to national and local services, as well as additional time. For sensitive cases, the CMC may use an investigation to reach an appropriate resolution based on expert advice.



282. Following the audit and investigations, a contextually appropriate explanatory letter is sent to the complainant. It should include the procedures to be followed by the NEEs to manage the complaint or propose the appropriate bodies to be contacted for cases that does not fall into the Project management unit's responsibilities.

283. If agreed with the complainant, the proposed responses are implemented by the Complaints Management Committee, the latter will monitor the whole process of the complaint treatments in all cases.

- Implementation of measures: if the CMC and the complainant agree to implement the proposed response, a plan will be developed involving all stakeholders. The CMC should document all discussions and choices available.
- Appeal procedure: If the measure proposed by the CMC does not satisfy the complainant, the latter may initiate the appeal procedure at the level of the OSS or a higher court (Adaptation Fund for example).
- Closing the grievance: The procedure will be closed if the mediation is satisfactory to the parties and leads to an agreement. It is necessary to track the number of complaints by the identity of the complainants, background, period, theme and final outcome. The satisfactory resolution and lessons learned should be documented.
- Publication of complaint result: all well-founded complaints will be made publically available by different communication means. The publication will include the type of complaint, its origin and impact, the treatment procedure and its results, including the complainant level of satisfaction.

Checklist of environmental and social principles	Potential impacts and risks	Mitigation measures
Conformity with the law	Unidentified activities or sub-projects particularly Income Generating Activities (IGAs) undertaken in the component 3 may require a specific EIA depending on the size and the location of the implementation to comply with national standards and laws.	- Risk screening of unidentified activities; - E&S impact assessment; - Consultation process; - Environmental and social management plan (ESMP) establishment describing, for each unidentified activity risk of negative environmental and social impacts, the process, how, at which stage and by whom during project implementation these risks will be addressed; - Monitoring Indicators identification; - Evaluation and monitoring process; - Obtaining certificates of conformity.
Access and Equity	Project beneficiaries will be in general rural people (pastoralists and smallholder farmers) who have difficulties to access to the decision-making process, this may limit their opportunities to benefit from projects outcomes. There is a risk that all members of the beneficiary groups or community are not involved in the preparation and the implementation of their subproject.	- Consultation workshops; - Close monitoring of the project beneficiaries to assure equal access of men; women, youth and the most vulnerable; - Grievance mechanism.
Marginalized and vulnerable groups	Insufficient knowledge and access/use of technological devices such as mobile phones or lack of good cellular connectivity specially required in component 2 on Early Warning System design and implementation.	- To avoid the exclusion of marginalized and vulnerable communities in order to disseminate and broadcast the warning messages in case of natural disaster, local radio channels and traditional practices such as speakers, maps and sirens will be implemented to reach them.
	Risk of reducing or prohibiting, because of the project, the access of certain populations to the resources on which they depend (pastures, water, fruit trees, crops, fishing grounds, forest, public services)	- Organize consultation meetings with local administrative and customary authorities and steering committees representing communities and indicate that any sub-projects limiting access to resources or sources of income will not be funded. All activities implementation must be decided in common with consultation of all concerned communities; - Grievance mechanism
Human rights	The project activities do not generate risks related to human rights.	- The project activities do not generate risks related to human rights so there are no mitigation measures to plan.
Gender Equality and Women's empowerment	The cultural and social norms of the project region lead to a greater role for women to question male dominance and claim their role in decision-making. So, there is a risk that women will not benefit equitably from the proposed adaptation measures and the capacity building interventions due to men leadership.	- - Ensure the presence of women and young people in workshops and trainings; - -Communication and sensitization of the population on the gender issue to ensure gender parity in income-generating activities; - Grievance mechanism.
Core Labor Rights	Increase in accidents and occupational hazards during the project preparation and implementation.	- Sensitize workers and populations to the risks related to the undertaken activities; - Design and implement safety measures and emergency plans to contain accidents risks and ensure the application of safety standards by companies (equipment, signs, training, etc.) ; - Provide workers with protective clothing (nose and mouth masks, ear muffs, overalls, industrial boots and gloves) and helmets as applicable
	Risk of late or unpaid salaries or remuneration non- compliant with the countries labor legislations and laws. Risk of Children's labor. Risk of Remuneration inequity between men and women.	- Salaries in line with regional practices and defined with national entities; - Close follow-up and monitoring of the worksites by the national executing entities including schedules, activities progress, respect of the labor and safety rights of workers and conformity with national labor codes.
Indigenous People	The project activities will generate the same risks on Indigenous people as the risks on all project communities. There will be no major risk on their assets, resources, culture, land and rights. The main risks that could raise are related to the ways they use water resource, transhumance routes, livestock management, agricultural practice etc.	- Involvement of indigenous people representatives at all project stages (development, implementation, monitoring and decision-making process) - Detailed analysis will be carried out by local and national agencies to understand the traditional use of natural resources especially regarding to water and land use.
Involuntary Resettlement	The construction of appropriate and innovative water harvesting and storage infrastructure as well as mini-irrigation and water delivery systems will occupy spaces and may affect private lands or related activities. The project is also expected as a potential impact related to rest areas management for transhumant that will occupy spaces	- The review process for these activities will include criteria that stipulate no resettlements. The project will opt for state-owned lands and if needs be, compensation measures will be arranged for used private lands owners.
Protection of natural habitats	The presence of labor and construction equipment, if this is necessary for carrying out the works or activities planned by the project, could have an impact on the fauna and flora of certain intervention sites. The implementation of solar-pumped boreholes, water harvesting and storage infrastructure (e.g simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, etc) can result	- Follow-up of the implementation of all activities related to the protection and management of ecosystems and natural habitats; - Establishment of E&S Impact Assessment Studies; - Policies and laws to protect natural habitats will be screened with the stakeholders to ensure that the critical habitats are legally protected;

	in the vegetation and wildlife habitats destabilization in the implantation site. There is a possibility of indirect risks related to the Transhumance corridors which will open up different migratory patterns. There is a herds' incursion in protected areas risk which will create tensions with farmers living around, protected area managers and other pastoralists. Mobile herders may go in search of refuge and living resources through poaching, threatened wildlife species trade, illegal exploitation of other wildlife or minerals.	- Sensitization sessions to local populations on good environmental practices and the protection of natural habitats. - A follow-up of the project activities implementation will particularly include the monitoring of transhumant pastoralists' number and herd sizes, grazing destinations (including protected area) and distribution of habitat types in order to provide inputs for decision making, solving tensions and natural habitats protection.
Biodiversity conservation	Vegetation Clearance for water harvesting and storage sites construction	- Follow-up and monitor the implementation of all activities related to the protection and management of ecosystems; - Minimize vegetation clearance as Low as Reasonably Practical (ALARP); - Avoid cutting large trees with a diameter >20cm; - Pre-survey the proposed construction site areas to avoid sensitive habitats that have high diversity of indigenous plants; - Promote planning for activities of biodiversity conservation such as Compensatory reforestation; - Promote awareness sessions, capacity building and peer learning to strengthen the efficient management of natural resources, including aquatic species, animals and forests.
Climate change	A potential change of the land use due to the field clearing to construct innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, etc) the may generate the risk of the sequestration decrease.	- Promote reforestation to offset these used lands
Pollution prevention and resource efficiency	Potential contamination of water reservoir through introduction of impurities, wastewater and solid waste.	- Conduct regular water quality monitoring and maintenance of the water supply system as well as ensure the monitoring of water quality by chemical analysis; - Awareness improvement on water Resource management and conservation through consultation workshops; - Separate the infrastructures for human and animal use and provide a specific installation for the watering of livestock near the tanks.
	Increase in dust levels	- Limit levels of dust through good practice such as watering of access routes, construction sites, and other disturbed sites; - Cover lorries transporting construction materials
	Vandalism of water pipelines infrastructure, Wastage of water and leakages at consumer points	- Creation of awareness on water Resource management and conservation through Consultation workshops; - Creation and Implementation of a Social Engagement Plan – SEP;
	Over abstraction of water	- Irrigation system installed and fully monitored - Irrigation schedule controlled
	Air pollution by gas emissions from machinery during field work or consultants and various stakeholders' vehicles during workshops and field visits.	- Reduce gaseous emissions by selection of appropriate machinery and regular servicing of vehicles; - Incite to use a good quality fuel meeting the standards.
	Generation of waste related to the presence of the workers, construction engines, and equipment, etc. during the execution of the project different activities.	- Recycling wastes/ recycling and composting could be an USP; - Waste management plans for construction sites.
Public Health	Increased incidences of diseases (such as HIV/AIDS, Malaria and Bilharzia)	- Raise awareness and support mechanisms to prevent and control spread of HIV/AIDS among the program workers and local communities. - Implement disease awareness and management programme for Malaria and Bilharzia
	Noise and odor nuisance	- Selection of appropriate machinery and regular servicing of machinery and vehicles. - Use and ensure the application of security measures by companies such as ear plugs and ear muffs among workers when noise levels exceed 80 dBA for 8 hours and limit the hours of exposure of workers. - Apply a noise mitigation policy for all operations in accordance with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution)
	Increase in dust levels	- Provide workers with appropriate dust protective gear including masks and overalls.
	Risk of persons safety in maintaining the tanks or dams (in particular risk of fall of man or cattle)	- Ensure security at the reservoirs especially at the dams' area by providing adequate protective equipment (e.g protective mesh).

	Risks of health problems due to tank water low quality or the proliferation of insects near the water points Risk of disease transmission by the transhumant pastoralists and/or their herd.	- Do not collect the first runoff that is often heavily loaded or provide a decanter for tanks to improve the water quality; - Train communities that tank water is not consumed by the population without adequate treatment (after boiling or treatment); - Provide family sanitary kits (filters and disinfectants) - Veterinary support in order to prevent livestock and transhumant herd related disease transmission.
Physical and Cultural Heritage	Possibility of physical heritage damage related to unidentified sub-projects.	- Participatory workshops to identify areas of physical and cultural significance to prevent activities/ subprojects implementation and negative impacts.
Soil and land conservation	Risk of increased soil erosion	- Where applicable install specific measures to combat erosion (dry rock, gabions, stone bunds) - Plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found appropriate.
	There is a minimal risk of soil compaction by the machinery during construction or maintenance.	- Promote the deteriorate lands restoration through sustainable techniques such as reforestation and agroforestry; - Raise the local population awareness to strengthen the effective management of soil and land; - A close follow-up and monitoring of the implementation of all activities related to the soil and land conservation.
	Possibilities of land degradation as a result of agricultural activities	- Adopt conservation agriculture practices

D. Monitoring and evaluation arrangements and budgeted M&E plan

284. The project Monitoring and Evaluation (M&E) arrangements will aim at providing a regular overview of the progress of implementation of activities in terms of input delivery, work schedules and planned outputs/targets. It will involve routine information gathering, analysis and reporting to partners, executing institutions, communities, and other stakeholders. The evaluation component shall represent a systematic and objective assessment of project components or activities in terms of their design, implementation, and results. In addition, the project evaluation will deal with strategic issues such as project relevance, effectiveness, and efficiency, as well as impact and sustainability, considering specified expected outcomes.

Scope of Monitoring and Evaluation

285. There will be a robust and comprehensive monitoring and evaluation of the project by DRESS-EA team and partners. In this case, strict adherence to the approved monitoring plan will be ensured. Moreover, the M&E activities will be participatory and will involve all the key stakeholders. Information on key stakeholders will be gathered through the stakeholder analysis. M&E will be carried out from the onset of project implementation up to the end of the project when the evaluation will be carried out. The M&E activity will be carried out at both the national and regional levels. Under DRESS-EA project the M&E will be conducted at two levels; **first**, assessing the extent of implementation of planned activities and **secondly**, assessing the achievement of results (outputs, outcomes, and impacts). Since the project will be implemented for four years, there is anticipation that some impacts will be achieved in the final years of the project i.e. before project termination.

286. The ***first level*** *M&E* will involve;

- Assessing whether activities are implemented in accordance with timeframe as contained in the project work plan
- Examining whether activities are being implemented with high quality, quantity and with the right target group

287. While for the ***second level***, it will entail;

- Assessing the extent to which the project expected results have been achieved including documenting unexpected results.
- Assessing whether the planned activities contributed to the project results.
- Assessing the relevance of the project design, effectiveness of the interventions, efficiency, sustainability, and impact of the project

Monitoring and Evaluation entities

288. The M&E system to be developed under the DRESS-EA project will be managed by different entities in order to have maximum information and data interpretation for an optimal monitoring. These entities will have the following roles and responsibilities:

Entities	Roles and responsibilities
Regional Implementing Entity (OSS)	- Review and approval of annual work plan & budget; - Review and approval of quarterly reports; - Review and approval of annual progress and completion reports; - Monitoring of the recommendations' implementation; - Review of project activities progress during supervision mission; - Monitoring of the recommendations' implementation; - Orientation and/or management decision-making.
Regional Executing Entity (GWPEA)	- Development of the project's operations plan and the annual work plan and budget; - Follow-up of the project's operations plan and the annual work plan and budget execution; - Development of data collection, treatment, analysis and dissemination tools; - Coordination of collection, treatment, analysis and dissemination of data and information; - Preparation and consolidation of quarterly activity reports, annual progress reports, and project completion report; - Dissemination of project evaluation and monitoring reports; - Implementation of decisions and corrective actions.
National Executing Entity (Countries: Djibouti, Kenya, Sudan and Uganda)	- Participation to the validation of project annual work plan and budget; - Monitoring of the project implementation at national level; - Gathering, treatment, analysis and management of project data; - Monitoring and specific studies activities supervision; - Preparation and transmission of quarterly reports and annual progress reports to the Regional Unit; - Contribution to the diffusion of project's monitoring and evaluation reports; - Implementation of recommendations and decisions at national and local level

Monitoring and Evaluation Work plan

289. The DRESS-EA project monitoring work plan will guide the data/information to be collected for monitoring. Table 17 shows the M&E activities and their budget implication.

290. The Regional and National Project Management Units will coordinate to organize preparatory mission of key project stakeholders to develop a Project M&E framework. The stakeholders will include the Regional Implementing Entity (OSS) and Executing Entities - who include the Regional Executing Entity (GWPEA) and National Executing Entities of Djibouti, Kenya, Sudan and Uganda. The stakeholders to undertake monitoring and evaluation exercise have to visit the project sites and interact with the targeted key stakeholders for feedback about the project execution.

291. The project M&E activities will include several steps and a regular feedback system, as follow:

Project start:

292. A Project inception workshop will be organized in the first quarter of project start. The workshop will involve diverse stakeholder base from the entire project chain (local communities, sub-national. national and regional stakeholders). Also, this workshop is critical to building ownership from the start of project implementation. Furthermore, the workshop will address the following key issues, including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of OSS and GWPEA staff with the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution and grievance redress mechanisms which includes regional and national channels. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework, share and validate the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide and discuss the Project Implementation Manual, the Annual Work Plan and Budget, and the Project team composition and responsibilities.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- Plan and schedule Project Regional Steering Committee meetings, National Steering Committee meetings and Inter Country Regional Coordination Mechanism meetings. Roles and responsibilities of all project organization structures should be

clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

- Provide among other things, the following: The M&E activities which include the annual M&E work plan, stakeholders identified for M&E activities, M&E tools, and the expected deliverables of the M&E exercise.

N.B: ***Monitoring will be done at quarterly at national levels and aggregated semi-annually to generate a semi-annual report.***

Quarterly monitoring

293. During project implementation and in accordance with the PIM a quarterly monitoring report will be developed by the national project units and aggregated by the regional project unit then submitted to OSS for review and follow up as an implementing entity. This report will include the extent of project activity execution during the quarter, the results generated in the short-term (on a quarterly basis) and record early lessons and best practices on a cumulative basis. It will also be composed by technical and financial monitoring as well as E&S risks mitigation activities.

Annual monitoring

294. The annual monitoring report will be develop based on the four quarterly reports and will consist of an annual review of the project implementation status including extent of implementation of the annual work plan against the set targets and outputs as well as a verification of achievement extent of the results framework. This report will cover also the monitoring of the technical and financial project progress and the planned activities for the upcoming year. The detailed content of the project will be agreed on in the PIM during the project preparation and launch. Based on the same frequency and content a PPR (Project Performance Report) will be developed by OSS and submitted to the Adaptation Fund for follow up.

Annual reflection workshop:

295. At regional level a reflection workshop on monitoring results and M&E system will be organized annually and will target key project stakeholders. The aim of the workshop is to disseminate the results of the annual monitoring exercise. The workshop is important to validate the annual results and cascade the results to a wider network to increase on project ownership. This workshop could be organized back to back with the project regional Steering Committee meeting.

Mid-Term Evaluation/Review

296. The mid-term review will identify progress made toward the achievement of the results and will determine the necessary correction and mitigation action if necessary. It will focus on the effectiveness, efficiency, and timeliness of project implementation. This evaluation (MTR) will focus on issues requiring decisions and actions, and will present the first lessons learned from designing the project, its implementation, and management. The purpose of the mid-term exercise is to determine progress towards achieving the project outcomes on the one hand and will identify weaknesses of project implementation, on the other hand. The elements that are not very successful at this stage but show promise will be modified for improvement in a participatory manner.

297. The mid-term evaluation will take place after two years of project start, and will be ensured by an external consultant hired by OSS as an AE of the project. Thus, the terms of reference of this mission will be developed according to international standards, in due time. The results of this review will be considered as recommendations for better implementation during the last two years of the project's duration.

Terminal Project Evaluation

298. At project end, there will be an independent third-party evaluation. This evaluation will take place three months before the last meeting of the Steering Committee and will be undertaken in accordance with OSS and AF regulations. The main focus of this evaluation is to assess the project results against the set targets in the results framework, the delivery of project's results as originally planned (and reviewed after the midterm review, if such a review has occurred, accordingly it will ensure that the modifications made at the mid-term review have been incorporated. The final evaluation will focus on the project impacts and sustainability of results, including the contribution to the capacity development and the achievement of global environmental objectives. Same as the MTR, the terms of reference for this evaluation will be prepared by the OSS based on the guidance of the Regional Coordination Unit. The results of the final evaluation should be presented during the project closure workshop and should also provide recommendations for a future project or for project results up-scaling and replication.

Final report:

299. During the last three months, the project's team will prepare the project final report. This comprehensive report summarizes the results obtained (objectives, products, axes), the lessons learned, the challenges encountered and the areas where the results may not have been achieved. The project final report will be presented during the project's closure workshop and will also prepare recommendations for further steps that may need to be taken to ensure the sustainability and replicability of project's results.

M&E Communication plan

300. The M&E communication plan will monitor communication actions on project achievements. Also, the plan will target disseminating M&E results to stakeholders within and outside the DRESS-EA project is a key priority in this monitoring plan. DRESS-EA will disseminate findings and recommendations to major stakeholders involved. The project results are important for a diversity of audiences including the vulnerable persons such as women, children, and disabled and elderly groups. Furthermore, M&E project information may be of interest among community organizations, small-scale farmers, pastoralists, youth, media, government officials and social service agencies at the national level. While at the regional level, the teams in the Regional Economic community and lake/river basin organization and other stakeholders may need to learn of the results for purposes of improvement in their institutions. Furthermore, the project will participate in relevant conferences and workshops to share the lessons and best practices from the interventions. This arrangement is useful because it causes a multiplier effect and leads to replication of best practices. The project is complementary to the already existing efforts in the region, as such a two-way flow of information between DRESS-EA and the identified projects in the region is proposed. This will help concretize and interventions as well as contribute to learning and knowledge sharing.

Table 15: Monitoring & Evaluation Work Plan and Budget

Type of M&E Activity	Responsable Parties	Budget (US$)	Timeframe																*Notes*
			2020				2021				2022				2023				
			Quarters				Quarters				Quarters				Quarters				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Initial studies to improve baseline, gender analyses, land rights analyses and environmental and social impact assessment	GWPEA and Project National Focal point	55.000																	*Within the first quarter of project start.*
Design of an M&E System for the project including ESMP and monitoring outputs by project team	Focal points of key institutions: OSS and the executing entities (GWPEA, Djibouti, Kenya, Sudan and Uganda)	100.000																	*Quarterly*
Field visits for measuring the project results for each target and reporting on activities as well as gender issues	Focal points of key institutions: the executing entities (GWPEA, Djibouti, Kenya, Sudan and Uganda)	100.000																	*Quarterly*
Field visits for joint review of the project results, progress and activities	Focal points of key institutions: OSS and the executing entities (GWPEA, Djibouti, Kenya, Sudan and Uganda)	80.000																	*Yearly (every year for project period)*
Annual monitoring report	Project Management Units at Regional and National Levels M&E Officer	20.000																	*Yearly (every year for project period)*

Annual reflection workshop on monitoring results and M&E system	Project Management Units at Regional and National Levels M&E Officer -M&E Officer	40.000																		*Yearly (every year for project period)*
Mid-term evaluation	Implementing entity OSS - External Evaluators	20.000																		*At mid-point of project execution*
Terminal Project Evaluation	Implementing entity OSS -External Evaluators	20.000																		*At least three months before the end of the project*
Terminal Project Audit	Implementing entity OSS-External Evaluators	10.000																		*At least three months before the end of the project*
Terminal Project report	Focal points of key institutions: OSS and the executing entities (GWPEA, Djibouti, Kenya, Sudan and Uganda)	20.000																		*At least three months before the end of the project*
Total cost		**465.000**																		

E. Results framework, including milestones, targets, and indicators

Result	Indicators	Baseline	Milestones (After 2 years)	End of Project Targets	Means of Verification	Responsible Parties	Risks and Assumptions
Objective: To increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.	• Number of EWS beneficiaries and users • Number of beneficiary communities of adaptation measures • Proportion (%) of smallholder farmers and pastoralists with increased incomes.	*(To be determined at baselines)*	• Number of EWS beneficiaries and users (to be determined) • Number of beneficiary communities of adaptation measures (to be determined) • At least 20% of smallholder farmers and pastoralists with increased incomes.	Number of EWS beneficiaries and users (*to be determined*) Number of beneficiary communities of adaptation measures (*to be determined*) At least 60% of smallholder farmers and pastoralists with increased incomes.	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	OSS, GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	• Inter-tribal conflicts based on water and other resources access and use • Adequate security to enable project implementation (Assumption) • Political will
Component 1: Development and enhancement of a regional Drought Early Warning System (Investments in Early warning)							
Outcome 1.1 Increased use of effective Early Warning Systems by stakeholders	• Proportion of targeted farmers and pastoralists that access and integrate EW information into seasonal calendars	Most smallholder farmers and pastoralists do not utilize EWS in their seasonal calendars thus have suffered crop and livestock losses during drought.	At least 30% of targeted smallholder farmers and pastoralists access and integrate EW information into seasonal calendars	At least 70% of targeted smallholder farmers and pastoralists access and integrate EW information into seasonal calendars	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	OSS, GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	• EW systems are functional • Smallholder farmers and pastoralists receive EW information timely
Output 1.1.1 Efficient and effective EWS in place/developed	• EWS status report • Number of weather stations set up and upgraded with Remote sensing derived products, time series of bioclimatic variables, • Number EW prototypes at national and regional levels developed • Number of EW information centers constructed, renovated and equipped • Number of times EW information has been released by mandated institutions as planned • Number of farmers and pastoralists utilizing EW information • Number of baseline reports	• Poor early warning systems exist in the focal countries • EW information rarely received	• An EWS status report • One EW prototype at national and regional levels developed • At least modern weather station set up in project sites of each country • At least one existing weather station upgraded in project sites of each country • One EW information center constructed/renovated in project sites of each country • At least 20% of farmers and pastoralists utilize EW information in their farming calendars • 4 baseline report	• An EWS status report per country • One EW prototype at national and regional levels developed • Two modern weather station set up in project sites of each country • Two existing weather station upgraded in project sites of each country • One EW information center constructed/renovated in project sites of each country • At least 70% of farmers and pastoralists utilize EW information in their farming calendars • 4 baseline report	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	Timely release of project funds
Output 1.1.2 Institutional linkages for EW information established	• Framework agreement document • A strategy document • Minutes of meetings • Approved plan (document) incorporating EW information	Weak or non-existing EW information in project sites	• 1 EW information framework agreement developed/reviewed in each country • 1 strategic document developed • 1 inter-ministerial Meeting minutes at regional; • 16 meetings minutes at national level (4 per country) and • 16 meetings minutes at the sub-national level (4 per country)	• 1 EW information framework agreement developed/reviewed in each country • One strategic document developed • 1 inter-ministerial Meeting minutes at regional; • 32 meetings minutes at the national level (8 per country) and • 32 meetings minutes at the sub-national level (8 per country).	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	Cooperation among project partner countries

			• 2 meetings minutes at regional level (fora) • 16 meetings minutes at national level (fora) • 16 meetings minutes at sub-national level (fora) • 4 document copy of approved plans incorporating EW information	• 3 meetings minutes at regional level (fora) • 24 meetings minutes at national level (fora) • 24 meetings minutes at sub-national level (fora) • 4 document copy of approved plans incorporating EW information			
Output 1.1.3 Feedback mechanism for EW information developed.	• Minutes of stakeholder meetings • Number of information sharing platforms established • Number of Press releases • KAP survey report • A tool for accessing, utilizing and reporting EW information developed	Poor feedback mechanism from users to mandated institutions	• 32 copies of Minutes (8 meetings per country) • 16 copies of Minutes (4 Joint meetings per country) • 4 KAP survey report • At least 8 press releases per country • A tool for accessing, utilizing and reporting	• 64 copies of Minutes (16 meetings per country) • 32 joint meetings per country • 4 KAP survey report • At least 16 press releases per country • A tool for accessing, utilizing and reporting	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 1.1.4 Emergency plan for Drought management is put in place.	• Number of emergency response plan for Drought disasters at the regional and national levels. • Percentage of the equipment needed for the contingency response is acquired by the end of the project • Number of blank operations (including regional and national levels) • Number of warning messages dissemination kit (beacons, flags, sirens, signaling, speakers, telephone, local radio …)	Poor feedback mechanism from users to mandated institutions	• 5 emergency response plan for Drought disasters at the regional and national levels. • 40 % of the equipment needed for the contingency response is acquired by the end of the project • 1 of blank operations (including regional and national levels) • 4 warning messages dissemination kit (beacons, flags, sirens, signaling, speakers, telephone, local radio …)	• 5 emergency response plan for Drought disasters at the regional and national levels. • 80 % of the equipment needed for the contingency response is acquired by the end of the project. • 2 of blank operations (including regional and national levels) • 4 warning messages dissemination kit (beacons, flags, sirens, signaling, speakers, telephone, local radio …)	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Component 2: Strengthening capacities of key stakeholders at regional, national and local levels (Strengthening the capacity of stakeholders)							
Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened	• Number of staff in targeted institutions at regional and national and local level with enhanced capacity in drought management • Percentage of farmers and pastoralists with increased knowledge and skills in drought adaptation actions	Inadequate capacity of institutions, farmers, and pastoralists to undertake drought adaptation measures	• Number of staff in targeted institutions trained (to be determined) • At least 30% of targeted farmers and pastoralists trained	• Number of staff in targeted institutions trained (to be determined) • At least 80% of targeted farmers and pastoralists trained	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 2.1.1: Drought management plans (DMPs) developed	• Number of DMP,s • Number of DMPs translated and distributed • Number of national and sub-national plans with DM component integrated • Bye-laws and ordinances formulated	No outstanding drought adaptation and management components in national and sub-national plans	• At least 1 national and 1 sub-national plans reviewed/developed per country • At least 1 national and 1 sub-national plans translated • At least 1 DMP, integrated into national and sub-national plans per country • At least 1 Bye-law and 1 ordinance formulated per country	• At least 1 national and 1 sub-national plan reviewed/developed per country being implemented • At least 1 national and 1 sub-national plans translated per country • At least 2 DMPs, integrated into national and sub-national plans per country • At least 2 Bye-laws and 2 ordinances formulated per country	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 2.1.2: Adaptive capacity of institutions, farmers, and pastoralists in drought management improved	• Capacity needs assessment report • Copies of capacity building plans, • Copies of training manuals • Number of stakeholders trained	Farmers and pastoralists have inadequate knowledge and skills to undertake drought adaptation actions	• 4Capacity needs assessment report • 4 Copies of capacity building plans	• 4 Capacity needs assessment report • 4 Copies of capacity building plans	• Project implementation reports • Field visits	GWPEA and Focal Ministries in Djibouti,	

	• Number of learning centers established		• 4 Copies of training manuals • 8 exchange visits (2 per country) • 4 trainings for staff managing EW information centers (1 per country) • 24 trainings for extension staff and artisans in drought adaptation (6 per country) • 64 community training workshops (16 per country) • At least30% of targeted stakeholders trained • 4 learning centers for farmers and pastoralists established per country	• 4 Copies of training manuals • 12 exchange visits (3 per country) • 8 trainings for staff managing EW information centers (2 per country) • 36 trainings for extension staff and artisans in drought adaptation (9 per country) • 96 community training workshops (24 per country) • At least 80% of targeted stakeholders trained • 12 learning centers for farmers and pastoralists established per country	• M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	Kenya, Sudan and Uganda	
Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened	• Number of Functional frameworks for drought management at different levels per country	The existing frameworks are not fully utilized to undertake drought adaptation measures. In some areas, partnerships are lacking.	At least 3 Functional frameworks for drought management established	At least 6 Functional frameworks for drought management established	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 2.2.1: New/existing regional and National arrangements /networks for drought management supported	• Number of minutes of regional meeting • Number of minutes for national and sub-national meetings • Number of platform events organized and press releases on drought management issues • Number of partnership agreements or MOUs reviewed or developed • Number of Platforms • Number of drought adaptation proposals developed jointly	Regional and national arrangements/networks for drought management are either weak, dysfunctional or lacking	• 1 copies of Minutes of regional meeting • 8 copies of meetings Minutes (1 national and 1 sub-national meetings per country) • At least 2 press releases each year per country • At least 2, partnership agreements/MOUs, • 2 platform events each year per country • At least 2 regional proposals	• 3 copies of Minutes of regional meeting • 24 copies of meetings Minutes (3 national and 3 sub-national meetings per country) • At least 8 press releases each year per country • At least 4, partnership agreements/MOUs, • 4 platform events each year per country • At least 4 regional proposals developed and submitted for funding	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Component 3: Supporting innovative drought adaptation actions (Drought and climate change adaptation actions)							
Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	• Percentage of farmers and pastoralists undertaking drought adaptation actions • Percentage increase in crop and livestock production	There are limited opportunities and options for undertaking drought adaptation actions for farmers and pastoralists	• At least 30% of farmers and pastoralists are undertaking drought adaptation actions • At least 30% of smallholder farmers and pastoralists have alternatives	• At least 60% of farmers and pastoralists are undertaking drought adaptation actions • At least 60% of smallholder farmers and pastoralists have alternatives	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 3.1.1: Innovative water and soil conservation structures constructed	• Number of assessment reports on surface water potential and WMP • Number of water harvesting and storage structures constructed • Number of mini-irrigation systems constructed • Number of water wells and springs protected • Number of Soil and water conservation measures	Farmers are constrained by high water losses due to limited technologies for water storage	• 4 assessment reports on surface water potential and WMP • At least 5 water harvesting and storage units constructed • At least 2 mini-irrigation systems constructed • At least 3 water well/spring/oasis protected	• 4 assessment reports on surface water potential and WMP • 32 Units of water harvesting and storage constructed (Djibouti 2 units; Kenya 10 Units; Sudan 12 units and Uganda 8 Units) • 14 mini-irrigation systems constructed (Djibouti 3	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	

	• Number of farmers and pastoralists undertaking soil and water conservation technologies		• At least 3 Soil and water conservation measures promoted • At least 30% of smallholder farmers and pastoralists undertaking water and soil conservation measures	units; Kenya 4 Units; Sudan 4 units and Uganda 3 Units) • 9 water wells, springs/oases protected (Djibouti 0 unit; Kenya 3 Units; Sudan 3 units and Uganda 3 Units) • At least 12 Soil and water conservation measures promoted • At least 70% of smallholder farmers and pastoralists undertaking water and soil conservation measures			
Output 3.1.2: Groundwater sources established/ improved	• A report on groundwater assessment • A report/Guidelines/regulations on groundwater resources developed • Area (acreage) of degraded site restored	Information on groundwater sources is inadequate Guidelines/regulations for protection and management of groundwater sources are lacking	• 4 Groundwater assessment report • At least 4 sets of Guidelines for groundwater regulation (1 per country developed) • At least 20% of the degraded sites restored	• 4 Groundwater assessment report • At least 8 sets of Guidelines for groundwater regulation (2 per country being implemented) • At least 60% of the degraded sites restored	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 3.1.3: Adaptive agricultural practices for improving crop production promoted	• Number of farmers and pastoralists supported with crop varieties, • Kilograms of seed/cuttings of drought-resistant crop varieties bought and distributed • Number of agroforestry tree seedlings bought and distributed • Quantities of inputs for irrigated agriculture • Number of small irrigation units • Number of CSA Units • Number of farmers engaged in climate-smart agricultural practices	• Crops varieties being grown are susceptible to drought conditions • Degraded landscapes that have reduced the ground recharge capacity of water catchment areas • There are limited/no small irrigation schemes • Climate adaptive agricultural practices are inadequate	• At least 20% of the target farmers have accessed improved and drought-resistant crop varieties • At least 9 tons of seeds/cuttings for drought-resistant crop varieties distributed in each country • At least 20% of the target pastoralists have accessed drought tolerant and fast growing pasture seeds • At least 30 hectares of degraded landscapes restored in each country • At least 6 irrigation units • At least 5 Climate smart agricultural units are developed • At least 20% of targeted farmers undertake Climate-Smart Agriculture (CSA)	• At least 70% of the targeted farmers and pastoralists have accessed drought-resistant crop varieties • At least 15 tons of seeds/cuttings for drought-resistant crop varieties distributed in each country • At least 50% of the target pastoralists have accessed drought tolerant and fast growing pasture seeds • At least 100 hectares of degraded landscapes restored in each country • At least 36 irrigation units (Djibouti 10 units; Kenya 8 Units; Sudan 10 units and Uganda 8 Units) • At least 28 Climate smart agricultural units are developed (Djibouti 6 units; Kenya 6 Units; Sudan 8 units and Uganda 8 Units) • At least 60% of targeted farmers undertake Climate-Smart Agriculture (CSA)	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 3.1.4: Adaptive livestock and rangeland practices enhanced	• Number of stock routes agreements • Area/acreage of rangeland improved with rangeland management practices • Number of pastoralists supported with improved animal breeds • Livestock numbers bought and distributed • Percentage reduction in mortality of livestock • Number of hydroponic units established • Quantities of improved grass varieties seed	• Low drought tolerance capacity of the current animal breeds • Poor quality of varieties of animal feeds • Conflicts amongst neighboring communities due to inadequate water and pastures in different rangelands	• At least one stock agreement signed per country • About 15% Area/acreage of rangeland improved with rangeland management practices • 40 pastoralists supported with improved livestock breeds per country • 60 Livestock bought and distributed in each country	• At least 4 stock route agreements signed per country • About 40% Area/acreage of rangeland improved with rangeland management practices • 160 pastoralists supported with improved livestock breeds per country • 170 livestock bought and distributed in each country	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	

	• Number of households with improved feeds and pastures • Number of meetings of associations/groups/cooperatives of livestock		• At least 20% of the target pastoralists supported with high value silage • Livestock mortality attributed to drought-reduced by 5% • 20 hydroponic units established per country • At least 4 tonnes of improved grass varieties distributed in each country • At least 20 households with improved feeds and pastures • 6 meetings for at least 4 associations per country	• At least 70% of the target pastoralists supported with high value silage • Livestock mortality attributed to drought-reduced by 10% • 80 hydroponic units established per country • At least 16 tonnes of improved grass varieties distributed in each country • At least 80 households with improved feeds and pastures • 12 meetings for at least 5 associations per country			
Output 3.1.5: Enabling environment for smallholder farmers and pastoralists adaptive activities created	• Number of pastoralists and smallholder farmers accessing Index-based weather insurance • A report on drought risk assessments on the agriculture value chain • Minutes of meetings and workshops for farmer and pastoralists associations/cooperatives meetings	• Index-based weather insurance is lacking • High crop and livestock losses due to weather-related events • Functional Farmers and Pastoralists associations and cooperatives are lacking	• At least 5% of targeted smallholder farmers and pastoralists have an Index-based weather insurance scheme • 4 report on drought risk assessments on the agriculture value chain • 4 meetings for at least 4 farmer and/or pastoralist associations or cooperatives in each country	• At least 15% of smallholder farmers and pastoralists have an Index-based weather insurance scheme • 4 report on drought risk assessments on the agriculture value chain • 12 meetings for at least 5 farmer and/or pastoralist associations or cooperatives in each country	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	
Output 3.1.6: Environmentally friendly IGAs ([e.g., Pottery, Beekeeping, Energy saving stoves, Briquettes making, and interlocking bricks) promoted	• Number of business enterprises promoted by women and youth groups • Number of households undertaking IGAs • Number of groups supported by grants • Number of groups/cooperatives supported to undertake value addition for their agricultural products	• Inadequate opportunities and resources especially for youth and women groups to undertake IGAs	• At least 1 IGAs undertaken by households, women and youth groups in each country • At least 80 Households supported to undertake IGAs per country • At least 5 women and youth groups were given grants to undertake adaptation actions per country • At least 3 cooperatives supported to add value to their crop and livestock products for each country	• At least 9 IGAs undertaken by households, women and youth groups in each country • At least 240 Households supported to undertake IGAs per country • At least 10 groups given grants to undertake adaptation actions per country • At least 9 cooperatives supported to add value to their crop and livestock products for each country	• Project implementation reports • Field visits • M&E reports Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda Farmers and pastoralists	
Component 4: Knowledge management and information sharing (Knowledge management)							
Outcome 4.1: Knowledge and awareness on drought risk management Increased	• Percentage of households of targeted farmers and pastoralists practicing drought adaptation actions	Small percentage of farmers and pastoralists with access to adequate information and knowledgeable in drought management issues and interventions	At least 30% of the targeted actors participating in regional information sharing platforms	At least 80% of the targeted actors participating in regional information sharing platforms	• Project implementation reports • •Field visits • •M&E reports • •Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	Partners at the regional level are willing to engage with the project and each other
Output 4.1.1 Good practices and lessons on drought management, EWS, and Climate Change impacts documented and disseminated	• Number of knowledge products e.g. documents on lessons and best practices from project interventions • Number of case studies and lessons learned documented and shared projects	Limited information on successful cases studies and documentation of lessons learned learned from implementation of drought management projects in the region	• 2 brochures, 2 publications (documents) on lessons and best practices from project interventions per country • At least 4 case studies /lessons on drought management, EWS and CC impacts learned documented, packaged and shared with key stakeholders	• 4 brochures, 4 publications (documents) on lessons and best practices from project interventions per country • At least 8 case studies /lessons learn documented, packaged and shared with key stakeholders for upscaling and informing project interventions	• Project implementation reports • Field visits • M&E reports • Interviews with smallholder farmers and pastoralists and community leaders	GWPEA, and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	Target projects are willing to share information

			for upscaling and informing project interventions				
Output 4.1.2 Drought information management strengthened	• Number of meetings for information generation and sharing • Number meetings on policy engagement at the national level • Number of platforms or fora organized jointly • Number of information sharing events organized at regional level • A gender responsive and scale-up strategy document for drought, CC and early warning technologies for vulnerable groups	• Limited opportunities including platforms and forums for information sharing drought management information • No existing/updated gender responsive and scale-up strategy document for drought, CC and early warning technologies for vulnerable groups in the region	• Minutes of 2 regional meetings held for information generation and sharing • Minutes of 4 meetings on policy engagement at the national level • At least 4 information sharing events organized at regional level	• Minutes of 4 regional meetings held • Minutes of 8 meetings on policy engagement at the national level • At least 8 information sharing events organized et regional level • A gender responsive and scale up strategy per country	Project implementation reports •Field visits •M&E reports •Interviews with smallholder farmers and pastoralists and community leaders	GWPEA and Focal Ministries in Djibouti, Kenya, Sudan and Uganda	

Adaptation Fund Core indicators for the project:

301. Three Adaption Fund Core Indicators will be monitored for the project as per the tables below.

Table 16: Core indicators for the project

Adaptation Fund Core Impact Indicator:"Number of Beneficiaries"				
Date of Report	OCTOBER 2019			
Project Title	STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION			
Country	DJIBOUTI, KENYA, SUDAN AND UGANDA			
Implementing Agency	OSS – SAHARA AND SAHEL OBSERVATORY			
Project Duration	4 YEARS			
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Direct beneficiaries supported by the project	0	701,624		
Female direct beneficiaries	0	290,397		
Youth direct beneficiaries	0	123,215		
Indirect beneficiaries supported by the project	0	70,162		
Female indirect beneficiaries	0	29,040		
Youth indirect beneficiaries	0	12,322		
Adaptation Fund Core Impact Indicator: "Early Warning Systems"				
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Adopted Early Warning Systems *(Category targeted – 1, 2, 3, 4; and absolute number)* *(1) risk knowledge,* *(2) monitoring and warning service,* *(3) dissemination and communication,* *(4) response capability.*	Most smallholder farmers and pastoralists do not utilize EWS in their seasonal calendars thus have suffered crop and livestock losses during drought.	At least 70% of targeted smallholder farmers and pastoralists access and integrate EW information into seasonal calendars. (i.e. 674,811 persons)		
Drought resilience improvement	Inadequate capacity of institutions, farmers, and pastoralists to undertake drought adaptation measures	At least 80% of targeted farmers and pastoralists trained (i.e. 771,212 persons)		
Drought adaptation actions undertaken	There are limited opportunities and options for undertaking drought adaptation actions for farmers and pastoralists	At least 60% of smallholder farmers and pastoralists have alternatives (i.e.578,409 persons)		
Knowledge, Dissemination and communication	Small percentage of farmers and pastoralists with access to adequate information and knowledgeable in drought management issues and interventions	At least 80% of the targeted actors participating in regional information sharing platforms (i.e. 771,212 persons).		
Hazard	DROUGHTS	DROUGHTS	DROUGHTS	DROUGHTS
Geographical coverage *(km2)*	Dikhil: 0 Biedley: 0 Kitui: 0 Samburu: 0 Kosti/ElSalam: 0 Rupa: 0	Dikhil:62,264 Biedley: 5,600 Kitui: 336,897 Samburu: 156,800 Kosti/ElSalam: 95,200 Rupa: 18,050		
Number of municipalities *(number)* *(report for each project component)*	NA	NA	NA	NA

Adaptation Fund Core Impact Indicator: "Assets Produced, Developed, Improved, or Strengthened"				
	Baseline	Target at project approval	Adjusted target first year of implementation	Actual at completion
Sector (Component 3) Drought and climate change adaptation actions				
Targeted Asset 1) Health and Social Infrastructure *(developed/improved)* *i) Index-based insurance* ii) *IGAs* iii) *Provision of Small competitive grants* 2) Physical asset *(produced/improved/strengthened)* *i) Innovative water harvesting and storage infrastructure produced* *ii) Mini-irrigation and delivery system produced* *iii) Water wells improved* **iv)** *Groundwater sources improved* **v)** *Agrisilvopastoral system improved* **vi)** *Climate smart agricultural infrastructure*				
Changes in Asset *(Quantitative or qualitative depending on the asset)* **1)** Health and Social Infrastructure *(developed/improved)*				
i) Index-based insurance developed	0	3- Moderatly improved		
ii) *IGAs developed*	0	960 Households (approx.4800 persons; 50% for women and youth; 480.000 USD)		
iii) *Provision of Small competitive grants developed*	0	40 Groups (approx.800 persons; 60% for women and youth; 480.000 USD)		
2) Physical asset *(produced/improved/strengthened)*				
i) Innovative water harvesting and storage infrastructure produced	0	32		
ii) Mini-irrigation and delivery system produced	0	50		
iii) Water wells improved	0	9		
iv) Groundwater sources improved	0	3- Moderatly improved		
v) *Agrisilvopastoral system improved*	0	60 Tons of seeds/cuttings for drought resistant crop varieties produced 400 Ha restored		
vi) Climate smart agricultural infrastructure produced	0	28 units developed		

F. The project alignment with the Results Framework of the Adaptation Fund

Table 17: DRESS-EA project alignment with the AF Results Framework

Project Objective(s)[40]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems (EWS) and implementation of drought adaptation actions	Number of EWS beneficiaries/users	**Outcome 1:** Reduced exposure at the national level to climate-related hazards and threats	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	**11,009.02**
		Outcome 2: Strengthened institutional capacity to reduce risks associated with Climate-induced socio-economic and environmental losses	2.Capacity of staff to respond to and mitigate impacts of, climate related invents from targeted institutions increased	
	Number of direct and indirect beneficiaries of climate change adaptation interventions	**Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level	3.1. Percentage of the targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	
			3.2. Modification in the behavior of the targeted population	
		Outcome 4: Increased adaptive capacity within the relevant development and natural resource sectors	4.1. Development sectors' services responsive to evolving needs from changing and variable climate	
			4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	
	Proportion (%) of smallholder farmers and pastoralists with increased incomes	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 Percentage of households and communities having more secure (increased) access to livelihood assets	
			6.2. Percentage of targeted population with sustained climate-resilient livelihoods	
		Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1.1 Increased use of effective Early Warning Systems by stakeholders	Proportion of targeted farmers and pastoralists that access and integrate EW information into seasonal calendars	**Output 1:** Risk and vulnerability assessments conducted and updated at a national level	1.1. No. and type of projects that conduct and update risk and vulnerability assessments	**2,387.10**
			1.2 Development of early warning systems	
Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened	Number of staff in targeted institutions at regional and national and local level with enhanced capacity in drought management	**Output 2.1:** Strengthened capacity of national and regional centers and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events	**1,310.00**
	Percentage of farmers and pastoralists with increased knowledge and skills in drought adaptation actions	**Output 2.2:** Targeted population groups covered by adequate risk reduction systems	2.2.1. Percentage of population covered by adequate risk-reduction systems	
			2.2.2. No. of people affected by climate variability	

	Number of national and sub-national plans with Drought Management component integrated	**Output 7**: Improved integration of climate resilience strategies into country development plans	7.2 Number of targeted development strategies with incorporated climate change priorities enforced	
Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened	Number of Functional frameworks for drought management at different levels per country	**Output 2.1:** Strengthened capacity of national and regional centers and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events	**440.00**
Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	Percentage of farmers and pastoralists undertaking drought adaptation actions	**Output 4:** Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)	**6,279.92**
			4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types)	
	Percentage increase in crop and livestock production	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of an individual or community-livelihood strategies	
			6.1.2. Type of income sources for households generated under climate change scenario	
Outcome 4.1: Knowledge and awareness on drought risk management Increased	Percentage of households of targeted farmers and pastoralists practicing drought adaptation actions	**Output 3:** Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at the local level	**592.00**
			3.1.2 No. of news outlets in the local press and media that have covered the topic	

NB: *During project launch and inception phase the baseline studies that will be carried out will allow a better knowledge about the exact number of direct beneficiaries including among others, pastoralists, farmers, women groups, and households.*

G. Detailed budget

Component/Outcome/Output/Activity	Djibouti	Kenya	Sudan	Uganda	Regional	Total Budget ('000 USD)	Budget notes
COMPONENT 1: Development and enhancement of a regional Drought Early Warning System	438.50	438.50	438.50	438.50	633.10	2,387.10	
Outcome 1.1: Increased use of effective Early Warning Systems by stakeholders	438.50	438.50	438.50	438.50	633.10	2,387.10	
Output 1.1.1: Efficient and effective EWS in place/developed	149.00	149.00	149.00	149.00	112.00	708.00	
Activity 1.1.1.1 Assess the status of EWS in the target countries and update options of traditional EWS with modern EW technologies	9.00	9.00	9.00	9.00	12.00	48.00	*Studies assessed @20-man days @ USD 300/day and validation workshops fees @ USD 3,000 in each Country* *Studies compilation @10-man days @ USD 300/day and regional restitution workshop @ USD 9,001*
Activity 1.1.1.2 Develop an EWS prototype to be used at the regional and national levels	0.00	0.00	0.00	0.00	100.00	100.00	*Studies assessed @200-man days @ USD 300/day* *National meetings fees @ USD 5,000 in each Country for prototype validation* *Regional workshop fees @ USD 20,000 for prototype validation*
Activity 1.1.1.3 Equip/upgrade selected weather stations and Remote sensing derived products, time series of bioclimatic variables, etc.	70.00	70.00	70.00	70.00	0.00	280.00	*Set up two modern weather station @USD 25,000 each and upgrade two other weather stations @USD 10,000 @in each Country*
Activity 1.1.1.4 Construct/renovate and equip EW information centers including data base	40.00	40.00	40.00	40.00	0.00	160.00	*The EW Information centers should be constructed or renovated maximum by the project second year so their related expenses must be scheduled for 2 years*
Activity 1.1.1.5 Support/Equip project beneficiaries (pastoralist, farmers and extension agents) to access EW information (e.g. devices including, brochure, SMS, Radio etc.)	30.00	30.00	30.00	30.00	0.00	120.00	*Involves buying EW information devices for targeted pastoralist, farmers and extension agents*
Activity 1.1.1.6 Conduct a baseline study					55.00	55.00	*Involves buying EW information devices for targeted pastoralist, farmers and extension agents*
Output 1.1.2: Institutional linkages for EW information established	49.00	49.00	49.00	49.00	245.00	441.00	
Activity 1.1.2.1 Develop/Review EW information sharing frameworks at regional. National and sub-national levels	10.00	10.00	10.00	10.00	40.00	80.00	*At least one EW information framework @ USD 10,000 e.g. agreement developed/reviewed in each country with support at regional level (workshop and travel)*
Activity 1.1.2.2 Develop an implementation action plan to operationalize the frameworks	12.00	12.00	12.00	12.00	0.00	48.00	*Consultancy @30-man days @USD 300 and associated costs of USD 3,000 for each country (workshop for validation of action plan)*
Activity 1.1.2.3 Hold inter-ministerial and sectoral meetings for data sharing	0.00	0.00	0.00	0.00	160.00	160.00	*One inter-ministerial regional meeting @USD 20,000* *Two sectoral national meetings per year in each country and Two sub-national meetings per year @USD 35,000 in each country (each country will organize 4 meetings per year = 16 meetings per year for all the countries)* *all the meetings are managed centrally at regional level.*
Activity 1.1.2.4 Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)	15.00	15.00	15.00	15.00	45.00	105.00	*One meeting at regional level @USD 20,000 per year; 2 meetings at national level @USD 4,000 per year and 2 meetings at sub-national level @USD 1,000 per year in each country for three years. (each country will organize 4 meetings per year = 12 meetings per year for all the countries + one regional workshop per year for three years)*
Activity 1.1.2.5 Support Incorporation of EW information into planning and budgeting processes of targeted countries	12.00	12.00	12.00	12.00	0.00	48.00	*Two meetings per country per year @USD 3,000 for the first two years.*
Output 1.1.3: Feedback mechanism for EW information developed	68.00	68.00	68.00	68.00	44.00	316.00	
Activity 1.1.3.1 Support regular stakeholder EW information feedback platforms for farmers and pastoralists	20.00	20.00	20.00	20.00	0.00	80.00	*Four meetings per year @USD 1,250 for farmers and pastoralists in each country*

Activity 1.1.3.2 Hold quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders	33.00	33.00	33.00	33.00	0.00	**132.00**	*Four joint national and sub-national level meetings per year @USD 4,125 for two years in each country*
Activity 1.1.3.3 Conduct KAP surveys on EW information	15.00	15.00	15.00	15.00	0.00	**60.00**	*Studies @ 30 man/days @USD 300 and associated costs of USD 6,000 per country*
Activity 1.1.3.4 Develop periodic feedback user friendly tools on accessing, utilizing and reporting EW information to mandated institutions	0.00	0.00	0.00	0.00	44.00	**44.00**	*One meeting to develop the tool @ USD 5,000 and subsequent meetings to review the tool @USD 2,000 per country for three years.*
Output 1.1.4: Emergency plan for Drought management is put in place	172.50	172.50	172.50	172.50	232.10	**922.10**	
Activity 1.1.4.1 Develop an emergency response plan for Drought disasters at the regional and national levels.	20.00	20.00	20.00	20.00	25.00	**105.00**	*Studies assessed @20-man days @ USD 300/day and validation workshops fees @ USD 4,000 in each Country* *Studies compilation @10-man days @ USD 300/day and regional restitution workshop @ USD 7,000*
Activity 1.1.4.2 Monitoring the EWS, feedback mechanism and its contingency plan at regional level.					67.10	**67.10**	*Studies @ 200 man/days @USD 300 and associated costs of USD 7,100*
Activity 1.1.4.2 Organize training sessions on the use of the intervention plan for the benefit of the different actors involved at national and regional level	10.00	10.00	10.00	10.00	20.00	**60.00**	*One meeting at regional level@ USD 10,000 per year; 2 meetings at national level @USD 5,000 per year in each country for two years. (each country will organize 2 meetings per year = 8 meetings per year for all the countries + one regional workshop per year for two years)*
Activity 1.1.4.3 Acquire equipment for Drought management (machines/pickup, bicycles, motorcycles,)	115.00	115.00	115.00	115.00		**460.00**	*Equipment Lot @ USD 115,000 per country*
Activity 1.1.4.4 Implement two (2) blank operations (including regional and national levels)					120.00	**120.00**	*One blank operation (including regional and national levels) @ USD 60,000 and subsequent meetings per year for two years.*
Activity 1.1.4.5 Acquire tools and materials to disseminate warning messages to the population (beacons, flags, sirens, signaling, speakers, telephone, local radio ...)	27.50	27.50	27.50	27.50		**110.00**	*One warning messages dissemination kit (beacons, flags, sirens, signaling, speakers, telephone, local radio ...) made available @ USD 27,500 per country.*
COMPONENT 2: Strengthening capacity of stakeholders to manage drought risks due to Climate Change effects	293.50	293.50	293.50	293.50	576.00	**1,750.00**	
Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened	248.50	248.50	248.50	248.50	316.00	**1,310.00**	
Output 2.1.1: Drought management plans (DMPs) integrating CC aspects and adaptation actions developed	90.00	90.00	90.00	90.00	0.00	**360.00**	
Activity 2.1.1.1 Develop/update existing DMPs at national and sub-national levels integrating CC aspects and adaptation actions	30.00	30.00	30.00	30.00	0.00	**120.00**	*Consultancy @ 60-man days spread over one year @USD 300 and associated costs of USD 12,000 per country*
Activity 2.1.1.2 Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists	12.00	12.00	12.00	12.00	0.00	**48.00**	*This involves translating DMPs, printing and dissemination @USD 4,000 per year for three years*
Activity 2.1.1.3 Support integration of DMPs into the national and sub-national development plans	18.00	18.00	18.00	18.00	0.00	**72.00**	*Consultancy of 30-man days @USD 300 and associated costs (two workshops) of USD 9,000 per country*
Activity 2.1.1.4 Support formulation of bye-laws and ordinances at sub-national and lower political units	30.00	30.00	30.00	30.00	0.00	**120.00**	*Involves hiring a facilitator @60-man days @USD 300 spread in two years and holding 4 consultative meetings per year @USD 1,500*
Output 2.1.2: Adaptive capacity of institutions, farmers and pastoralists in drought management improved	158.50	158.50	158.50	158.50	316.00	**950.00**	
Activity 2.1.2.1 Undertake a capacity needs assessment to identify gaps and hindrances to effective drought management	0.00	0.00	0.00	0.00	120.00	**120.00**	*Studies assessed @60-man days @ USD 300/day and associated costs of USD 12,000 per country*
Activity 2.1.2.2 Develop capacity building plans for regional, national and sub-national levels	0.00	0.00	0.00	0.00	48.00	**48.00**	*Consultancy @20-man days @USD 300 and associated costs of USD 6,000 per country*

Activity 2.1.2.3 Develop capacity building materials	0.00	0.00	0.00	0.00	28.00	**28.00**	*Consultancy @10-man days @USD 300 and associated costs of USD 4,000 per country*
Activity 2.1.2.4 Undertake exchange visits and learning tours for cross learning in areas with successful drought management innovations including ground water management initiatives	0.00	0.00	0.00	0.00	120.00	**120.00**	*Exchange visits and learning tours @USD 10,000 per year per country for three years*
Activity 2.1.2.5 Train staff managing EW information centers	20.00	20.00	20.00	20.00	0.00	**80.00**	*Involves an initial and follow up training @USD 10,000 per country for two years*
Activity 2.1.2.6 Train extension staff and artisans in drought adaptation interventions	30.00	30.00	30.00	30.00	0.00	**120.00**	*Involves three annual trainings @USD 10,000 per country for three years*
Activity 2.1.2.7 Facilitate community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	60.00	60.00	60.00	60.00	0.00	**240.00**	*Two quarterly community trainings@ USD 2,500 for three years in each country*
Activity 2.1.2.8 Support farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services	48.50	48.50	48.50	48.50	0.00	**194.00**	*This involves construction of 4 learning centers for farmers and pastoralists @USD 5,000 per learning center and USD 9,500 for operational costs per country for three years.*
Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened	45.00	45.00	45.00	45.00	260.00	**440.00**	
Output 2.2.1: New/existing regional and National arrangements /networks for drought management supported	45.00	45.00	45.00	45.00	260.00	**440.00**	
Activity 2.2.1.1 Support review/development of MoUs, protocols and stock route agreements for Drought Management and reducing conflict between farmers and pastoralists	45.00	45.00	45.00	45.00	60.00	**240.00**	*1 Consultative meetings and workshops at regional @USD 20,000 per year for three years 1 national @USD 10,000 and 1 local levels @ USD 5,000 per year per country for three years (each country will organize 2 meetings per year = 8 meetings per year for all the countries + one regional workshop per year for three years)*
Activity 2.2.1.2 Facilitate establishment of regional and national drought management multi-sectoral/stakeholder platforms to coordinate partner efforts	0.00	0.00	0.00	0.00	120.00	**120.00**	*Involves coordination of regional and national partners to dialogue on drought management aspects @USD 30,000 per platform per year for the project duration of 4 years*
Activity 2.2.1.3 Support regional and national partners to jointly mobilize resources for Drought Management in a changing climate context	0.00	0.00	0.00	0.00	80.00	**80.00**	*Involves Coordination of partners to mobilize resources @USD 20,000 per year*
COMPONENT 3: Drought and Climate Change adaptation actions	1492.48	1577.48	1667.48	1542.48	0.00	**6,279.92**	
Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	1492.48	1577.48	1667.48	1542.48	0.00	**6,279.92**	
Output 3.1.1: Innovative water and soil conservation structures constructed	315.00	420.00	460.00	355.00	0.00	**1,550.00**	
Activity 3.1.1.1 Undertake assessment on surface water utilization/potential/availability and develop water Management Plans in project sites	30.00	30.00	30.00	30.00	0.00	**120.00**	*Studies assessed @60-man days @ USD 300/day and associated costs of USD 12,000 per country*
Activity 3.1.1.2 Construct appropriate, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells	165.00	200.00	240.00	160.00	0.00	**765.00**	*Innovative water harvesting and storage infrastructure: Djibouti 2 units; Kenya 10 Units; Sudan 12 units and Uganda 8 Units @ unit @USD 20,000*
Activity 3.1.1.3 Construct mini-irrigation and water delivery systems (e.g. gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation and solar powered irrigation systems)	75.00	100.00	100.00	75.00	0.00	**350.00**	*Mini irrigation and delivery system: Djibouti 3 units; Kenya 4 Units; Sudan 4 units and Uganda 3 Units @ unit @USD 25,000*

Activity 3.1.1.4 Support protection of water wells and springs to ensure quality, quantity and efficient water use	0.00	45.00	45.00	45.00	0.00	**135.00**	*Protection of 3 water wells springs and oases: Djibouti 0 unit; Kenya 3 Units; Sudan 3 units and Uganda 3 Units @ USD 15,000 per unit*
Activity 3.1.1.5 Promote appropriate soil and water conservation measures (e.g. terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)	45.00	45.00	45.00	45.00	0.00	**180.00**	*Soil and water conservation measures estimated @USD 45,000 per country*
Output 3.1.2: Ground water sources established/ improved	115.00	115.00	115.00	115.00		**460.00**	
Activity 3.1.2.1 Undertake assessment on ground water utilization/potential/availability and develop groundwater Management Plans in project sites	30.00	30.00	30.00	30.00	0.00	**120.00**	*Studies assessed @60-man days @ USD 300/day and associated costs of USD 12,000 per country*
Activity 3.1.2.2 Review/develop regulatory framework and guidelines on ground water sources	40.00	40.00	40.00	40.00	0.00	**160.00**	*Consultative meetings and workshops at regional @USD 5,000, national @USD 10,000 and local levels @ USD 5,000 per year per country for two years*
Activity 3.1.2.3 Restore degraded water catchments to improve recharge rates of ground water	45.00	45.00	45.00	45.00	0.00	**180.00**	*This involves improving ground cover e.g. planting of grasses, shrubs and some trees @USD 15,000 per country for 3 years*
Output 3.1.3: Adaptive agricultural practices for improving crop production promoted	280.00	260.00	310.00	290.00	0.00	**1,140.00**	
Activity 3.1.3.1 Promote fast growing and drought resistant crop varieties (e.g. varieties in Graminae and Leguminoceae families	60.00	60.00	60.00	60.00	0.00	**240.00**	*Cost of buying and distributing drought resistant crops seeds/cuttings @USD 20,000 per country for three years (Create resistant crop varieties nurseries for the benefit of smallholder farmers)*
Activity 3.1.3.2 Promote agrisilvopastoral systems (dryland agroforestry) (e.g. fast-growing multi-purpose tree species such as *Acacia mearnsii*, integrated with crops and livestock rearing)	30.00	30.00	30.00	30.00	0.00	**120.00**	*Involves costs for agroforestry tree/shrub seeds/seedlings and associated components @USD 10,000 per country for three years (Create agrisilopastoral seeds nurseries for the benefit of smallholder farmers, to restore degraded landscapes)*
Activity 3.1.3.3 Provide in puts for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)	100.00	80.00	100.00	80.00	0.00	**360.00**	*Drip irrigation and small-scale irrigation infrastructure: Djibouti 10 units; Kenya 8 Units; Sudan 10 units and Uganda 8 Units @ unit @USD 10,000*
Activity 3.1.3.4 Promote climate smart agricultural practices	90.00	90.00	120.00	120.00	0.00	**420.00**	*Climate smart agricultural infrastructure: Djibouti 6 units; Kenya 6 Units; Sudan 8 units and Uganda 8 Units @ unit @USD 15,000*
Output 3.1.4: Adaptive livestock and rangeland practices enhanced	261.01	261.01	261.01	261.01		**1,044.04**	
Activity 3.1.4.1 Promote improved rangeland management practices (e.g. developing of rangeland management plans, reduction livestock stocking, integrated pest and disease management)	60.00	60.00	60.00	60.00	0.00	**240.00**	*Consultancy for rangeland management planning @ 30-man days @USD 300 and associated costs of USD 6,000 per country; and meetings and workshops @ USD 15,000 per country per year for three years*
Activity 3.1.4.2 Support introduction of drought tolerant livestock breeds	90.00	90.00	90.00	90.00	0.00	**360.00**	*This involves cost of buying drought tolerant livestock breeds (@USD 30,000 per country per year for three years*
Activity 3.1.4.3 Promote hydroponic systems for growing nutritious fast-growing cereals for livestock (animal feeds)	40.00	40.00	40.00	40.00	0.00	**160.00**	*This involves the cost of an average household hydroponic unit and seed for the fast-growing cereals @USD 2,000 for 10 households per year per country for two years*
Activity 3.1.4.4 Support farmers and pastoralists to prepare high value silage and hay for livestock during dry spells	36.00	36.00	36.00	36.00		**144.00**	*This involves the costs of farmer trainings, buying seed and construction of hay and silage storage units, @USD 12,000 per year per country for three years*
Activity 3.1.4.5 Support formation/facilitate existing livestock associations/groups/cooperatives at community level	35.01	35.01	35.01	35.01	0.00	**140.04**	*This involves meetings and workshops @USD 11,670 per country per year for three years*
Output 3.1.5: Enabling environment for smallholder farmers and pastoralists adaptive activities created	156.40	156.40	156.40	156.40		**625.60**	
Activity 3.1.5.1 Introduce and promote Index-based weather insurance in partnership with insurance companies	30.00	30.00	30.00	30.00	0.00	**120.00**	*This involves seed money for insurance premiums and operations @USD 10,000 per country per year for three years*
Activity 3.1.5.2 Conduct drought risk assessments on the agriculture value chain	30.00	30.00	30.00	30.00	0.00	**120.00**	*Studies assessed @60-man days @ USD 300/day and associated costs of USD 12,000 per country*

Activity 3.1.5.3 Facilitate farmer and pastoralists associations/cooperatives to generate analyze and share market information.	56.40	56.40	56.40	56.40	0.00	**225.60**	*This involves meetings and workshops @USD 18,800 per country for three years*
Activity 3.1.5.4 Create linkages between farmer and pastoralists associations/cooperatives at regional, national and sub-national levels to enable sharing of market information	40.00	40.00	40.00	40.00	0.00	**160.00**	*This involves costs for meetings and workshops at different levels @USD 20,000 per country for two years*
Output 3.1.6: Environmentally friendly IGAs ([e.g., Pottery, Bee keeping, Energy saving stoves, Briquettes making, and interlocking bricks) promoted	365.07	365.07	365.07	365.07	0.00	**1,460.28**	
Activity 3.1.6.1 Support women and youth groups with inputs for IGAs including (e.g. growing of sisal and *Aloe vera* to support rope production and art crafts; bee keeping; briquette making; keeping of local poultry (e.g. Kroilers) and community tourism	120.00	120.00	120.00	120.00	0.00	**480.00**	*This involves the cost of inputs for the selected enterprises, meetings and workshops all estimated @USD 40,000 per year per country for three years*
Activity 3.1.6.2 Provide competitive small grants targeting small holder farmers and pastoralist associations to undertake innovative IGAs or drought adaptation actions	120.00	120.00	120.00	120.00	0.00	**480.00**	*This involves a fund set aside for farmer and pastoralist groups with innovative drought adaptation actions to compete for and be supported by the project. It is estimated @USD 60,000 per year per country for two years.*
Activity 3.1.6.3 Provide inputs for value addition crop and livestock products	125.07	125.07	125.07	125.07	0.00	**500.28**	*This involves costs for buying equipment and materials for value addition for the respective crop and livestock enterprises estimated @USD 41,690 per country per year for three years*
COMPONENT 4: Knowledge management and awareness creation	87.00	87.00	87.00	87.00	244.00	**592.00**	
Outcome 4.1: Knowledge and awareness on drought risk management Increased	87.00	87.00	87.00	87.00	244.00	**592.00**	
Output 4.1.1 Good practices and lessons on drought management, EWS and Climate Change impacts documented and disseminated	57.00	57.00	57.00	57.00	76.00	**304.00**	
Activity 4.1.1.1 Document lessons and best practices from project interventions	27.00	27.00	27.00	27.00	40.00	**148.00**	*These are costs for 60 consultancy man days @USD 300 and associated costs of USD 9,000 for three years per country* *Regional compilation of lessons and best practices@ USD 30,000 and associated costs of USD 10,000 for three years*
Activity 4.1.1.2 Generate and package information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders	15.00	15.00	15.00	15.00	16.00	**76.00**	*Cost of developing at 30-man days @USD 300, printing the materials estimated @USD 6,000 per country for four years.* *Regional cost of developing at 20-man days @USD 300, printing the materials estimated @USD 10,000*
Activity 4.1.1.3 Disseminate/share knowledge and information through use of existing and popular platforms e.g. electronic and print media, telecoms that is easily accessible by the stakeholders.	15.00	15.00	15.00	15.00	20.00	**80.00**	*Costs of using various communication platforms and channels estimated @USD 15,000 per country for four years* *Regional costs of using various communication platforms and channels estimated @USD 20,000 for four years*
Output 4.1.2 Drought information management strengthened	30.00	30.00	30.00	30.00	168.00	**288.00**	
Activity 4.1.2.1 Support existing channels/networks for information generation and dissemination at regional level (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms)	0.00	0.00	0.00	0.00	56.00	**56.00**	*Costs of meetings, workshops and coordination estimated @USD 14,000 per year for four years*
Activity 4.1.2.2 Engage policy makers in dissemination of drought management information and best practices	0.00	0.00	0.00	0.00	80.00	**80.00**	*Costs of meetings, workshops and travel estimated @USD 20,000 per year for four years*
Activity 4.1.2.3 Support drought management working groups to share and disseminate the information	0.00	0.00	0.00	0.00	32.00	**32.00**	*Costs of meetings, workshops and travel estimated @USD 8,000 per year for four years*
Activity 4.1.2.4 Develop Strategies to empower women and other vulnerable groups in drought management initiatives	30.00	30.00	30.00	30.00	0.00	**120.00**	*Studies assessed @60-man days @ USD 300/day and associated costs of USD 12,000 per country*

Project activities Total Budget (component 1, 2, 3, 4)	2311.48	2396.48	2486.48	2361.48	1453.10	11,009.02	
Execution costs (Regional Implementing Entity-GWPEA and national entities in the four countries)	95.00	95.00	95.00	95.00	665.86	1,045.86	
▪ Project inception launch activities	20.00	20.00	20.00	20.00	60.00	140.00	*Consultancies, Workshop and travel*
▪ Project Co-ordination and management fees	30.00	30.00	30.00	30.00	260.00	380.00	*Salaries and management fees*
▪ Operating costs	35.00	35.00	35.00	35.00	230.86	370.86	*Travel, DSA, printing, support staff*
▪ Equipment	10.00	10.00	10.00	10.00	15.00	55.00	*Equipment*
▪ Monitoring and evaluation	0.00	0.00	0.00	0.00	100.00	100.00	*Consultancies*
Implementation costs (Implementing Entity -OSS)						1,024.66	
▪ Implementation and Coordination Management Fees: salaries and fees of experts in charge of the project for planning, daily management, M&E, and implementation, as well as equipment and consumables, etc.						550.00	*Salaries and management fees*
▪ Assessment, supervision and travel expenses for monitoring: Costs of supervision missions, participation in steering committee meetings, mid-term and final evaluation and participation in workshops.						324.66	*Travel, DSA, consultancies*
▪ Financial management, accounting, and administrative follow-up and financial audit: Financial management monitoring fees in line with the requirements of the Adaptation Fund, financial reports, procurement procedures, accounting, audits, etc. Bank charges related to banking transactions and transfers of funds						150.00	*Consultancies, management fees*
Grand total						13,079.54	

H. Disbursement schedule with time-bound milestones

Component/Outcome/Output/Activity	Costs ('000 USD)				
	Year 1	Year 2	Year 3	Year 4	Total
COMPONENT 1: Development and enhancement *of a regional Drought Early Warning* System	759.36	1,294.35	256.63	76.78	2,387.11
Outcome 1.1: Increased use of effective Early Warning Systems by stakeholders	759.36	1,294.35	256.63	76.78	2,387.11
Output 1.1.1: Efficient and effective EWS in place/developed	368.00	340.00	0.00	0.00	708.00
Activity 1.1.1.1 Assess the status of EWS in the target countries and update options of traditional EWS with modern EW technologies	48.00				48.00
Activity 1.1.1.2 Develop an EWS prototype to be used at the regional and national levels	100.00				100.00
Activity 1.1.1.3 Equip/upgrade selected weather stations and Remote sensing derived products, time series of bioclimatic variables,	140.00	140.00			280.00
Activity 1.1.1.4 Construct/renovate and equip EW information centers including data base	80.00	80.00			160.00
Activity 1.1.1.5 Support/Equip project beneficiaries (pastoralist, farmers and extension agents) to access EW information (e.g. devices including, brochure, SMS, Radio etc.)		120.00			120.00
Activity 1.1.1.6 Conduct a baseline study	55.00	0.00			55.00
Output 1.1.2: Institutional linkages for EW information established	147.00	179.00	75.00	40.00	441.00
Activity 1.1.2.1 Develop/Review EW information sharing frameworks at regional. National and sub-national levels		80.00	0.00	0.00	80.00
Activity 1.1.2.2 Develop an implementation action plan to operationalize the frameworks	48.00				48.00
Activity 1.1.2.3 Hold inter-ministerial and sectoral meetings for data sharing	40.00	40.00	40.00	40.00	160.00
Activity 1.1.2.4 Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)	35.00	35.00	35.00		105.00
Activity 1.1.2.5 Support Incorporation of EW information into planning and budgeting processes of targeted countries	24.00	24.00			48.00
Output 1.1.3: Feedback mechanism for EW information developed	92.57	98.57	104.86	20.00	316.00
Activity 1.1.3.1 Support regular stakeholder EW information feedback platforms for farmers and pastoralists	20.00	20.00	20.00	20.00	80.00
Activity 1.1.3.2 Hold quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders		66.00	66.00		132.00
Activity 1.1.3.3 Conduct KAP surveys on EW information	60.00				60.00
Activity 1.1.3.4 Develop periodic feedback user friendly tools on accessing, utilizing and reporting EW information to mandated institutions	12.57	12.57	18.86		44.00
Output 1.1.4: Emergency plan for Drought management is put in place		151.79	676.78	76.78	16.78
Activity 1.1.4.1 Develop an emergency response plan for Drought disasters at the regional and national levels.	105.01				105.01
Activity 1.1.4.2 Monitoring the EWS, feedback mechanism and its contingency plan at regional level.	16.78	16.78	16.78	16.78	67.10
Activity 1.1.4.2 Organize training sessions on the use of the intervention plan for the benefit of the different actors involved at national and regional level	30.00	30.00			60.00
Activity 1.1.4.3 Acquire equipment for Drought management (machines/pickup, bicycles, motorcycles...)		460.00			460.00
Activity 1.1.4.4 Implement two (2) blank operations (including regional and national levels)		60.00	60.00		120.00
Activity 1.1.4.5 Acquire tools and materials to disseminate warning messages to the population (beacons, flags, sirens, signaling, speakers, telephone, local radio ...)		110.00			110.00
COMPONENT 2: Strengthening capacity of stakeholders to manage drought risks due to Climate Change effects	420.00	576.67	418.67	334.67	1,750.00
Outcome 2.1: Drought resilience of key stakeholders at regional, national and local levels strengthened	370.00	446.67	288.67	204.67	1,310.00
Output 2.1.1: Drought management plans (DMPs) integrating CC aspects and adaptation actions developed	132.00	144.00	84.00	0.00	360.00
Activity 2.1.1.1 Develop/update existing DMPs at national and sub-national levels integrating CC aspects and adaptation actions	60.00	60.00			120.00
Activity 2.1.1.2 Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists	12.00	12.00	24.00		48.00
Activity 2.1.1.3 Support integration of DMPs into the national and sub-national development plans		72.00			72.00
Activity 2.1.1.4 Support formulation of bye-laws and ordinances at sub-national and lower political units	60.00		60.00		120.00
Output 2.1.2: Adaptive capacity of institutions, farmers and pastoralists in drought management improved	238.00	302.67	204.67	204.67	950.00
Activity 2.1.2.1 Undertake a capacity needs assessment to identify gaps and hindrances to effective drought management	120.00				120.00
Activity 2.1.2.2 Develop capacity building plans for regional, national and sub-national levels	24.00	24.00			48.00
Activity 2.1.2.3 Develop capacity building materials	14.00	14.00			28.00

Activity 2.1.2.4 Undertake exchange visits and learning tours for cross learning in areas with successful drought management innovations including ground water management initiatives	40.00	40.00	20.00	20.00	**120.00**
Activity 2.1.2.5 Train staff managing EW information centers		40.00		40.00	**80.00**
Activity 2.1.2.6 Train extension staff and artisans in drought adaptation interventions	40.00	40.00	40.00		**120.00**
Activity 2.1.2.7 Facilitate community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	0.00	80.00	80.00	80.00	**240.00**
Activity 2.1.2.8 Support farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services		64.67	64.67	64.67	**194.00**
Outcome 2.2: Partnerships for drought management at regional, national and local levels strengthened	50.00	130.00	130.00	130.00	**440.00**
Output 2.2.1: New/existing regional and National arrangements /networks for drought management supported	50.00	130.00	130.00	130.00	**440.00**
Activity 2.2.1.1 Support review/development of MoUs, protocols and stock route agreements for Drought Management and reducing conflict between farmers and pastoralists		80.00	80.00	80.00	**240.00**
Activity 2.2.1.2 Facilitate establishment of regional and national drought management multi-sectoral/stakeholder platforms to coordinate partner efforts	30.00	30.00	30.00	30.00	**120.00**
Activity 2.2.1.3 Support regional and national partners to jointly mobilize resources for Drought Management in a changing climate context	20.00	20.00	20.00	20.00	**80.00**
COMPONENT 3: Drought and Climate Change adaptation actions	143.34	1,273.79	3,015.95	1,846.83	**6,279.92**
Outcome 3.1: Increased uptake and usage of concrete and innovative drought adaptation actions	143.34	1,273.79	3,015.95	1,846.83	**6,279.92**
Output 3.1.1: Innovative water and soil conservation structures constructed	60.00	319.53	733.59	436.87	**1,550.00**
Activity 3.1.1.1 Undertake assessment on surface water utilization/potential/availability and develop water Management Plans in project sites	60.00	60.00			**120.00**
Activity 3.1.1.2 Construct appropriate, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells	0.00	119.53	358.59	286.87	**765.00**
Activity 3.1.1.3 Construct mini-irrigation and water delivery systems (e.g. gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation and solar powered irrigation systems)	0.00	50.00	225.00	75.00	**350.00**
Activity 3.1.1.4 Support protection of water wells and springs to ensure quality, quantity and efficient water use	0.00	45.00	45.00	45.00	**135.00**
Activity 3.1.1.5 Promote appropriate soil and water conservation measures (e.g. terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)		45.00	105.00	30.00	**180.00**
Output 3.1.2: Ground water sources established/ improved	60.00	170.00	170.00	60.00	**460.00**
Activity 3.1.2.1 Undertake assessment on ground water utilization/potential/availability and develop groundwater Management Plans in project sites	60.00	60.00		0.00	**120.00**
Activity 3.1.2.2 Review/develop regulatory framework and guidelines on ground water sources		80.00	80.00	0.00	**160.00**
Activity 3.1.2.3 Restore degraded water catchments to improve recharge rates of ground water		30.00	90.00	60.00	**180.00**
Output 3.1.3: Adaptive agricultural practices for improving crop-production promoted	0.00	195.00	605.00	340.00	**1,140.00**
Activity 3.1.3.1 Promote fast growing and drought resistant crop varieties (e.g. varieties in Graminae and Leguminoceae families		40.00	120.00	80.00	**240.00**
Activity 3.1.3.2 Promote agro-silvo-pastoral systems (dryland agroforestry) (e.g. fast-growing multi-purpose tree species such as *Acacia mearnsii*, integrated with crops and livestock rearing)		20.00	60.00	40.00	**120.00**
Activity 3.1.3.3 Provide in puts for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)		60.00	200.00	100.00	**360.00**
Activity 3.1.3.4 Promote climate smart agricultural practices		75.00	225.00	120.00	**420.00**
Output 3.1.4: Adaptive livestock and rangeland practices enhanced	23.34	210.68	562.02	248.00	**1,044.04**
Activity 3.1.4.1 Promote improved rangeland management practices (e.g. developing of rangeland management plans, reduction livestock stocking, integrated pest and disease management)		40.00	120.00	80.00	**240.00**
Activity 3.1.4.2 Support introduction of drought tolerant livestock breeds		60.00	180.00	120.00	**360.00**
Activity 3.1.4.3 Promote hydroponic systems for growing nutritious fast-growing cereals for livestock (animal feeds)		40.00	120.00		**160.00**
Activity 3.1.4.4 Support farmers and pastoralists to prepare high value silage and hay for livestock during dry spells		24.00	72.00	48.00	**144.00**
Activity 3.1.4.5 Support formation/facilitate existing livestock associations/groups/cooperatives at community level	23.34	46.68	70.02		**140.04**
Output 3.1.5: Enabling environment for smallholder farmers and pastoralists adaptive activities created	0.00	215.20	215.20	195.20	**625.60**
Activity 3.1.5.1 Introduce and promote Index-based weather insurance in partnership with insurance companies		20.00	60.00	40.00	**120.00**
Activity 3.1.5.2 Conduct drought risk assessments on the agriculture value chain		120.00			**120.00**
Activity 3.1.5.3 Facilitate farmer and pastoralists associations/cooperatives to generate, analyze and share market information.		75.20	75.20	75.20	**225.60**
Activity 3.1.5.4 Create linkages between farmer and pastoralists associations/cooperatives at regional, national and sub-national levels to enable sharing of market information			80.00	80.00	**160.00**

Output 3.1.6: Environmentally friendly IGAs ([e.g., Pottery, Bee keeping, Energy saving stoves, Briquettes making, and interlocking bricks) promoted	0.00	163.38	730.14	566.76	**1,460.28**
Activity 3.1.6.1 Support women and youth groups within puts for IGAs including (e.g. growing of sisal and *Aloe vera* to support rope production and art crafts; bee keeping; briquette making; keeping of local poultry (e.g. Kroilers) and community tourism		80.00	240.00	160.00	**480.00**
Activity 3.1.6.2 Provide competitive small grants targeting small holder farmers and pastoralist associations to undertake innovative IGAs or drought adaptation actions			240.00	240.00	**480.00**
Activity 3.1.6.3 Provide inputs for value addition crop and livestock products		83.38	250.14	166.76	**500.28**
COMPONENT 4: Knowledge management and awareness creation	81.00	100.73	279.93	130.33	**592.00**
Outcome 4.1: Knowledge and awareness on drought risk management Increased	81.00	100.73	279.93	130.33	**592.00**
Output 4.1.1 Good practices and lessons on drought management, EWS and Climate Change impacts documented and disseminated	39.00	58.73	117.93	88.33	**304.00**
Activity 4.1.1.1 Document lessons and best practices from project interventions		19.73	78.93	49.33	**148.00**
Activity 4.1.1.2 Generate and package information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders	19.00	19.00	19.00	19.00	**76.00**
Activity 4.1.1.3 Disseminate/share knowledge and information through use of existing and popular platforms e.g. electronic and print media, telecoms that are easily accessible by the stakeholders.	20.00	20.00	20.00	20.00	**80.00**
Output 4.1.2 Drought information management strengthened	42.00	42.00	162.00	42.00	**288.00**
Activity 4.1.2.1 Support existing channels/networks for information generation and dissemination at regional level (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms)	14.00	14.00	14.00	14.00	**56.00**
Activity 4.1.2.2 Engage policy makers in dissemination of drought management information and best practices	20.00	20.00	20.00	20.00	**80.00**
Activity 4.1.2.3 Support drought management working groups to share and disseminate the information	8.00	8.00	8.00	8.00	**32.00**
Activity 4.1.2.4 Develop Strategies to empower women and other vulnerable groups in drought management initiatives			120.00		**120.00**
Project activities Total Budget (component 1, 2, 3, 4)	1403.70	3245.54	3971.18	2388.61	**11,009.02**
Execution costs (Regional Implementing Entity-GWPEA and national entities in the four countries)	395.00	220.00	200.63	230.23	**1,045.86**
▪ Project inception launch activities	140.00				**140.00**
▪ Project Co-ordination and management fees	95.00	95.00	95.00	95.00	**380.00**
▪ Operating costs	80.00	100.00	80.63	110.23	**370.86**
▪ Equipment	55.00				**55.00**
▪ Monitoring and evaluation	25.00	25.00	25.00	25.00	**100.00**
Implementation costs (Implementing Entity -OSS)	232.00	275.00	242.00	275.66	**1,024.66**
▪ Implementation and Coordination Management Fees: salaries and fees of experts in charge of the project for planning, daily management, M&E, and implementation, as well as equipment and consumables, etc.	130.00	140.00	140.00	140.00	**550.00**
▪ Assessment, supervision and travel expenses for monitoring: Costs of supervision missions, participation in steering committee meetings, mid-term and final evaluation and participation in workshops.	72.00	90.00	72.00	90.66	**324.66**
▪ Financial management, accounting, administrative follow-up and financial audit: Financial management monitoring fees in line with the requirements of the Adaptation Fund, financial reports, procurement procedures, accounting, audits, etc. Bank charges related to banking transactions and transfers of funds	30.00	45.00	30.00	45.00	**150.00**
Grand total	**2,030.70**	**3,740.54**	**4,413.81**	**2,894.50**	**13,079.54**

IV - PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY TH E IMPLEMENTING ENTITY

- **Record of endorsement on behalf of the government[1]:**

Kenya **Dr. Ibrahim M. Mohamed, CBS** Principal Secretary Ministry of Environment and Forestry Office of the Principal Secretary	**March 14, 2019**
Djibouti **Mr. Dini Abdallah Omar** Secretary General Ministry of Environment	**March 28, 2019**
Sudan **Dr. Noureldin Ahmed Abdalla** Secretary General - Higher Council for Environment and Natural Resources (HCENR) UNFCCC national focal point	**April 03, 2019**
Uganda **Mr. Patrick Ocailap** **FOR** Permanent Secretary/Secretary to the Treasury Ministry of Finance, Planning and Economic Development	**April 29 2019**

- **Implementing Entity certification**

I certify that this proposal has been prepared in accordance with the guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (Country programming papers (CPPs), **Djibouti'**s Public Investment Plan and the National Plan for Climate Change Adaptation; **Kenya**'s National Disaster Management Policy and National Climate Change response Strategy, **Sudan**'s regulatory policy frameworks related to drought and **Uganda**'s National Policy for Disaster Preparedness and management) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and to the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.

Mr. Khatim Kherraz– Executive Secretary of the Sahara and Sahel Observatory (OSS) as the Implementing Entity Coordinator

Date: May 13, 2019	Tel.: (+216) 71 206 633 Email: boc@oss.org.tn

Project Contact Person: **Mr. Nabil BEN KHATRA**

Tel. and Email: (+216) 71 206 633; nabil.benkhatra@oss.org.tn

[1]Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities

ANNEXES

Annex 1: ENDORSEMENT LETTERS

Telephone : 256 41 4707 000
: 256 41 4232 095
Fax : 256 41 4230 163
: 256 41 4343 023
: 256 41 4341 286
Email : finance@finance.go.ug
Website : www.finance.go.ug

In any correspondence on
this subject please quote No. ALD 79/251/02

THE REPUBLIC OF UGANDA

Ministry of Finance, Planning &
Economic Development
Plot 2-12, Apollo Kaggwa Road
P.O. Box 8147
Kampala
Uganda

29th April 2019

The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Email: secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

ENDORSEMENT FOR A REGIONAL PROJECT: STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION.

I have the honor to refer to the above mentioned subject.

In my capacity as the Designated Authority for the Adaptation Fund in Uganda, I confirm that the above regional project proposal is in accordance with the national and regional climate Adaptation priorities of the Government of Uganda.

Accordingly, I am pleased to endorse the full project proposal for support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by Ministry of Water and Environment of Uganda in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Patrick Ocailap
FOR PERMANENT SECRETARY/ SECRETARY TO THE TREASURY/ DESIGNATED AUTHORITY FOR CLIMATE CHANGE

Copies to: The Permanent Secretary, Ministry of Water and Environment.
Kampala, Uganda.

The Regional Coordinator, Global Water Partnership, Eastern Africa
Entebbe, Uganda.

The Executive Secretary, Sahara and Sahel Observatory
Tunis, Tunisia.

596 VOL II

MINISTRY OF ENVIRONMENT AND FORESTRY
Office of the Principal Secretary

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Ragati Road
P. O. Box 30126 – 00100
NAIROBI

Ref: DENR/EMC/6/VOL.III/45

14th March 2019

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 52 3240/5

ENDORSEMENT FOR A PROJECT
"STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION"

In my capacity, as designated authority for the Adaptation Fund in Republic of Kenya, I confirm that the above regional project proposal is in accordance with the Government's National and Regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Kenya and the IGAD region.

Accordingly, I am pleased to endorse the above project full proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by the Climate Change Directorate, Ministry of Environment and Forestry of Kenya in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Dr. Ibrahim M. Mohamed, CBS
PRINCIPAL SECRETARY

جمهورية السودان
Republic of Sudan
المجلس الأعلى للبيئة والموارد الطبيعية
The Higher Council for Environment and Natural Resources
General Secretariat
الأمانة العامة

Date: 03/04/2019

To: The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for a project "***Strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region***"

In my capacity, as designated authority for the Adaptation Fund in **Republic of Sudan**, I confirm that the above regional project proposal is in accordance with the government's national and regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Sudan and the IGAD region.

Accordingly, I am pleased to endorse the above project full proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by Ministry of Water Resources and Electricity of Sudan in close collaboration with the Higher Council of Environment and Natural Resources (HCENR) and in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Sincerely,

Dr. Noureldin Ahmed Abdalla
Secretary General (HCENR)
and National UNFCCC Focal Point

P.O.Box: 10488 - Tel:+249 183 784279 - Fax:+249 183 787617
Website:www.hcenr.gov.sd - E-mail:hcenr2005@yahoo.com
Gamaa Street, Khartoum, Sudan

REPUBLIQUE DE DJIBOUTI
UNITE – ÉGALITE – PAIX

MINISTERE DE L'HABITAT,
DE L'URBANISME ET DE
L'ENVIRONNEMENT

LE SECRÉTAIRE GÉNÉRAL

N° 198/ SG/2019
Djibouti, le 28 MARS 2019

MHUE

جـمـهـورية جيبوتي
الوحدة - المساواة - السلام

وزارة الإسكان والتعمير والبيئة

الأمين العام

رقم
جيبوتي في

To : The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Emai l : Secretariat@Adaptation-Fund.org
Fax : 202 522 324015

Subject: Endorsement for a project ***"strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region"***

In my capacity, as designated authority for the Adaptation Fund in Djibouti, I confirm that the above regional project proposal is in accordance with the government's national and regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Djibouti and the IGAD region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by the Ministry of Agriculture, Water, Fisheries and Livestock of Djibouti in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Sincerely,

Dini Abdallah Omar
Secretary General of the Ministry of Environment

+253 35-85-22 +253 35-16-18 BP 11 dini.omar12@gmail.com

Annex 2: LIST OF ACRONYMS AND ABBREVIATION USED IN THIS DOCUMENT

ADC	Africa Drought Conference
ASALs	Arid and Semi- arid lands
CC	Climate Change
DMPs	Drought Management Plans
DRESS-EA	Strengthening Drought Resilience of Smallholder farmers and Pastoralists in the IGAD Region
EIAs	Environmental Impact Assessments
ESIAs	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
GCM	Global Circulation Models
GWPEA	Global Water Partnership East Africa
HOA	Horn of Africa
IDMP HOA	Integrated Drought Management Program in the Horn of Africa
IGAs	Income Generating Activities
IGAD	Inter-Governmental Authority on Development
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
MOU	Memorandum of Understanding
MWE	Ministry of Water and Environment, Uganda
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
SDGs	Sustainable Development Goals
SNAPA	Sudan National Adaptation Programme of Action
UNCCP	Uganda National Climate Change Policy
USPs	Unidentified sub-projects
WACDEP	Water, Climate and Development Programme
WMP	Water Management Plan
WNS	White Nile State

Annex 3: CONSULTATIVE WORKSHOPS REPORT

(This annex is provided as separate file)

Annex 4: GENDER ANALYSIS & ACTION PLAN for DRESS-EA Project

GENDER ANALYSIS
For the project
"Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region"

1. Introduction

The Intergovernmental Authority on Development (IGAD) region stretches over an area of 5.2 million km^2 and has a population of about 200 million people. The region comprises of eight countries including Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. A large part (about 70%) of the region's land area is Arid and Semi-Arid Lands (ASALs) and receive less than 600 mm of annual rainfall (IGAD 2013)2. The area is a majorly water scarce area with minimal perennial river flows, making groundwater be the main source of water for the majority of the people in the horn of Africa. It is estimated that more than 80% of the inhabitants' communities live in rural areas, with less than 20% having access to improved water supplies. This situation demands address and is further complicated significantly by illicit activities such as deforestation and poor agricultural practices that lead to reduced water retention capacities, surface runoffs and soil cover losses. The dominant livelihood of the people in the region is agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems. The rural communities, who are mainly small-scale farmers and pastoralists, are highly vulnerable to droughts. The causes for vulnerability in the region include low adaptive capacity by communities to droughts, inadequate innovative adaptation actions to droughts, poor early warning systems and inadequate knowledge and skills in drought management. The impacts of droughts in the region have been manifested in the form of acute water constraints, significantly reduced precipitation levels and drying up of rivers. The effects of droughts have had destructive impacts on the region's economy, ecosystems and community livelihoods. Smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been most affected due to their limited coping mechanisms. GWPEA is collaborating with IGAD and governments of these countries through the Integrated Drought Management Programme (IDMP) and the Water, Climate and Development Programme (WACDEP) to enhance drought resilience in the region.

The proposed project entitled "Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region -DRESS-EA" will build on the existing initiatives and establish new mechanisms to address drought related challenges in the region through facilitating investments in early warning systems, building the capacity of targeted stakeholders, supporting innovative adaptation actions and enhancing knowledge management and skills.

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks, mainly those related to drought, through the establishment of appropriate early warning systems and the implementation of drought adaptation actions. More specifically, this project is intended to, promote investments in drought early warning systems (EWS) and improve the existing ones, strengthen and improve the capacity of key stakeholders in drought risks management at regional, national and local levels, Support communities to undertake innovative adaptation actions that reinforce their resilience to drought and enhance knowledge management and information sharing on drought resilience at the considered levels. To address the drought challenges, the DRESS-EA project, has been developed by partners in the IGAD region. The project will be implemented by is being developed by Sahara and Sahel Observatory (OSS), is an accredited Regional Implementing Entity for the Adaptation Fund. Project execution will be done by the in partnership with Global Water partnership Eastern Africa (GWPEA) as the Regional Executing Entity in partnership with the focal countries that include Djibouti, Kenya, Sudan and Uganda. The four countries have fully endorsed the project due to current challenges in their countries and have expressed support to undertake the proposed interventions. Understanding the different needs and capacities of women and men is critical to effective project implementation. It is against this background that a gender analysis was conducted to analyse the gender group differences in terms of their vulnerability, roles and responsibilities as well as challenges and opportunities; mitigate or gender mainstream into project activities and draw a gender-based action plan for project implementation.

2. Methodology

The gender analysis was conducted using Participatory Rural Appraisal tools and techniques in 4 community consultative meetings/PRA sessions that involved 15 males and 15 females per meeting in the proposed project sites that are highly prone to frequent and intense droughts. The main purpose of these public consultation sessions was to seek the beneficiaries' points of view and to collect information for a better design of the project with a focus on involving vulnerable groups, farmers, fishermen, women, and youth. This participatory approach aimed at ensuring effective representation of the project beneficiaries during preparation and planning stage; learning about the concerns of all stakeholders, including vulnerable groups (women, youth and men) in the design and implementation of the project as well as exchanging views on the financing and sustainability of the project. Women's presence at the consultation workshops helped to enrich the debate about income generating activities. In the climate change context, the role of women and other vulnerable groups in natural resources management is still limited. This results from the socio-cultural constraints that impede the full participation of women and vulnerable groups in adaptation and mitigation measures. The Key Informant Interviews (KIIs) were also conducted with a total of 18 local leaders in the four countries in which the project will be implemented. Other key informants were engaged during and after the workshop sessions. These methods were further supported by telephone interviews where possible. Therefore, although the data collected may not be statistically representative given the fact that the participants were few, the qualitative data gathered presents a reliable analysis and incorporation of the gender issues for the proposed project in the four countries.

3. Findings of the Gender Assessment

A gender assessment has been conducted in order to understand the differences and similarities in women and men's vulnerability to climate change and drought, their adaptive capacities in the face of climate change as well as their roles and participation in climate change and drought risk management.

Demographic characteristics

The results show that the demographic composition of most communities in the proposed project sites makes them vulnerable to the impacts of climate change aggravated droughts. The most vulnerable members of communities among the small holder farmers and pastoralists in the proposed project areas are women, youth and People Living with HIV/AIDS (PLWHAs). The main factors that contribute to their vulnerability are; unsafe sexual practices within and outside these communities, poverty due to low incomes and limited/inadequate livelihood options and men abandoning their family responsibilities and heaping most activities to the women and youth especially in times

when climate change and drought events are at the peak. In terms of populations, women and youth outnumber men. Therefore, women and youth are numerically stronger than men. However, traditional norms have hitherto disadvantaged both women and youth in most countries including the four countries where the DRESS-EA project will be implemented. Most women work in the informal sector where they provide labour for domestic and commercial activities. Women are providing the bulk of the labour force in agriculture.

Education

Women are generally less educated compared to the men. Actually, most women among smallholder farmers and pastoralists are illiterate and of poorer socio-economic status. This implies that their access to basic services especially water and health-care is greatly limited thereby further rendering them more vulnerable to the vagaries of climate change including droughts. Due to limited education or literacy levels, their involvement in community leadership and governance thereby living and working under the mainly male-dominated local leadership and governance structures that are ideally meant to guide communities in managing and coping with climate risks. These findings further reveal that women's access to information is also very limited as a result of limited literacy levels.

Access to resources and decision making

Despite women's labour force in the agricultural sector, few own and control land resources including trees crops and food crops. Women have very little power to access to resources and are not the main decision makers. It was evident in the proposed sites that based on limited power to access resources and make decisions renders women more highly vulnerable to poverty and other vagaries including drought and climate change impacts. These aspects impede their coping mechanisms as well as the entire community of smallholder farmers and pastoralists. Similarly, despite the numerical strength of the youth, their representation in socio-economic development processes and activities is still low. They are characterized by poor access to land and related resources and access and decision-making powers over agricultural production. They are vulnerable to limited livelihood options due to poor incomes. Yet the youth are the most energetic and more technologically savvy. These findings imply that there is limited capacity to cope due to high levels of poverty and dependency among the women and youth that render them more susceptible to the damaging effects of drought and climate change. Thus, their exclusion represents untapped potential for increasing productivity under a changing climate.

Roles and responsibilities

The roles and responsibilities of women are strongly attached to culture and traditions among the small-scale farming communities and pastoralists. Women and other vulnerable individuals such as the elderly are less mobile and spend much of their time at home. Women are expected to remain at home and household keepers and engage in cultivation around homesteads. They cannot by this nature respond quickly in situations when climate risks and hazards trike. Despite the immobility of women, they are expected to perform various roles even when livelihoods have been disrupted by drought and other climate induced risks. Women are expected to take care of their children, collect fire wood, fetch water, cook food for themselves, children and their husbands and other household members as the more mobile men either seek help elsewhere or migrate to neighbouring areas purportedly searching opportunities for earning more income.

Gender Balance

Gender balance in leadership, governance and decision-making over drought management and control of resources remains very low in the proposed project sites. They are characterized by poor access to land and related resources and access and decision-making powers over agricultural production. Therefore, gender mainstreaming is vital for successful design and implementation of the proposed project activities. It is vital that the women and youth are empowered to contribute to the design and implementation of the livelihood options especially in agriculture and natural resources management interventions

Access to finance

Access to land through succession is the main avenue though generally reserved for men hence limiting women's opportunity to accessing controlling assets and resources. However, access to land ownership is possible for both, men and women, through the acquisition expensively paid for. Access to finance is also unequal because of the stringent, discriminative eligibility criteria that require security in form of yields, productivity, and contributions. These criteria often accompany financial requests that women can hardly meet. In general, the credits allocated to women are small amounts from informal networks and are most often invested in areas other than production. Men, on the other hand, often benefit from more substantial loans for the acquisition of production equipment and marketing.

4. Conclusions

This gender analysis revealed that whereas women and men face various challenges including livelihood challenges and vulnerability to droughts and climate change risks, women, children, the elderly, and youth remain the most physically, economically and socially vulnerable to climate related disasters. the vulnerabilities stem from traditional norms and beliefs, and stereotypes that have hitherto limited women's ownership and control of livelihood resources, restricted their movement, and increased their burden with many domestic gender roles. The coping strategies are also gendered, with men reportedly migrating to purportedly find opportunities to widen their income bases for their families leaving the women, children, youth and elderly behind. Women have adequate access to information on drought risk and management as well as finance. Actually, most trainings/capacity building initiatives undertaken by other stakeholders on drought and other climate change disasters management have previously targeted more men than women. Women are generally more knowledgeable than men in drought management measures due to their resilience in facing and dealing with such challenges in absence of the men. Although men, women and youth are vulnerable to drought and climate change, women are more vulnerable.

5. Recommendations

It is recommended that measures aimed at strengthening men and women's resilience to drought and other climate risks are undertaken so as to reduce their vulnerability to the damaging impacts of drought aggravated climate change. These include women empowerment schemes such as small competitive grant schemes, soft loans, restocking of households with cattle and goats, provision of drought resistant crops, high yielding, varieties, and provision of improved cooking stoves etc. that directly target and benefit women. Those measures that are aimed at enabling women and men equally access information, benefit from project interventions, empower women to take up leadership and governance roles and responsibilities should be undertaken. Such measures include Gender mainstreaming of the project interventions (Table 1) supported by a Gender action plan to guide project implementation.

6. Gender Mainstreaming

Gender considerations will be made at every stage and intervention of the proposed project gender will be a major consideration in for instance capacity building meetings or workshops, management committees such as the water management committees, drought management information sharing platforms, developing and formulating by-laws and ordinances for groundwater sources management in communities within the four selected countries, women should constitute at least 40% of each target group. Also, at every stage of providing inputs such as for early warning devices, soil and water conservation, climate-smart agricultural practices, range, and livestock management at least 40% of the women will be the sole beneficiaries. A gender analysis for project interventions is presented in the following.

Table 1: Gender considerations by the project

Component	Activity	Gender aspect	Benefits	Risks	Strategies for mitigation
COMPONENT 1: Development and enhancement of a regional Drought Early Warning System	Provision /supporting gender groups of farmers and pastoralists with to access EW information (e.g. devices including, brochure, SMS, Radio etc.)	Representation of various gender groups in accessing EW information	The aspect leads to stronger/strengthened gender groups (women, men, and youth) of farmers and pastoralist that have climate information earlier. This aids planning crop and livestock-based activities.	The tendency to selectively provide early warning information to men only yet women are the main planners of climate influenced household activities including cropping and livestock grazing.	Provide fair guidelines for supporting gender groups. The guidelines should acknowledge the importance of women by about 40%. The guidelines should be approved by project parties.
	Involves buying EW information devices for targeted pastoralist, farmers and extension agents	Representation of various gender groups in accessing EW information devices	The benefit is timely reception of EW information leading to timely planning and implementation of agro-pastoral activities.	The tendency to provide EW devices without gender consideration, yet the roles the devices serve requires a gender perspective. Most often devices are provided to only the men	Deliberately buying EW information devices that are gender sensitive.
	Holding inter-ministerial and sectoral meetings for data sharing	Representation of various gender groups at ministerial and sectoral meetings	This provides an opportunity for gender groups to share EW information and data at a high influential and policy level	The tendency for EW information and data not to remain un utilized at higher levels to the detriment of the end users (farmers and pastoralists) at the local levels.	Ensure the participants at these ministerial and sectoral meetings are gender segregated to at least 40% women representation compared to other gender groups.
	Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)	Representation of various gender groups in EW information and data sharing forums	This aspect is beneficial in strengthening forums and associations sharing EW information.	Forums and Associations for farmers and pastoralists are not gender balanced, hence lack equity in effective representation of the gender groups.	Deliberately ensure that 40% of the women participate and are supported in such Forums as well as executive committees on Pastoralists' and crop farmers' associations.
	Supporting regular stakeholder EW information feedback platforms for farmers and pastoralists	Representation of various gender groups on EW information feedback platforms	This aspect is beneficial in strengthening platforms for EW information feedback.	Platforms for EW information feedback are not engendered. Feedback provision is quite often lead by men.	Deliberately ensure that 40% of the women participate and are supported on such feedback platforms for Pastoralists' and crop farmers'.
	Organize training sessions on the use of intervention plan for the benefit of different actors involved at national and regional levels	Proportional representation of various gender groups on training	This is beneficial in building the capacity of various actors to plan and prepare for emergency responses to droughts. Different actors acquire knowledge and skills to plan and manage emergencies.	Trainings being dominated by men	Proper guidelines to determine the proportion of gender groups in such trainings should be developed and implemented.
COMPONENT 2: Strengthening capacity of stakeholders to manage drought risks due to Climate Change effects	Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists	Representation of various gender groups in workshops organized for popularization and dissemination of reviewed DMPs.	Strengthens the planning and management of drought by farmers and pastoralists.	More men selected to attend workshops yet women and youth more vulnerable to the impacts of drought.	Deliberately ensure 40% women representation in workshops
	Supporting formulation of bye-laws and ordinances at sub-national and lower political units. The support required is facilitating the organization of a workshop for formulating as well as deliberating on the specific bye-laws	Representation of various gender groups in workshops organized for formulation of bye-laws and ordinances at sub-national and lower political units.	Encourages women to take the lead in formulation and implementation of laws and ordinances	Marginalization women, youth and other vulnerable groups	Proper guidelines to determine the proportion of gender groups in such workshops for formulation of bye-laws and ordinances

	Undertaking exchange visits and learning tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives	Selection of at least 40% women for participation in exchange visits for cross learning in such initiatives	Encourages women to take the lead in implementing successful interventions to the success of the projects	Selecting only then men, yet youth and women often lead implementation of project interventions.	Develop guidelines for selecting participation in exchange visits.
	Facilitating community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	Proportional representation of various gender groups on training	Strengthens the capacity of various actors in drought management	Trainings being dominated by men	Proper guidelines to determine the proportion of gender groups in such trainings should be developed and implemented.
	Supporting farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services. In this activity farmers and pastoralists will be provided with inputs	Proportional representation of various gender groups on training Representation in accessing farm inputs.	Strengthens the capacity of various actors to undertake innovative climate smart agriculture through skills and knowledge acquisition as well as accessing farm inputs	Trainings being dominated by men	Proper guidelines to determine the proportion of gender groups in such trainings should be developed and implemented.
COMPONENT 3: Drought and Climate Change adaptation actions	Supporting protection of water wells and springs to ensure quality, quantity and efficient water use by providing inputs, for instance, live markers around the wells.	Representation of various gender groups in accessing inputs for protection of water wells and springs	Promotes sustainability of interventions for water wells and springs	The tendency to provide inputs without gender consideration, yet the women and youth and children interact more with water resources later on are more vulnerable to water scarcity, quality and quantity related challenges.	Deliberately buying EW information devices that are gender sensitive.
	Training the established water management committees to protect water wells and springs to ensure quality, quantity and efficient water use	Proportional representation of various gender groups on training Representation in accessing farm inputs.	Strengthens the capacity of various actors to undertake innovative climate smart agriculture through skills and knowledge acquisition as well as accessing farm inputs	Trainings being dominated by men	Proper guidelines to determine the proportion of gender groups in such trainings should be developed and implemented.
	Supporting farmers and pastoralists to prepare high-value silage and hay for livestock during dry spells.	Representation in accessing inputs for preparing high value silage and hay for livestock	Strengthens the capacity of farmers and pastoralists in silage and hay preparation; It also beneficial in the sustainability of interventions on resilient drought and livestock management	Marginalization women, youth and vulnerable groups	Gender groups especially women need to be supported and empowered to participate in livestock management activities
	Training communities in preparing high-value silage and hay for livestock to increase production of livestock products.	Proportional representation of various gender groups on training Representation in accessing farm inputs.	Strengthens the capacity of various actors preparing high-value silage and hay for livestock	Trainings being dominated by men	Proper guidelines to determine the proportion of gender groups in such trainings should be developed and implemented.
	Support women and youth groups with inputs for IGAs including (e.g. growing of sisal and *Aloe vera* to support rope production and art crafts; bee keeping; briquette making; keeping of local poultry (e.g. Kroilers) and community tourism	Proportion of women accessing support/ inputs for alternative IGAs	People acquire additional knowledge and skills about the various alternative IGAs People have improved incomes	Marginalization women, youth and vulnerable groups	Supporting various groups especially women and the other vulnerable groups to access the inputs IGAs through skills development and trainings etc. Develop clear guidelines on management of the fund to cater for all groups Ensure that all gender groups are equally represented fund management committees Proper and inclusive criteria for

					selection of beneficiaries
	Provide competitive small grants targeting small holder farmers and pastoralist associations to undertake innovative IGAs or drought adaptation actions	Proportion of women accessing Small grants engaging in innovative alternative IGAs or value addition.	People acquire additional knowledge and skills about the various alternative IGAs People have improved incomes	Marginalization women, youth and vulnerable groups	Supporting various groups especially women and the other vulnerable groups to access the inputs IGAs through skills development and trainings etc. Develop clear guidelines on management of the fund to cater for all groups Ensure that all gender groups are equally represented fund management committees Proper and inclusive criteria for selection of beneficiaries
COMPONENT 4: Knowledge management and awareness creation	Develop gender responsive and scale-up strategies for drought, CC and early warning technologies among women, and other vulnerable groups	Non-Gender responsive strategies for up scaling project interventions Representation of various gender groups in workshops and meetings for inputs	Women and other gender groups embrace project interventions and contribute to their sustainability	Marginalization of women, youth and other vulnerable groups	Proper guidelines to determine the proportion of gender groups in such workshops

7. Gender Action Plan

TABLE 2: The project action plan for Gender considerations

Component	Gender Objective	AF GP Principle	Action	Responsible parties (Who)	When (Time)
COMPONENT 1: Development and enhancement of a regional Drought Early Warning System	To tackle gender imbalances at local, national and regional levels from project design to implementation	Gender equality and Gender equality (*adherence to these two principles helps to ensure that there are no imbalances in assessing EW devices first of all between the gender groups as well as within the groups*)	Provision /supporting gender groups of farmers and pastoralists with to access EW information (e.g. devices including, brochure, SMS, Radio etc.).	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality	Involves buying EW information devices for targeted pastoralist, farmers and extension agents	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality and gender equity (*i.e. to ensure there are no gender balances between ministerial and sectoral meetings as well as within ministries and sectors*)	Holding inter-ministerial and sectoral meetings for data sharing	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality	Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality	Supporting regular stakeholder EW information feedback platforms for farmers and pastoralists	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
			Organize training sessions on the use of intervention plan for the benefit of different actors Gender equality involved at national and regional levels	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
COMPONENT 2: Strengthening capacity of stakeholders to manage drought risks due to Climate Change effects	To tackle gender imbalances at local, national and regional levels from project design to implementation To improve women empowerment to during designing and implementation of project activities at local national and regional levels To tackle gender imbalances at local, national and regional levels from project design to implementation	Gender equality	Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
			Supporting formulation of bye-laws and ordinances at sub-national and lower political units. The support required is facilitating the organization of a workshop for formulating as well as deliberating on the specific bye-laws	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Women empowerment	Undertaking exchange visits and learning tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage

		Gender equality	Facilitating community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality and Gender equality	Supporting farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services. In this activity farmers and pastoralists will be provided with inputs	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
COMPONENT 3: Drought and Climate Change adaptation actions	To tackle gender imbalances at local, national and regional levels from project design to implementation	Gender equality	Supporting protection of water wells and springs to ensure quality, quantity and efficient water use by providing inputs, for instance, live markers around the wells.	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
		Gender equality, Gender equity and Women empowerment	Training the established water management committees to protect water wells and springs to ensure quality, quantity and efficient water use	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
			Supporting farmers and pastoralists to prepare high-value silage and hay for livestock during dry spells.	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
			Training communities in preparing high-value silage and hay for livestock to increase production of livestock products.	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
	To improve women empowerment to during designing and implementation of project activities at local national and regional levels	Women empowerment and Gender equality (*to ensure that there are gender disparities between the women and youth groups in accessing inputs for IGAs as well as the Small Competitive Grants*)	Support women and youth groups with in puts for IGAs including (e.g. growing of sisal and *Aloe vera* to support rope production and art crafts; bee keeping; briquette making; keeping of local poultry (e.g. Kroilers) and community tourism	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
			Provide competitive small grants targeting small holder farmers and pastoralist associations to undertake innovative IGAs or drought adaptation actions	OSS, GWPEA and Executing Entities and Consultants	Project design and implementation stage
COMPONENT 4: Knowledge management and awareness creation	To tackle gender imbalances at local, national and regional levels from project design to implementation	Gender equality and women empowerment	Develop gender responsive and scale-up strategies for drought, CC and early warning technologies among women, and other vulnerable groups	OSS, GWPEA and Executing Entities and Consultants	After Project implementation stage

Annex 5: Vulnerability Assessment

ASSESSMENT OF POPULATIONS AND NATURAL RESOURCES VULNERABILITY TO THE ADVERSE EFFECTS OF DROUGHT IN THE IGAD REGION

1. Introduction

Broadly, this study evaluates and analyzes the vulnerability of ecosystems and populations to the adverse effects of climate change and drought in the proposed DRESS-EA project titled "***Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region***". The study provides current data and climate projections in the proposed project sites. Specifically, the study includes

i. Literature review and analysis of existing documents, national communications, studies, and projects reports dealing with the priority areas vulnerability.
ii. A general overview on the priority areas vulnerability
iii. Identifying and delineating the most vulnerable areas
iv. Actions to mitigate ecosystems and populations' vulnerability in the most vulnerable sites

This document was majorly prepared in order to inform the design and implementation of the proposed project. The pre-concept of the proposed project was submitted to the Adaptation Fund for funding seeking a total budget of USD 13,079,540. This was a part of the scoping exercise aimed at determining relevant information to be collected to develop the Concept Note for submission to the Adaptation Fund. In this report the key issues regarding the vulnerability and potentials related to small holder farmers and pastoralists in the four countries are presented. In addition, specific interventions and options for reducing the vulnerability of small holder farmers and pastoralists that could be explored by the project have been identified.

2. Methodology

Literature review was used to collect the data necessary for accomplishing the tasks of this study as elaborated in subsequent sections of this report. Desk reviews and content analysis were conducted on background documents in relation to the specific information required for this study. Efforts were made to align the information gathered to the data required to elaborate the Concept note for submission to the Adaptation Fund. Documents were obtained from various sources including the participating Executing Entities of the selected countries in the IGAD region i.e. Ministry of Agriculture Water Fisheries and Livestock; Ministry of Environment and Natural Resources; Ministry of Water Resources and Electricity and Ministry of Water and Environment respectively in Djibouti, Kenya, Sudan and Uganda. Online resources including Government Reports, policies and plans were reviewed.

3. Overview of priority areas vulnerability of populations and ecosystems

The Inter-Governmental Authority for Development (IGAD) region comprises eight countries namely Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. It is a regional economic community that was initially established in 1986 in response to devastating droughts and famine that affected millions of people in the Horn of Africa sub-region that supports the largest livestock population in the world. The IGAD region covers an area of 4,625,278 km^2. The total population of was approximately 221 million people in 2011. The IGAD member states face severe water constraints and prolonged

droughts. Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm (Figure1) of rainfall annually (IGAD 2013)[1]. It is predicted that the frequency and intensity of droughts will increase as a result of climate change, especially in semi-arid areas[2]. The main consequences of droughts are degradation of environmental and natural resources largely due to climate variability and change, increased human population, inadequate institutional capacities, civil strife and high poverty levels in the region (IFRC, 2011). Climate change contributes to higher temperatures in the region thereby aggravating the impacts of drought. Therefore, the human populations including the most vulnerable members among smallholder farmers and pastoralist as well as the ecosystems on which these populations derive various ecosystem goods and services are highly vulnerable to droughts and climate change.

Due to the significant destructive climate change led effects of droughts on the region's economy, ecosystems and community livelihoods for smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been the most affected due to their limited coping mechanisms coupled with limited knowledge, skills and early warning information as well as the associated facilities to enable them adapt to droughts. The other factors that worsen the vulnerability to drought risk include high dependency on climate sensitive livelihoods, fragile and rapidly degrading physical environment, inadequate extension services and high incidences of conflicts that are rampant in the region (Global Water Partnership East Africa, 2015). Global Water Partnership East Africa (GWPEA) is collaborating with IGAD and governments of Djibouti, Kenya, Sudan and Uganda through the Integrated Drought Management Programme (IDMP) and the Water, Climate and Development Programme (WACDEP) to enhance drought resilience in the region. The four selected countries of the region, GWPEA and OSS have developed a project that will build on the existing initiatives and establish new mechanisms to address drought related challenges in the IGAD region through facilitating investments in early warning systems, building the capacity of targeted stakeholders, supporting innovative adaptation actions and enhancing knowledge management and skills. However, vulnerability of ecosystems and populations to the adverse effects of climate change in the project areas is not known thus needs to be elaborated.

Overall, prolonged and widespread drought is a recurrent feature that is exacerbated by the climate change phenomena, advancing desertification and ecological degradation[3]. The international disasters database reveals that drought occurrence has been steadily increasing in eastern Africa during the past 50 years[4]. Climate variations and droughts affect livelihoods and trigger adaptation strategies. Therefore, a better understanding of the impacts of drought and responses of African populations is key for researchers and decision makers in the current and future context of multiple socioeconomic and environmental changes, including climate change[5]. The Horn of Africa which includes countries like Djibouti, Kenya, Sudan, South Sudan and Uganda has been affected by the worst droughts in history that decimated the livestock and destroyed crops. Drought has led to increased degradation of the nutritional status of populations particularly women and children with a chronic malnutrition rate of 30%. Recurrent droughts combined with various conflicts and civil wars in the region, have caused massive displacement of populations and affected persons estimated to be 12 million[6]. Droughts cause large human and economic losses resulting from poor rainfall and rising food prices thereby increasing the vulnerability of the population to the effects of drought (Cenacchi, 2014).

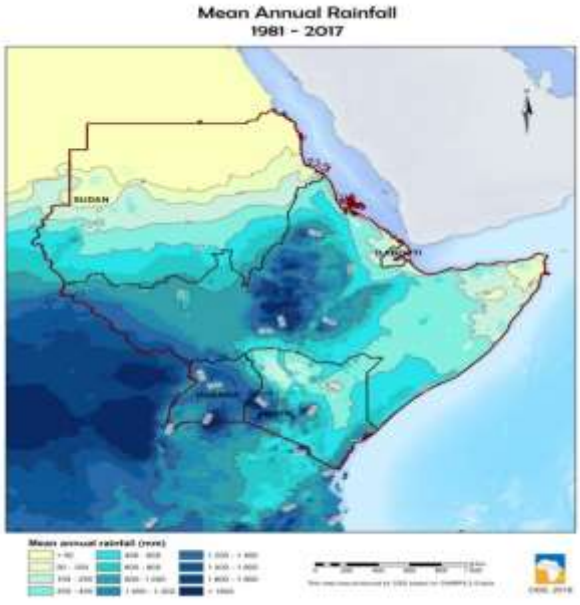
Populations in Djibouti, Kenya, Sudan and Uganda have long lived with a dry climate that varies from year to year as well as in the long term. These populations have been affected by food insecurity as evidenced by famine in the 17th century but also triggered adaptation strategies, e.g. temporary or permanent migration among others. However, the efficiency of these adaptation strategies remains limited. The harm to a population caused by a climatic event varies depending on other types of exposure. The high vulnerability of populations and institutions to drought-related shocks originates from a long history of exposure to natural hazards combined with several other factors: population growth, increased pressure on resources leading to land fragmentation, soil degradation and overexploitation of water resources, insecure access to land and water resources, conflict, and poor coping and adapting capacity. Decreased agricultural productivity resulting from drought-induced crop

[1] *IGAD, 2013. IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) Strategy.*
[2] T. Zhao *et al*. (2015) 'The Magnitude and Causes of Global Drought Changes in the Twenty-First Century under a Low–Moderate Emissions Scenario'. Journal of Climate, 28.
[3] Global Water Partnership Eastern Africa (GWPEA) (2015). *Assessment of Drought Resilience Frameworks in the Horn of Africa. Integrated Drought Management Program in the Horn of Africa (IDMP HOA), Entebbe, Uganda.*
[4] *Cenacchi, N. 2014. Drought Risk Reduction in Agriculture*
[5] Gautie, D. 2016. *Impacts of drought and responses.*
[6] Bikwemu, G. 2012. Drought Resilience and Sustainable Livelihoods Program in Horn of Africa.

failure affects the populations already living on few assets and low income. The new impacts further erode people's assets, thereby increasing vulnerability to additional shocks (Cenacchi, 2014).

Natural resources in the IGAD region and especially in the four selected countries are the major sources of livelihoods for the human and livestock populations therein. Due to the increasing human population in the region, natural resources have been subjected to immense pressure for such ecosystem goods and services. However, drought and climate change impacts impede the productivity of the natural resources including forests, water, rangelands, wetlands and marshy areas. Crop production, livestock and dairy production, the need for fuel wood, and construction materials all depend on plant productivity that is constrained by water availability. This constrains viable livelihood opportunities. Practices like intensified cultivation in areas that do not have an adequate level of supporting services (soil fertility, nutrients, and water supply) thus require adjustments in management practices or costly imports of nutrients and water. There is excessive loss of soil, change in vegetation composition and reduction in vegetative cover, deterioration of water quality and reduction in available quantity, and changes in the regional climate system[7]. According to IGAD and OSS (2011), transformation of rangelands and sylvo-pastoral dryland systems to croplands increases the risk of desertification due to increased pressure on the remaining rangelands or to the use of unsustainable cultivation practices. Although rangelands are resilient under traditional mobile grazing practices—commonly called transhumance—in response to seasonal changes, reduced transhumance leads to overgrazing and rangeland degradation. Removal of the rangeland vegetation cover takes place both by overgrazing of forage and by transforming rangelands to cultivated systems worldwide. Removal of vegetation cover when combined with unsustainable soil and water management practices in the converted rangelands brings about soil erosion, soil structure change, and soil fertility decline.

According to Cooper et al. (2008), the drought-coping strategies developed by farmers over generations in the arid and semiarid areas of SSA are mostly "risk spreading" measures; they can mitigate the negative effects of deficit rainfall but may not necessarily allow the farmers to address issues of soil fertility and significantly improve productivity during average or good seasons. However, it is important to recognize that a very wide variety of strategies have been and still are being adopted between regions, villages, and even from household to household (Cooper et al. 2008).



4. *Identifying and delineating the most vulnerable areas*

The project will be implemented in different sites within each of the four selected countries of the IGAD region. Basically, these are areas that are considered to be most vulnerable and prone to drought based on the following criteria:

[7] *Intergovernmental Authority on Development and Sahara and Sahel Observatory 2011. Mapping, Assessment & Management of Transboundary Water Resources in the IGAD Sub-Region Project. Environment Component. An assessment of the key environmental issues affecting the IGAD sub-region*

- In terms of the environmental conditions the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (easpecially vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).
- Communities inhabiting such sites are also food insecure due to recurrent famine and shortage of food resulting from droughts. There is high dependence on rain-fed agriculture. In this case farmers and pastoralists highly depend on crop and livestock farming for livelihoods.
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender.
- Low income levels of the population/high poverty levels in such sites therein are known, and reported.
- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income.

These criteria allowed the selection of the project sites which are the most vulnerable to drought the impacts of climate variability and change.

4.1 Geographical location and area

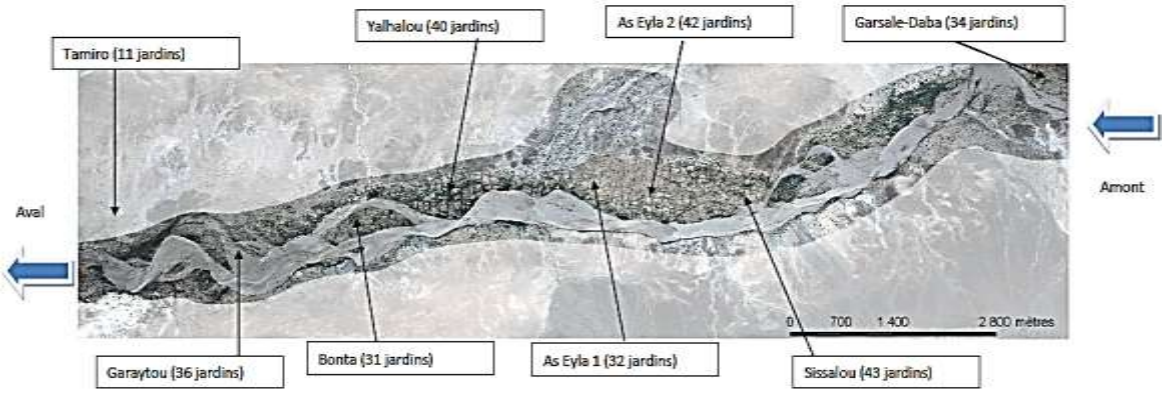
In Djibouti the project will be implemented in three sites that are considered most vulnerable to droughts. The sites include Oued Ambouli, Wadi Gobaad and the Hanle sector. These sites are located at latitudes 0°5"and 2°13" and longitudes 43°58" and 33°8" east respectively (Figures 4). The Oued Ambouli drains a watershed of about 600 km^2 and flows into the Indian Ocean near the Gulf of Tadjourah. The Wadi Gobaad is 120 km long and drains south of the Gobaad depression to the southwest of the Republic of Djibouti. It is the confluence of many superficial flows of the Adigala region in Ethiopia that crosses from south to north into Djibouti territory via Abbot Lake As Eyla. The Hanle sector is found 150-200m above sea level.

In Kenya, project will be implemented in Kitui and Samburu counties (Figure 5) that lie between latitudes 0°10" and 3°0" south and longitudes 37°50" and 39°0" east and latitudes 0°30'and 2° 45' north of the equator between longitudes 36°15' and 38° 10'east of the Prime Meridian respectively. Kitui covers an area of 30,496.4 km^2 including 6,369 km^2 occupied by Tsavo East National park. Samburu covers an area of 21,022.27 km^2. Samburu is bordered by Turkana to the Northwest, Baringo to the Southwest, Marsabit to the Northeast, Isiolo to the East and Laikipia to the South.

In Sudan the project will be implemented in El Salam in the White Nile state. This site is located west of the White Nile River bordered by South Sudan to the south, South Kordofan state to the west and Kosti town mid-way to the north and North El Zelate town of South Sudan to the north (Figures 6a and 6b).

In Uganda, the project will be implemented in Rupa Sub County in Lokere Catchment. The catchment is located in the districts of Kaabong (5.4%), Moroto (32.0%), Kotido (3.8%), Napak (32.9%) and Nakapiripirit (2.2%) in the Karamoja Region and; Amuria (11.0%), Katakwi (9.5%) and Soroti (3.3%) in Teso Region (Figure 7). Lokere Catchment covers a total area of 8,156 km^2. Rupa Sub County in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya. This calls for transboundary approaches and interventions in tackling the drought problem across neighboring areas in Uganda and Kenya.

Figure 2 : Image satellite de la région du Gobaad, localisation des secteurs agricoles de la coopérative de Gobaad (Pasquet, 2011)



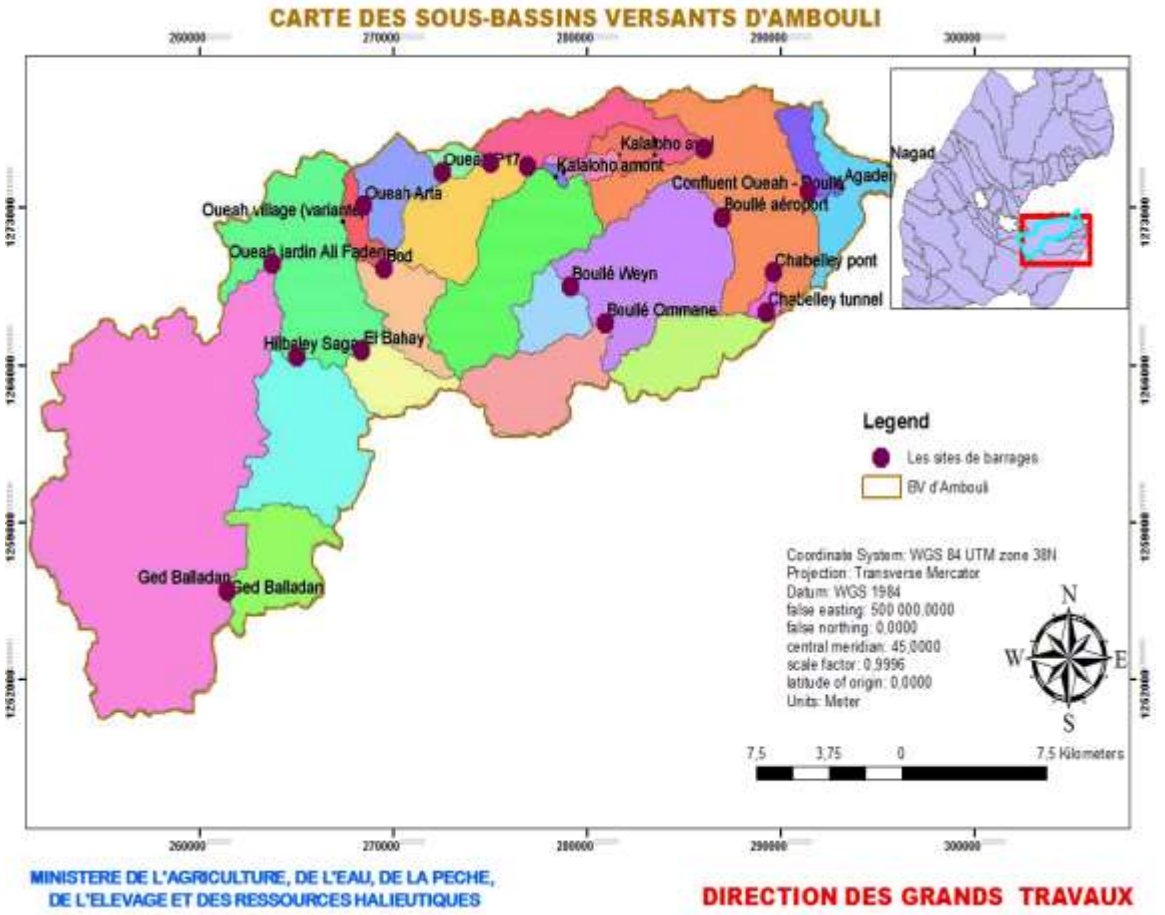


Figure 4b: Location of project sites (Oued Ambouli, Wadi Gobaad and the Hanle sector) in Djibouti

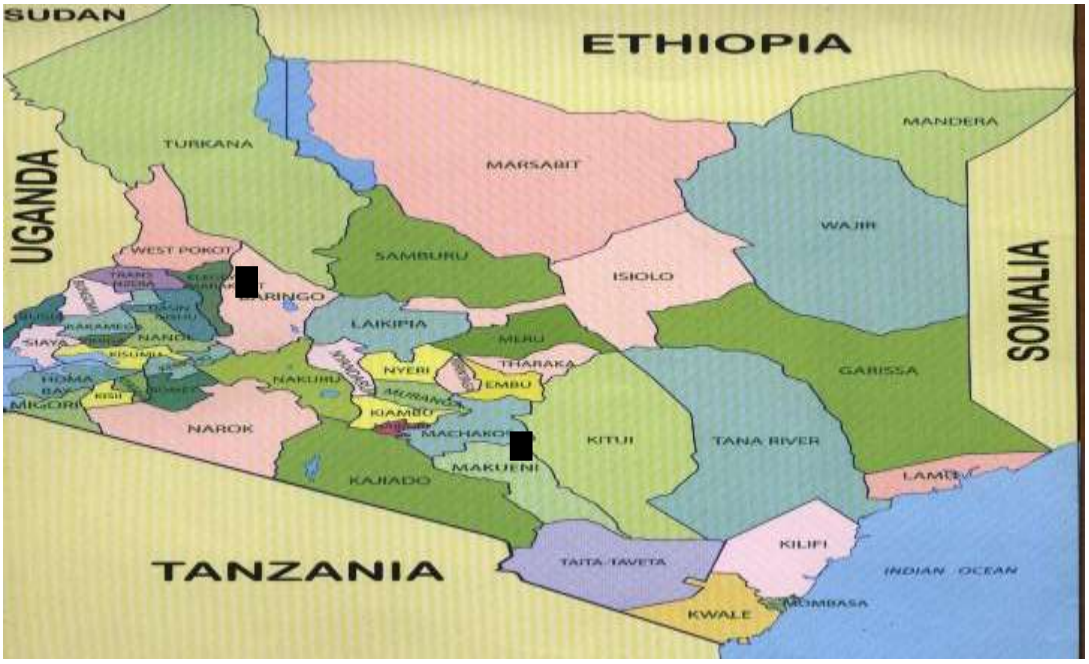


Figure 5: Location of project sites (Kitui and Samburu counties) in Kenya

Figure 6(a): The location of El Salam in Sudan

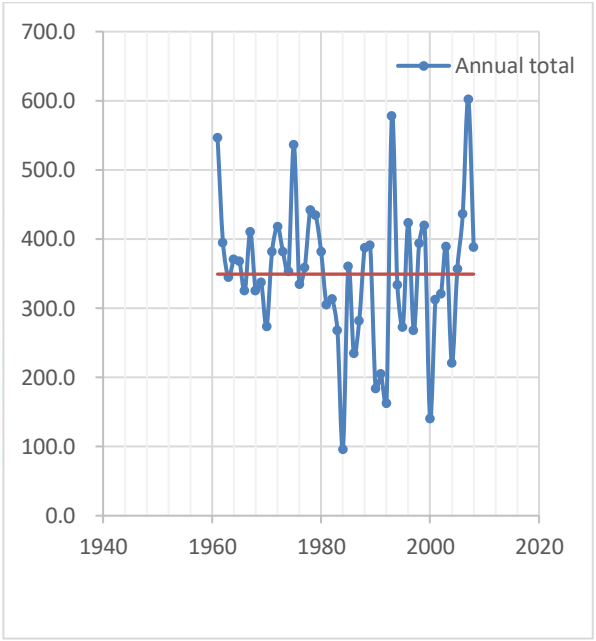


Figure 6(b): Total Annual Rainfall (mm).

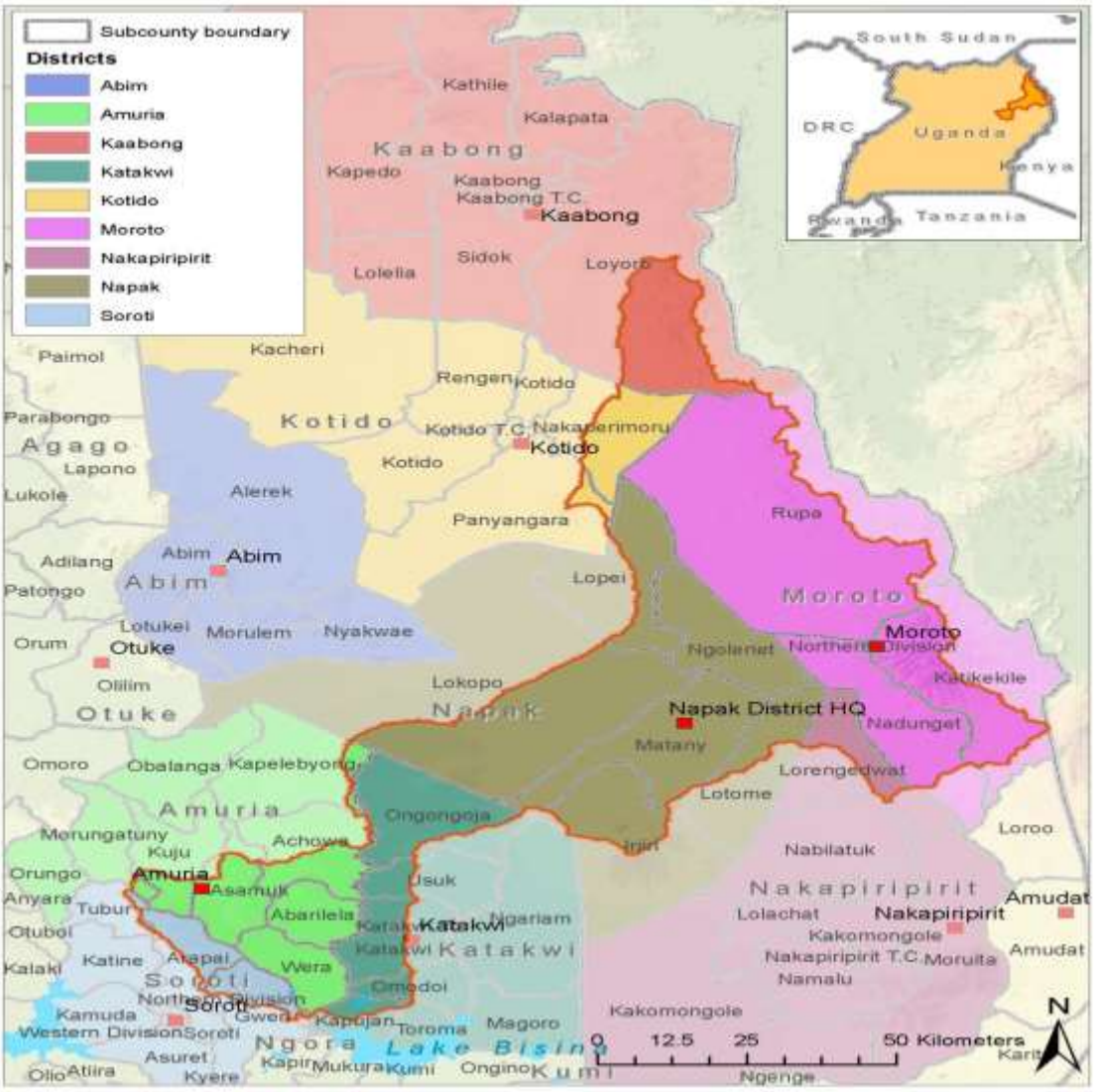


Figure 7: Districts and Sub-Counties in Lokere Catchment (Source: Lokere catchment Management Plan)

4.2 Agriculture

The agricultural lands are widely distributed on the terraces of the large basins of Wadi Gobaad and Hanley Wadi with a cultivated area of 0.5 to 1 ha per farm. Irrigation water is obtained from the wells dug in the terraces. According to the Government of Djibouti, only 10,000 hectares (24,700 acres) of arable land exist in the country. Majority of the agriculture is irrigated and domestic food production satisfies only 20% of the grain needs and 10% of the fruit and vegetable requirements of the population. Palm oil, refined sugar, and rice accounted for a combined 25.9% of total imports in 2007. Due to the limited number of either permanent or intermittent water sources, rainfall is a key determinant of food security in the country. In Kitui County agriculture is the backbone of the economy. In the highlands of Kitui, farmers are involved in subsistence agriculture - mainly growing cotton, tobacco, sisal, mangoes, maize, beans, cassava, sorghum, millet and pigeon peas. These crops are well adapted to the climatic conditions of Kitui. Crops produced are consumed locally with the surplus being sold to traders from Nairobi and neighboring towns. In the lowlands, farmers keep livestock - mainly cattle, sheep, goats and chicken - as a means to supplement crop farming as their source of income. Tourism is a low-key economic activity in this area. Majority of the farming schemes in Sudan are traditional farming schemes (10 – 30 feddans) although there are also some mechanized rain fed schemes (500 – 1000 feddans).

4.3 Pastoralism

Approximately 130,000-170,000 pastoralists and/or nomads in Djibouti live in the rural parts of the country. These nomads live very traditional lives, sheltering themselves in portable huts made of branches and woven mats and living through the herding of sheep, goats, and cattle. However, due to the consistent presence of drought, pastoralists have lost 70-80% of their livestock from a lack of food and water. In Kenya, the majority of people in Kitui are nomadic pastoralists who mainly keep cattle, camels, sheep and goats. These animals are mainly sold to the Kenya Meat Commission as well as traders from Nairobi and other neighboring towns especially during droughts. The livestock population in Sudan is estimated to be 6,000,000 (cattle), 8,000,000 (sheep) on which communities depend for food and income. The Samburu people are nomadic pastoralists related to the Maasai that mainly occupy the county. The Samburus rely on sheep, goats, cattle and camels as their source of livelihood. Livestock rearing is the backbone of Samburu County's economy. Their main food consists of maize, milk and blood, and meat on special occasions such as during circumcision ceremonies, marriage and birth of a child. Other ethnic groups living in Samburu County include Rendille, Turkana and Borana. These are nomadic pastoralists who rear cattle, donkeys, camels and goats. Cattle are an essential feature of the Samburu culture, especially because milk is an important part of the Samburu diet-a mixture of blood and milk. Traditionally, men are supposed to protect their villages and the livestock, whereas the women are tasked with looking after children and performing domestic duties such as cooking, fetching water and gathering firewood. Approximately 80% of the pastoralists move from the El Salam to South Sudan in search for pastures and water where they stay from September to June every year. In Uganda, the pastoral livelihood zone runs along the extreme eastern border with Turkana-Kenya, which comprises mostly of eastern Kaabong and Nakapiripirit, a huge proportion of Kotido, and Moroto as well as parts of Napak. In this area, transhumance is practices by Karamajong and Turkana across the Uganda and Kenya border in search for water and pastures. At the on-set of the rains, these communities return to their homes in the respective countries.

4.4 Water resources

Djibouti is generally poorly endowed with natural resources. It has inadequate arable land, insufficient rainfall and underground water resources. There are a number of water pump schemes in Sudan scattered along the river Nile. However, most of them have not been operational since 1995. No ground water sources have been recorded in the El Salaam. . Rainwater harvesting facilities mainly haffirs (artificial bonds) therein enable farmers and pastoralists harvest and store water during dry spells. The White Nile River is the major source of water in the El Salaam. Lokere Catchment is well drained with a dense network of meandering seasonal rivers and streams. The only permanent streams run in the Mount Moroto Ranges (IIRR 2015), all other rivers and streams are seasonal. They originate in the mountainous areas along the border with Kenya, of which the rivers Nangoloapolon, Apule, Matheniko and Omanimani are the most noticeable. With more frequent and severe droughts, such water resources in Uganda, will likely experience negative impacts on water supply, biodiversity and hydropower generation. A shift in rainfall patterns decreases the recharge of rain water into the soil, which has far reaching negative impacts on groundwater resources and water tables in wells.

4.5 Population

Overall, there is high human population that is vulnerable to climate change and droughts in the project sites. Djibouti has a population of 818,159 people, of which 58.1% live in the capital city, Djibouti-ville. The hinterland, an extension of the deserts of Ethiopia and Somalia, is sparsely occupied by a poor pastoral and largely nomadic population. Djibouti's population is young, with about 40 percent under age 15 and only 15 percent over 40 years of age 18. In Kenya within the arid and semi-arid climatic conditions Samburu has a population of about 224,000 people and 1.147 million[8]people in Kitui. According to the 2009 Population and Housing Census, the population growth rate of Samburu County is 4.45 percent per annum, higher than the national growth rate of 3 percent. Samburu shares its borders with four other counties; Marsabit to the north and northeast, Isiolo to the east, Turkana to the west and northwest, and Laikipia and Baringo to the southwest. In Sudan the human population is constitutes about 136,000 people (permanent), 120,000 (refugees in camps), 68,000 people (coming from South Sudan. The human population in Lokere catchment comprises mainly the rural poor estimated at 420,000 people. Such a population constrains or is in dire need of the scarce water resources during drought.

[8] *http://www.kitui.go.ke/*

4.6 Livelihoods

Livestock pastures constitute the country's major industries with the fishing sector employing only about 1,000 people in Djibouti. In Kenya Bee-keeping is a major economic activity especially in Kitui. Despite the harsh climatic conditions, some Samburu residents have recently started growing crops in effort to fight starvation. Drought-resistant crops such as millet, sorghum and certain species of maize are grown in areas such as Lpartuk, Poros and Malaso for food as well as income. Tourism is also a major source of revenue to the Samburu people, with some of the residents being employed in the county's safari lodges and others working as tourist guides. The county's main attraction sites offer a thriving market for Samburu artifacts such as beads, necklaces and bracelets. The main livelihood of the Karamojong and Iteso in Lokere Catchment revolves around a mixed agro-pastoral economy. An increasing number of people rely on agro-pastoral livelihoods, which combine livestock rearing with crop production.

4.7 Climate Change, droughts, vulnerability and threats

Djibouti is characterized by a very arid and semi-desert type of climate, which makes it extremely sensitive to climate change-induced drought and water scarcity risks. It experiences fluctuating, low and abrupt precipitation regime with annual mean rainfall of 150 mm, mean temperatures between 17°C and 42°C and extremely high rate of evapotranspiration amounting to 2000 mm per year. The vast majority of Djibouti's rural population is highly susceptible to climatic uncertainty – they live in deserts or marginal and infertile areas, often with highly erodible soils, poor ground cover and limited water supplies, where food security is a serious concern. Djibouti imports nearly all of the cereals consumed in the country, and food aid represents almost 10% of total imports. The country is poor in natural resources and arable land are limited (only 0.1% by area), as well as rainfall and groundwater reserves. According to the UN assessment of 2005, the population of Djibouti was 800,000 inhabitants, of which two-thirds live in the capital. The poor pastoral and nomadic people in Djibouti are highly vulnerable to prolonged droughts. The last major drought claimed nearly 4 percent of gross domestic product (GDP) annually between 2008 and 2011 and impacted more than half of its 860,000 residents. Djibouti is at particular risk for water shortages and severe flooding, both of which profoundly impact its growing but fragile economic sector.

In Kenya rainfall distribution is erratic and unreliable due to drought. Kitui County is mostly dry and hot with temperatures ranging between 14°C during the coldest months (July-August) and 34°C during the hottest months (January-March). The county receives between 500mm and 1050mm of rainfall annually, with average rainfall of 900mm a year. It has two rainy seasons; May-June (long rains) and September-October (short rains). Samburu is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). The county receives between 200mm and 250mm of rainfall annually. The rainfall pattern is unpredictable and at times the county receives no rain in a whole year.

Although Sudan is generally vulnerable to climate change especially to the high rainfall variability and related recurrent droughts, the human and livestock populations as well as the ecosystems in El Salam are highly vulnerable to the effects of drought. Insufficient and highly variable annual precipitation define the climate of most of Sudan with El Salam recording average minimum temperature (1963 – 2004) of 15.7°C in (Jan.) and 25.3°C (May); average maximum temperature (1964 – 2004) of 32.5°C (Jan.) and 41.5°C (April/May) and the average annual rainfall (1961 – 2008) of 350mm.

The precipitation pattern in Lokere is classified as bimodal, but is highly variable in space and time, with high peak events and long dry periods. Variance in annual rainfall is highest in the middle parts of the catchment. It is characterized by prolonged dry spells and erratic rainfall. These prolonged dry spells result in: total crop failure with far-reaching impacts on food security, leaving communities vulnerable to starvation; reduced water and pasture for livestock; disease outbreaks; loss of biodiversity and increased resource use conflicts. Overall the targeted countries have experienced drought for quite a long time. The table below illustrates the drought years with wide spread impact.

Table 1: Drought events in the four selected countries in the IGAD region.

Djibouti	Kenya	Sudan	Uganda
1980	1960-1961	1967-1973	1973
1984	1974-1976	1980-1984	1979
1988	1979	1987	1981
1996	1981	1989	1984
1999	1983	1990	1985
2000	1984	1991	1986
2005	1991/92	1993	1987
2007	1995/96	2011	1992
2008	1999-2000		1993
2010/11	2004		1999
	2011		

Source: ICPAC[9], Nairobi

In conclusion, the impacts of climate change and variability in IGAD region is therefore felt directly be these selected countries, especially the most vulnerable rural populations. The arid and semi-arid lands (ASALs) that are mainly inhabited by the itinerant pastoralists and nomads, some of who combine pastoralism with agriculture[10]. However their habitats are being denuded of vegetation – especially the forests – leading to wider environmental impacts such as land degradation, reduction in ground and surface water resources, pollution of the soils and waters, increased soil erosion and failure by the ecosystems to perform their roles in a sustainable manner (IGAD and OSS, 2011).

5. Policies and legislations

5.1 Policy, legal and institutional frameworks

A functioning and conducive policy, legal and institutional framework that is consistent with the regional (IGAD) principles is essential to keep the countries actions in managing droughts. This section focuses on contextual analysis of the existing relevant policies, laws, regulations and institutions that may provide a conducive environment for managing drought at both regional and country levels in the IGAD region.

a. Regional Level

i. The Intergovernmental Authority on Development (IGAD) IDDRSI frame work

This is an overarching initiative on drought to support IGAD member states. It aimed at preventing, mitigating and adapting to the adverse impacts of drought (IGAD 2013b)[11]. The framework was initiated following the decision on building resilience to drought emergencies by the Summit of heads of State and Government of IGAD and East African Community (EAC) due to the severe drought that devastated the HOA region in 2010/2011. Through the IDDRSI framework, IGAD region developed Regional Programming Paper (RPP) and Country Programming Papers (CPPs) RPP is the programmatic and implementation arm of IDDRSI to operationalize drought related actions at regional levels (IGAD 2013a)[12], while CCP serve as planning, coordination and resource mobilization tools for projects and investments required to contribute to ending drought emergencies.

ii. IGAD Environment and Natural Resources Strategy

The focus of the strategy is on drought, desertification and food security among others. The strategy has several objectives aimed at ensuring sustainable management and use of the natural resources of the region. Countries are obliged to contribute to achieving some or all the objectives of the strategy. The DRESS-EA project will contribute in meeting one of the key

[9] *IGAD Prediction and Application Centre*

[10] Intergovernmental Authority on Development and Sahara and Sahel Observatory 2011. Mapping, Assessment & Management of Transboundary Water Resources in the IGAD Sub-Region Project. Environment Component. An assessment of the key environmental issues affecting the IGAD sub-region

[11] IGAD (2013b). *Drought Disaster Resilience and Sustainability Initiative (IDDRSI): The IDDRSI Strategy.* Intergovernmental Authority on Development (IGAD), Djibouti. IGAD

[12] IGAD (2013a). The IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI). Regional Programming Paper.. Final Draft. Intergovernmental Authority on Development (IGAD), Djibouti.

objectives of the strategy to achieve optimal and sustainable use of the natural resources of the region through wise land use practices, protection of vulnerable ecosystems, public awareness, popular participation and institutional capacity building.

iii. IGAD Food Security Strategy

The food security strategy aims at enhanced capacity of IGAD member states to achieve food security through regional cooperation in sustainable food production, marketing and poverty reduction. The DRESS-EA proposed project will supplement additional efforts in the operationalization of the IGAD Food Security Strategy. Especially through engaging the small-scale farmers and pastoralists to target in increased crop production and livestock management respectively.

b. National Level

The policies and legislation on drought of the target countries are scattered within their national development or poverty reduction strategies. These include Kenya and Uganda whose where there are no drought policies, but, have issues of drought incorporated into the national policies on disaster risk management. In Djibouti and Sudan, the focus is of their policies is mainly on emergency responses. Nevertheless, efforts are being made by some countries to put in place independent legislations that will provide conducive environment to support drought related activities (GOSS 2013)[13].

Table 1: Policies and Legislation related to drought[14]

Country	National Policies and legislations related to drought	Key priority areas identified
Djibouti	○ National Programme for Food Security	○ Investments in food security in the country
	○ The Public Investment Plan	○ Around 15% of the PIP in 2013 was allocated to interventions focused to the Priority Areas of the CPP including in areas of environment
Kenya	○ Disaster management policy and Strategy ○ Vision 2030 has mainstreamed DRM in all its key pillars ○ The Second Medium Term Plan (2013-17) ○ National Climate Change Response Strategy (2010) and Action Plan (2013)	○ Disaster risk management ○ Climate change adaptation
Sudan	○ There are many sectoral policies, laws, strategies and programmes related to drought but they are yet to be properly coordinated.	○ The understanding and coordinated implementation of IDDRSI at country and regional level is a major priority based on the national drought management policy.
Uganda	○ The Constitution 1995 provides for drought risk management ○ The National Climate Change Policy, 2013; Disaster Management and Preparedness Policy, 2010 ○ The Rangeland Management Policy, 2001 ○ National Water Policy, 1999.	○ Disaster risk management ○ Climate change adaptation

5.2 Institutions (Regional, National and Local)

a. Regional Level

Intergovernmental Authority on Development (IGAD):

IGAD is the regional economic community for the Horn of Africa region with a membership of eight countries: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. IGAD has developed the IDDRSI Strategy, which arose from the consensus of IGAD Member States and development partners to work together coordinating the efforts aimed at ending drought emergencies through building sustainable livelihoods. (IDDRSI) Strategy is aimed at addressing the effects of

[13] GoSS (2013). Programming Framework to End Drought Emergencies in the Horn of Africa – Ending Drought Emergencies in South Sudan: Country Programme Paper. Final Draft. Government of South Sudan, Juba, South Sudan

[14] Global Water Partnership Eastern Africa (GWPEA) (2015). *Assessment of Drought Resilience Frameworks in the Horn of Africa.* Integrated Drought Management Program in the Horn of Africa (IDMP HOA), Entebbe, Uganda.

drought and related shocks in the IGAD region in a sustainable and holistic manner. The preparation of the IDDRSI Strategy involved many stakeholders both in the region and internationally. The process of developing the IDDRSI Strategy was guided by the IGAD Strategy 2011 – 2015.

b. National Level

The target countries in the DRESS-EA project have a government institution in place that is responsible for leading and coordinating drought activities in the country. Some countries such as Kenya have an independent National Drought Management Authority (NDMA) (GoK, 2012)[15] to coordinate drought activities. Other countries such as Djibouti, Sudan and Uganda, drought is coordinated through line ministries. Table 2 summaries the national institutions supporting the coordination of drought activities in the target countries.

Table 2: National institutions involved in drought management

Countries	National Institutions supporting Drought Interventions
Djibouti	○ Executive secretariat for DRM which coordinates natural disaster technical matters as well as prevention, mitigation and response activities, including adaptation to climate change
Kenya	○ National Drought Management Authority (NDMA)
Sudan	○ The institutional arrangements that deal with natural resources management are basically sector oriented. The sectors need to be coordinated
Uganda	○ The Department for Disaster Preparedness and Management in the Office of the Prime Minister (OPM) coordinates and responds to drought related emergencies including supporting a number of community-based programs. ○ District Disaster Management Committees (DDMC), established and coordinated by the Office of the Prime Minister.

5.3 Agricultural extension services/systems

The targeted countries face a poor agricultural extension system. The agricultural systems are poorly facilitated and with inadequate capacity. In some countries where the extension services exist, political unrest and inter-tribal conflicts are common. These multiple challenges put the agricultural extension services in a difficult situation. Overall, support for the communities to access agricultural extension services is required. The initiation of innovative mechanisms to deliver the extension services is critical. For example, establishing or supporting existing organized community infrastructure such as Pastoral and Farmers' Field Schools and Junior Farmer Field and Life Schools (JFFLS), and information exchange platforms at the local level. These are avenues for the communities to adopt pilot agricultural technologies to boost production and enhancing resilience capacities of small-scale farmers to mitigate drought impacts. Below are proposed interventions to ensure diffusion of knowledge and skills to the local communities:

(i) Building the capacity of community-based organizations (CBOs) and local NGOs to improve their capability to implement rural development programmes in the drought-prone areas in the country;
(ii) Strengthen capacity of rural extension staff and other staff working with communities, particularly in identified critical interventions e.g. soil and water conservation management, natural resources management, range land management, animal husbandry and improved farming methods adaptable to semi-arid areas and dryland agroforestry
(iii) Replicating successful lessons from other countries in similar situation.

5.4 Pastoral organizations

Pastoral and Agro-pastoral production comprise the predominant livelihood system in Arid and Semi- Arid Lands (ASALs). The pastoralists are constantly on the move in search of pasture and fresh water resources. This results in conflicts between pastoralist and other stakeholders e.g. farmers. To resolve the conflict, require internal intervention (conflict within the country) or transboundary intervention (if conflict is between two or more countries). Drought is a major cause of pastoral movements. Due to the nature of their (pastoralist) livelihoods i.e. depending on climate (water), rapidly degrading physical environment, inadequate extension services they are very vulnerable to droughts.

[15] GoK (2012). Programming Framework to End Drought Emergencies in the Horn of Africa – Ending Drought Emergencies in Kenya: Country Programme Paper. Ministry of State for Development of Northern Kenya and other Arid Lands, Government of Kenya, Nairobi, Kenya.

5.5 Environmental management standards for drought management

The Environmental and Social Policy of the Adaptation Fund requires that projects /programme activities comply with environmental and social safeguard standards to enhance sustainable development benefits and avoid unnecessary harm to the environment and affected communities (Environmental and Social policy of the Adaptation Fund, 2016)[16]. This is important in avoiding, minimizing or mitigating harm which would otherwise endanger living in harmony amongst the communities and other stakeholders. Furthermore, the policy is clear on potential environment and social risks and requires that the implementing entity screens the project activities to identify any potential environmental and social impacts and risks. The E&S policy categorizes project activities by nature of adverse impacts that may be caused.

The Executing Entities in the four selected countries are not alien to the above similar categorization and procedures. However, each country is governed by their environmental standards and regulations. Potential projects are required to comply with these standards in accordance with law of that country. Below is an analysis of the existing environmental standards and regulations in the countries:

Table 5: Environmental Standards and guidelines in Executing countries

No.	Country	Environmental Standards	Responsible institution
1	Djibouti	The project will comply with the environmental standards in Djibouti I.e. National Environmental Impact Assessment Procedures and Guidelines. The Ministry of Habitat, Urbanism, Land Planning and Environment of Djibouti is responsible for approving and evaluating the EIAs.	- The Ministry of Habitat, Urbanism, Land Planning and Environment
2	Kenya	The National Environmental Management Authority of Kenya is responsible to coordinate and supervise Environment related activities in Kenya. Identified activities in the project will categorized according to the Environment Impact Assessment Regulations of Kenya. For example, the small projects are subjected to the Environment Social Monitoring Plan (ESMP)	National Environmental Management Authority of Kenya
3	Sudan		
4	Uganda	National Environmental Impact Assessment Procedures and Guidelines.	National Environmental Management Authority of Uganda

The project has conducted consultations with key stakeholders at the local, sub-national, national and regional level to assess the project activities that may require undertaking Environment Impact Assessment (EIA) or EIR (Environment Impact Reviews). Detailed studies of the activities listed to assess potential impacts and their mitigation measures will be done at the proposal development phase. The consultation process used several methodologies. These included key informant interviews, focused group discussions, reconnaissance surveys. Individual meetings were held with representatives of the countries from the EE and telephone call to stakeholders who were difficult to physically meet but recommended to provide input.

The project will undertake environmental impact assessment and environment impact reviews (depending on the scale of threat of project activities). During this concept development stage, the screening of project activities has been done and a list of the activities which require detailed studies has been generated. This information has been obtained by the project proponents in partnership with the affected communities (the target group). During the concept development, the project undertook a stakeholder analysis and identified beneficiaries as well as targeted population at local and national level including

[16] *Environmental and Social policy of the Adaptation Fund, 2016*

vulnerable groups. Gender considerations were taken care of in compliance with the Environmental and Social Policy of the Adaptation Fund.

6. Conclusion

It is evident that the four countries Djibouti, Kenya, Sudan and Uganda and other countries of the IGAD region are vulnerable to drought and climate change because their human and livestock populations as well as their entire economies largely dependent on climate-sensitive natural resources and/or ecosystems and rain-fed agriculture. Therefore, their coping options against the associated negative impacts of climate change are greatly limited. Drought is a major transboundary threat to people's lives and livelihoods in the IGAD region where it is characterized by highly variable and erratic rainfalls, high evapotranspiration, reduced crop and livestock and pastures production, reduced land /vegetation cover, long dry spells and shorter wet seasons and increased migration of people and livestock in search for water and pastures.

7. Recommendations/proposed actions to mitigate ecosystems and populations' vulnerability in the most vulnerable sites

Based on the likely impacts of drought and climate change documented in the different countries in line with the respective NAPAs, the following actions are suggested in order to mitigate the vulnerability of populations and ecosystems to drought and climate change not only in the four selected countries but also other countries in the IGAD region.

- Developing and providing inputs for drought Early warning Systems to provide timely and increased use of information on climate change and drought by the vulnerable populations
- Organizing capacity building/and/or training sessions on drought management technologies at sub-national, national and regional levels
- Preparation and updating environmental and drought management plans at sub-national, national and regional levels
- Developing and implementing integrated water management technologies for sustainable catchment and ecosystems management
- Providing various inputs to support implementation of alternative Income Generating Activities for vulnerable populations
- Rehabilitating and restoring degraded ecosystems
- Supporting vulnerable populations to access seed and grow improved and highly nutritious drought resistant crop varieties
- Supporting vulnerable populations to access and benefit from improved and drought tolerant livestock breeds for increased incomes
- Organizing and supporting establishment and equipping learning centers for farmers and pastoralists in groups to plan, undertake drought management measures and facilitate cross learning and knowledge diffusion
- Supporting vulnerable populations to access credit facilities to engage in profitable alternative Income generating Activities such as Ecotourism, Apiculture, Pottery etc.
- Organizing and supporting stakeholders' platforms, dialogues, meetings and workshops to share and disseminate drought management information
- Supporting formulation of bye-laws and ordinances at sub-national and lower political units.

Annex 6: ENVIRONMENTAL AND SOCIAL MANGEMENT FRAMEWORKS FOR THE FOCAL COUNTRIES

(This annex is provided separately)

Annex 7 : APPROVAL LETTERS FOR ESMP

بسم الله الرحمن الرحيم
جمهورية السودان
Republic of Sudan
وزارة المـــوارد المـــائيـــة و الري و الكهـــربـــاء
Ministry of Water Resources, Irrigation and Electricity (MWRIE)
الجهاز الفني للموارد المائية
Water Resources Technical Organ (WRTO)

17 April 2019

Ref. No.: WRTO/GWP EnA SWAP-

To Whom It May Concern

Dear Sir / Madam,

RE: Environmental and Social Management Framework (ESMF) for the Project entitled "Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region"

The Government of Sudan through the Ministry of Water Resources, Irrigation and Electricity is collaborating with the Sahara and Sahel Observatory (OSS), Global Water Partnership Eastern Africa (GWPEA) and three other riparian countries of Djibouti, Kenya and Uganda to prepare a regional project entitled ***"Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region - DRESS EA"*** to be submitted to the Adaptation Fund (AF) for funding. The overall project budget is USD$ 13,079,540 (Thirteen Million Seventy Nine thousand Five Hundred forty United States Dollars).

The overall objective of the DRESS-EA project is to increase the resilience of small holder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions.

In Sudan, the executing entity is the Ministry of Water Resource, Irrigation and Electricity and the project will be executed in EL Salam Locality at the White Nile State.

One of the key requirements for DRESS-EA project approval is an ESMF. An ESMF for the project has been prepared to aid various stakeholders to identify and effectively manage potential environmental and social impacts during implementation. This is in accordance with international good practice and the Adaptation Fund's Environmental and Social Policy as well as Government of Sudan (GoS) requirements.

Ministry Of Water Resources, Irrigation & Electricity
Water Resources Technical Organ

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E: mwre_wrto@yahoo.com

Specifically, the main purpose of the ESMF is to:

- Establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and the subsequent Environment and Social Impacts Assessments as well as Environment and Social Management Plans as applicable;
- Provide practical information on resources required to implement the ESMF requirements.

Eng. Khider Mohamed Gasmelseed

Chairman of Water Resources Technical Organ

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

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NEMA 4.5

17th April, 2019

The Permanent Secretary
Ministry of Water and Environment
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Tel: +256-414505942/414505945

RE: REVIEW OF THE ENVIRONMENTAL AND SOCIAL FRAMEWORK (ESMF) FOR THE PROJECT ENTITLED "STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

The above refers.

In general terms the framework is adequate and should serve as a guide for environmental and social impacts that are likely to arise when individual project components are implemented.

In recognition of the key environmental and social concerns associated with a project of such magnitude, you should therefore take the necessary steps to:

(i) Ensure that the transboundary issues pertaining to the various components of the project are catered for in line with the legal provisions governing management of transboundary matters;

(ii) Fulfill public consultations and disclosure requirements through consultations to fully involve the beneficiary communities and other interested stakeholders at all levels in the formulation and development of proposed sub- projects/ activities;

(iii) Carryout separate environmental and social impact assessments and or screening for each project segment that are part of the detailed design process of the sub-projects, in the benefiting communities, and ensure that the environmental impact statements/ project briefs are submitted to this authority for decision making;

(iv) Address any issues pertaining to land ownership and acquisition and ensure that the implementation of project activities takes into consideration the land tenure systems of the area of influence;

(v) Liaise with the District Local Government in the respective areas to amicably address any concerns that may by raised by the communities relating the project;

(vi) Ensure that the proposed restoration of degraded water catchments in the project area is carried out in consultation with all relevant Lead Agencies including respective District Local Governments, and that proposed project activities fit into existing Management Plans for these catchments

This is therefore, to issue formal **APPROVAL** of the Environmental and Social Management Framework for the project

I look forward to our continued collaboration.

Dr. Tom O. Okurut
EXECUTIVE DIRECTOR

c.c: The Permanent Secretary
Ministry of Agriculture, Animal Industry and Fisheries
ENTEBBE.

c.c The Director
Directorate of Water Resources Management
ENTEBBE

RÉPUBLIQUE DE DJIBOUTI
UNITÉ – ÉGALITÉ – PAIX

MINISTÈRE DE L'HABITAT, DE L'URBANISME ET DE L'ENVIRONNEMENT (MHUE)

DIRECTION DE L'ENVIRONNEMENT ET DU DÉVELOPPEMENT DURABLE (DEDD)

جمهورية جيبوتي
الوحدة - المساواة - السلام

وزارة الإسكان والتعمير والبيئة

إدارة البيئة والتنمية المستدامة

Djibouti, le 09/04/19
N° 234/DEDD/19

LE DIRECTEUR

A
Madame la Directrice de l'Hydraulique Rurale

OBJET: Rapport sur les lignes directrices pour l'élaboration d'un cadre de gestion environnementale et sociale du projet DRESS-EA

Madame la Directrice,

Après examen et analyse du rapport supra-mentionné, j'ai l'honneur de vous informer que le rapport est dans l'ensemble, satisfaisant. Il fournit les lignes directrices pour l'élaboration d'un cadre de gestion environnementale et sociale permettant de prévenir et de gérer les risques environnementaux et sociaux potentiels du projet.

Donc, la Direction de l'Environnement et du Développement Durable (DEDD) valide ledit rapport, sous réserve d'intégrer dans le tableau des coûts estimatifs de le mise en œuvre du PGES les frais nécessaires aux missions de contrôle et de suivi de la DEDD, conformément à l'article 31 et 32 du décret n°2011-029/PR/MHUEAT portant révision de la procédure d'Etude d'Impact Environnemental.

Cependant, afin d'atténuer les impacts potentiels du projet, il est primordial d'assurer la bonne exécution du Plan de Gestion Environnemental et Social (PGES) et du programme de surveillance et de suivi développés dans ces lignes directrices, tout en associant à ce processus la DEDD.

Veuillez agréer, Madame la Directrice, à l'expression de mes salutations distinguées.

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Annex 8 : Training and capacity building of the project

Table 1: Trainings planned by the DRESS-EA Project

Component	Specific Training Theme/Activity	Stakeholders	Training Methods	Responsible Persons	Timelines (Years)			
					1	2	3	4
Component 1: Development and enhancement of a regional Drought Early Warning System	Activity 1.1.4.2 Organize training sessions on the use of the intervention plan for the benefit of the different actors involved at national and regional level	• Pastoralists and crop farmers in the project sites • Focal Executing Country entities, • ICPAC • Staff from Departments of Meteorology	• Training workshops • Presentations and discussions	• GWPEA, • Focal Executing Country entities				
Component 2: Strengthening capacity of stakeholders to manage drought risks due to climate Change	Activity 2.1.2.4 Undertake exchange visits and learning tours for cross learning in areas with successful drought management innovations including ground water management initiatives	• Pastoralists and crop farmers in the project sites • Focal Executing Country entities	• Field excursion • Practical demonstrations • Case studies	• GWPEA, • Focal Executing Country entities				
	Activity 2.1.2.5 Train staff managing EW information centers	• ICPAC, • Executing Country entities, • Staff from Departments of Meteorology	• Training workshops • Presentations and discussions • Practical demonstrations	• GWPEA, • Focal Executing Country entities				
	Activity 2.1.2.6 Train extension staff and artisans in drought adaptation interventions	• District/County/ • Sub national level government Extensionists • Focal Executing Country entities	• Field excursion • Practical demonstrations • Training workshops • Presentations and discussions	• GWPEA, • Focal Executing Country entities				
	Activity 2.1.2.7 Facilitate community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach	• Different actors per country • Pastoralists and Farmers in the project sites	• Training workshops • Practical demonstrations	• GWPEA, • Focal Executing Country entities				
Component 3: Drought and Climate Change adaptation actions	Activity 3.1.4.4 Support farmers and pastoralists to prepare high value silage and hay for livestock during dry spells	• Farmers and Pastoralists • District/County/ • Sub national level government • Extensionists • Focal Executing Country entities	• Training workshops • Practical demonstrations	• GWPEA, • Focal Executing Country entities				

Table 2: Topics for the training

Objective of the training	Topics of the ToT and Module	Number of Trainings	Persons to be trained to become a trainer	Persons to be trained by ToTs
To impart knowledge and skills to stakeholders on EWS operation and management including real time, data collection, processing and communication of the results and actual "warning"	1. Early Warning Systems (EWS) • Weather and Climate • Multihazard early Warning Systems • Types/forms of data • Data collection analysis and • Communication	• 8 initial Training sessions at national level • 8 follow up training sessions	Different actors involved in Multi-hazard Early Warning including those that focus on drought e.g. Staff from the Department of Meteorology, Ministries, Decentralized governments e.g. Environment and natural resources Officers.	Local communities (men, women and youth), both crop farmers and pastoralists in project sites
To impart knowledge and skills to stakeholders in resilient catchment management techniques so as reduce the vulnerability to climate change aggravated drought.	2. Water catchment restoration and water resources management • Water harvesting and storage technologies • Water source protection and management • Irrigation and water balance • Water and soil conservation measures • Water catchment restoration techniques	• 3-year annual training sessions	Ministries and Extension staff at local government, Artisans, Community Development Officers, Local leaders and Catchment Management Committee members	Local communities (men, women and youth), both crop farmers and pastoralists in project sites Local communities (men, women and youth), both crop farmers and pastoralists in project sites
To impart knowledge and skills to stakeholders in resilient crop, and livestock management technologies.	3. Resilient Cropping and livestock systems in drought prone areas (Crop varieties, • Agrisilvopastoral systems • Rangeland management • Hydroponic systems and hay production	• 3-year annual training sessions	Ministries and Extension staff at local government, Artisans, Community Development Officers, Local leaders and Catchment Management Committee members	Local communities (men, women and youth), both crop farmers and pastoralists in project sites
To impart knowledge and skills to stakeholders in drought risk management through engaging in resilient alternative IGAs, insurance, value addition and marketing.	4. Drought risk management • Index-based weather insurance • Income Generating Activities (e.g. Apiculture and Briquettes making) • Value addition and marketing	• 3-year annual training sessions per country	Ministries and Extension staff at local government, Artisans, Community Development Officers, Local leaders and Catchment Management Committee members	Local communities (men, women and youth), both crop farmers and pastoralists in project sites

Annex 9: NATIONAL TECHNICAL STANDARDS OF PROJECT BENEFICIARIES' COUNTRIES

1) Djibouti

- **Policy Framework**

N°	Policy	Purpose of the Policy	Relevance to the Project
1	national environmental protection and management policy	• This policy aims to establish guidelines and guidelines for sustainable management and development that respect the environment and ensure the equilibrium of ecosystems, the sustainability of natural resources and a life of good quality.	The project is closely related to the management of natural resources, the establishment of infrastructures, all its activities will be implemented in compliance with environmental standards and requirements.
2	Vision Djibouti 2035	Achievement of the goals of the 2035 Djibouti vision will be achieved through the strategies that underpin each of the identified pillars and cross-cutting themes (Gender, Youth, and Environment). To address food and nutrition insecurity and combat food shortage, the 2035 Djibouti vision aims to promote a food and nutritional security strategy. In the context of more productive and sustainable agriculture, forestry and fisheries, Djibouti Vision 2035 provide for the promotion and development of agriculture, fishing, and breeding.	The DRESS EA project will contribute to achieving the objectives set by this vision, especially in terms of protection, conservation of the environment and natural resources. The project will contribute to strengthening sustainable agriculture and improving farmer's livelihoods and their incomes.
3	Gender Policy 2011-2021.	The National Gender Policy Framework aims to contribute to the achievement of gender equity and equality for boys and girls, men and women, in all areas of life.	The gender policy will serve as a strategic framework for the implementation of the activities planned by the project, particularly in terms of taking into account the gender aspect. Women, youth and marginalized groups in the project areas have been consulted and involved, and will be involved in the implementation of the project.

- **Legal Framework:**

N°	Law	Purpose of the law	Relevance to the Project
1	Law n ° 51 / AN / 09 / 6th L Bearing Code of the Environment	In its general provisions it says that "The environment of Djibouti is a national heritage, an integral part of world heritage. Its preservation is therefore of primary interest at the local, national, regional and international levels to ensure the needs of present and future generations. Moreover, she says that "Every citizen has the right to a healthy environment under the conditions defined by this law. This right is accompanied by an obligation to preserve and protect the environment. "	Although the project is low risk to the environment, environmental and social safeguards are planned. These measures will be aligned with the provisions of this law.
2	Law No. 93 / AN / 95 / 3e L Bearing Code of Water	The provisions of this Code concern the protection of the aquatic environment, the preservation of the common water resource and the conciliation in the interest of all of the different uses.	Small farmers, pastoralists, managers of natural areas ... are potential users of water resources in the project area. The water code of Djibouti is the basic regulatory framework that the entities responsible for the implementation of the project must take into consideration in relation to the use of the water resource in terms of quality and quantity.
3	Decree N ° 2001-0011 / PR / MHUEAT defining the procedure of environmental impact study	This decree concerns environmental management texts concerning major works. The activities for which the impact assessment is mandatory are annexed to the decree. The decree thus insists on the obligation of the environmental impact study and the respect of the procedure for all the projects, whether public or private, consisting of works, agricultural, mining, artisanal installations., commercial or transport whose realization is likely to harm the environment.	The impact studies / notices that will be prepared before and during the execution of the project, will comply with the directives and procedures established by this Decree.

4	Decree No. 2013-110 / PR / DFAIT establishing the National Early Warning and Reaction Mechanism for Pastoral and Urban Conflicts	The National Early Warning and Response Mechanism for Pastoral and Urban Conflicts (CEWERU) is the lead agency for national alert and response initiatives. It is responsible, inter alia, for: - Collect, check useful information on early warning and response to conflicts; - carry out a preliminary analysis of the information collected; - Develop reaction strategies; - Implement the capacity building programs of its members and stakeholders concerned with conflict prevention and response; - Liaise and coordinate with civil society groups involved in information gathering, at the community level and at other levels; - Prepare periodic reports on early warning in the field of conflict;	Among the major activities of component 1 of the DRESS EA project is the establishment of an early warning system. The scope and the operational, institutional, legal ... terms of this system will be imperatively aligned with the provisions and guidelines of this law.

- **Institutional Framework:**

N°	Institution	Mandate	Relevance to the project
1	Ministry of Agriculture, Water Fisheries and Livestock of Djibouti	This Ministry is in charge of, among other things, the implementation of sectoral policies in the areas of food security, rural development and water. It is also responsible for the promotion and development of animal and plant production, the improvement of plant cover, the study and exploitation of water resources, as well as fish production. It puts in place measures to assist production, promote agricultural and agro-pastoral activities. In the field of water, it is in charge of the preparation and implementation of the government's policy in the field of water in both urban and rural areas.	This ministry will be the National Executing Entity (NEE) of the project. The implementation of this project will be under the direct supervision of this ministry at the national level and also at the local level. The NEE will collaborate with institutions in the respective countries during the project activity execution. These include the Designated National Authorities; Ministries, Departments and Agencies (MDA) that are mandated to support climate resilience and livelihood improvement.
2	Ministry of Housing, Urbanism, Environment and Spatial Planning	This ministry ensures the quality of the environment, the protection of natural areas and the prevention, reduction or elimination of pollution of all kinds. In particular, he exercises alone or with the assistance of the other ministries concerned,	This ministry is in charge of the environmental policy in Djibouti. The project focused on the adaptation to CC of populations, ecosystems and natural resources will be carried out in close collaboration with the services of this ministry which will be represented at the level of the different entities responsible for the implementation and monitoring of activities. The project will also be in compliance with the standards and environmental policies established by this ministry.
3	National Commission for Sustainable Development (CNDD) ,.	It is responsible for drawing up a National Action Plan for Sustainable Development and a consequent Strategic Framework. The mission of the National Commission for Sustainable Development is to define the axes of a comprehensive and coherent policy taking into account the orientations and objectives of Agenda 21.	The project DRESS EA intervenes in application of the main orientations of the environmental policy of Djibouti ... The CNDD is the strategic institutional framework that oversees the implementation of this policy and the respect and application of the provisions of international conventions and agreements including UNCAC, CBD, UNCCD ... The CNDD will be periodically informed of the progress of the implementation of this project and will provide its recommendations and strategic guidelines to achieve the results and objectives assigned.

2) Kenya

- **Policy Framework**

No	Policy	Purpose of the Policy	Relevance to the Project
	Kenya Environment Policy, 2013	proposes a broad range of measures and actions responding to key environmental issues and challenges.	It seeks to provide the framework for an integrated approach to planning and sustainable management of natural resources in the country.
	National Agricultural Research System Policy	Establishes a national institutional framework that captures the complementarities of the diverse actors engaged in agricultural research and development aims at addressing these shortcomings.	integrating public funded research with research product delivery; mainstreaming social, human and environmental concerns
	Vision 2030	A national long-term development blueprint to create a globally competitive and prosperous nation with a high quality of life by 2030, that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment.	The project is in line with the broad outlines of this vision. It will contribute to achieving the objectives set at the project area level by implementing activities and adaptation measures to CC for the benefit of farmers and natural resources.
	The National Disaster Risk Management Policy	The Policy aims to increase and sustain resilience of vulnerable communities to hazards through diversification of their livelihoods and coping mechanisms.	The Policy will go a long way in preserving life and minimizing suffering by providing sufficient and timely early warning information on potential hazards and droughts that may result to disasters. It will also aim at alleviating suffering by providing timely and appropriate response mechanisms for disaster victims.
	Policy Framework on Nomadic Education in Kenya, 2015	The policy aims to coordinate education programmes in these regions and mobilize additional to support investment in education in these regions.	The project includes capacity building, awareness raising and communication activities. These activities will benefit the different categories of beneficiaries: young people, schoolchildren, decision-makers, ...
	National Water Policy and act water 2002	The national water policy of Kenya mainly focused on the decentralization of water services and separating water policy formulation from regulation and services provision."' Additionally, the 2002 National Water Policy defined the government's role as regulatory and delegated water service provision to the private sector, municipalities and communities.' 2	The water resources in the DRESS EA project are among the main natural resources to consider alongside soil resources, flora and fauna. The project, which is aimed at small farmers, pastoralists, young people, women ... will want to considerate water as a scarce and vulnerable resource to the CC in order to put in place appropriate measures and activities to ensure its sustainability and accessibility. ....
	Arid and Semi-arid Land (ASAL) policy	The Government of Kenya adopted a national policy on arid and semi-arid lands (ASALs) in October 2012. The ASAL Policy cover nearly 90 per cent of Kenya's land mass and are home to nearly 30 per cent of its population. In addition, they hold approximately 70 per cent of the national livestock herd and are the location of most of the country's national parks, which support its thriving wildlife tourism. To improve the enabling environment for development in the ASALs, the policy proposes interventions in infrastructure, human capacity, and security and the rule of law.	The DRESS EA project fits perfectly with the objectives and expectations of the intervention area. This policy aims at an inclusive development of the population living in arid and semi-arid environments. This development must be based on respect for the environment and the sustainable management of natural resources
	Gender Policy 2007	This policy consists of policy measures and orientations and concrete measures for mainstreaming gender in different strategies, programs and at the level of different sectors.	The gender policy will serve as a basic framework and reference for taking gender into account (young people, girls, women, etc.). Indeed, the gender aspect has been taken into account in all the pre-project phases of this project document. This aspect will be taken into account in terms of setting up infrastructures, planning actions, income generating activities, capacity building ...

- **Legal Framework**

No.	Laws	Purpose of the Law	Relevance to the Project
	The Constitution of Kenya, 2010.	This is the Supreme law of the Republic of Kenya and binds all persons and all State organs at both levels of government	The Constitution under Article 42 guarantees every person a right to a clean and healthy environment
	the Environment Management and Coordination Act (EMCA), Cap 387.	EMCA is the principle legislation on all matters environment and creates the National Environment Management Authority (NEMA)	EMCA establishes the Environmental Impact Assesment (EIA) rules for the preparation of the mandatory EIA reports, It establishes the requirement for an annual environmental Audit for projects.
	The Climate Change Act, No 11 of 2016	The principal Kenyan legislation on for the development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.	This law is consistent with the nature of the DRESS EA project which is a CC project, The planned measures and concrete adaptation activities, the EWS will be implemented in accordance with the provisions of this law.
	The Land Act, 2012	An Act of Parliament to give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes	Provides for the different land tenure and management of land in areas the projects are implemented.
	The Forest and Conservation Act, No. 34 of 2016	The legislation that applies to all forests on public, community and private lands	The Act provides for licenses/permits in relation to forest resources.
	The County Governments Act, 2012	The Act gives effect to the objects and principles of devolution as set out in Articles 174 and 175 of the Constitution.	The Act provides for governance, transfer of functions and powers from one level of government to another and the procedure for County assemblies.
	The intergovernmental relations Act, No. 4 of 2012	The Act establishes a framework for consultation and cooperation between the national and county governments and amongst county governments; The Act provides a framework for consultation and co-operation amongst county governments;	The Act will serve in the project to establish institutional structures and mechanisms for intergovernmental relations.
	Agriculture Fisheries and Food Authority **Act**, **2013**	The Act provides for the regulation and promotion of agriculture	The Act Establishes the Agriculture, Fisheries and Food Authority, to make provision for the respective roles of the national and county governments in agriculture excluding livestock
	The Crops Act, No. 16 of2013	An Act of Parliament to accelerate the growth and development of agriculture in general, enhance productivity and incomes of farmers and the rural population, improve investment climate and efficiency of agribusiness and develop agricultural crops as export crops that will augment the foreign exchange earnings	The Act provides for promotion of subsistence crops for smallholder farms and promote the farming of drought resistant crops

	Science and Technology Act	Establishes the key building blocks of the national agricultural research system (NARS), namely: the Kenya Agricultural Research Institute (KARI), the Kenya Forestry Research Institute (KEFRI), the Kenya Marine Fisheries Research Institute (KMFRI) and the Kenya Industrial Research Institute (KIRDI).	Provides for a systematic rationalization, integration and alignment of the various research programs with national goals on providing drought resilience led research
	National Drought Management Authority Act	AN ACT of Parliament establishing the National Drought Management Authority, to provide for the membership, powers and functions of the Authority and for connected purposes	In this project, it will provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management

- **Institutional Framework**

No	Institution	Mandate	Relevance to the Project
	National Environment Management Authority (NEMA)	To exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment.	In this project, this instance will serve for: Accept and review project reports articulating the effects on the environment in respect to project under the project Approve and issue Environmental Impact Assessment (EIA) Licenses to projects identify projects and programs for which environmental audit or environmental monitoring must be conducted All its activities are guided by the Environment Management and Coordination Act 2015
	Kenya Forest Service (KFS)	This service is mandated to: Manage water catchment areas in relation to soil and water conservation, carbon sequestration and other environmental services in collaboration with relevant stakeholders; conserve, protect and manage all public forests receive and consider applications for licenses or permits in relation to forest resources	This structure will be related to: Management of water catchment areas in the areas the project is to be implemented Issuance of permits/licenses for forest resources
	the Climate Change Directorate	The Climate Change Directorate, under the Ministry of Environment and Natural Resources (MENR), operates this National Climate Change Registry of mitigation, adaptation and enabling actions.	During the implementation of the project, this department will perform the following tasks: - Give advice and technical support, where possible, in natural resources management and environmental protection Provision of technical assistance on climate change programmes based on needs identified by national and county governments agencies Collaboration with relevant institutions on promoting innovation, research & development and technology transfer on climate change Promotion of public participation, awareness, sensitization and capacity building on the relevant programmes
	Kenya Meteorological Department	Provision of meteorological and climatological services to agriculture, forestry, water resources management, civil aviation and the private sector including industry, commerce and public utilities for the better exploitation and utilization of natural resources for national development	The KMD provides metrological service for the areas the project will be implemented for best exploitation and utilization of natural resources for resilience to drought and the use of EWS

	Kenya Forest Research Institute (KEFRI)	A state corporation established in 1986 and mandated to undertake research in forestry and allied natural resources	Research theme focusing on development of technologies for: rehabilitation and sustainable management of natural forests and woodlands including water towers, wetland and riparian ecosystems; integration of high value trees on farms mitigation and adaptation to climate change & drought; development and promotion of efficient technologies for processing and utilization of scarce forest resources
	National Drought Management Authority	To provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management	To respond and coordinate all matters relating to drought management develop, in consultation with stakeholders, an efficient, drought early warning system and operate the system
	Food and Agriculture Authority	To promote best practices in and regulate the processes in agricultural processes To advise the national government and the county governments on agricultural and aquatic levies for purposes of planning, enhancing harmony and equality in the sector	To promote the best practices for agriculture and enhance drought mitigation measures when implemlentation of the project activities,
	Kenya Agricultural and Livestock Research Organization	Aimed at restructuring agricultural and livestock research into a dynamic, innovative, responsive and well-coordinated system driven by a common vision and goal. It emphasizes to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology in Kenya	It emphasizes to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology,

3) Sudan

- **Policy Framework**

No	Policy	Purpose of the Policy	Relevance to the Project
1	Sudan Water Policy 2007	Overarching all sectors policies. National water resources utilization, protection and management.	All intervention has to comply with the national water policy.
2	Comprehensive National Strategy 2002-2027	/	/
3	Natural resources strategy (2003-2027)	/	/

- **Legal Framework**

No	Laws	Purpose of the Law	Relevance to the Project
1	Environment Act 1901	Including regulations for irrigation, energy, health, industry and insects' protection.	The DRESS EA project will comply with and comply with all laws and regulations in relation to natural resources, the environment; the health and well-being of the population.
2	Environmental Health Act 2009	To preserve environmental health including provision and preparation of public drainage and drain rain water and sewage water.	The project has a low negative impact on the environment. However, project activities with a potential impact will be subject to environmental impact assessments and mitigation measures will then be undertaken.
3	Environment and Natural Resources Protection Act 2017	It is a law relating to the protection of the environment and also of natural resources in general. It governs the exploitation of resources in soil, water, vegetation, fauna, flora, deforestation...etc.	This law will allow the framing, monitoring and recovery of all project activities to respect the environment and implement management approaches that ensure the sustainability of natural resources.

4	Water Resources Act 1995	Is a major institutional reform concerned with the Nile and Non-Nilotic surface waters as well as with groundwater, hence superseding the 1939 Nile pumps control act that was limited to the Nile waters only.	This law is directly related to the main concerns of the DRESS EA project. The sharing, allocation and management of water resources will be among the topics and issues to be addressed by the project.

- **Institutional Framework**

No	Institution	Mandate	Relevance to the Project
1	Ministry of Water Resources, Irrigation and Electricity.	The ministry has different mandates; these are: Monitoring of water resources; Implementing researches in related topics to water sector; Approval of water Management of irrigation water… etc.	This ministry will have a relationship with the project on the following aspects: Approval of proposed water projects; Water licensing; Implementation of water harvesting activities; Design and organizing capacity building programs;
2	Ministry of Environment, Natural Resources and Physical Development	Environment management and protection of natural resources.	It is the ministry that designs and implements the country's environmental policy. It is also responsible, in coordination with other departments and institutions for the protection and sustainability of natural resources.
3	State ministry of Health and Social Affairs – White Nile State.	Managing health and social issues.	Within the framework of this project this ministry will be concerned inter alia by: Monitoring Standards Participate in the community-oriented intervention … etc.
4	State ministry of Education and Guidance – White Nile State.	New reform. It comprises education, culture, tourism, youth, public media.	As part of this project, this ministry will have a role in taking into account aspects in relation to, gender mainstreaming, communicating, awareness raising, environmental education, ecotourism...

4) Uganda

- **Policy Framework**

N°	Policy	Purpose of the Policy	Relevance to the Project
1	The National Environment Management Policy	The NEMP recognises that Uganda faces a number of environmental issues including: soil degradation, deforestation, loss of biodiversity, increasing pollution and environmentally related diseases. These problems are compounded by poverty, low amounts of environmental awareness and low levels of technology. The NEMP aims to address these issues by establishing a more comprehensive and integrated approach to environmental issues.	The DRESS EA project fits perfectly with the country's environmental policy. Project activities and mitigation of negative social and environmental impacts will be governed by this policy.
2	The National Water Policy 1999	The National Water Policy promotes a new integrated approach to manage the water resources in ways that are sustainable and most beneficial to the people of Uganda. This new approach is based on the continuing recognition of the social value of water, while at the same time giving much more attention to its economic value. Allocation of both water and investments, in water use schemes, should aim at achieving the maximum net benefit to Uganda from its water resources now and in the future.	The policy advocates for the management and development of water resources in Uganda in an integrated and sustainable manner so as to secure and provide water of adequate quality and quantity for all social and economic needs for present and future generations with the full participation of all stakeholders. This Project is planned to ensure provision of adequate water needs for domestic use, irrigation and livestock in the target communities.

3	The National Land Use Policy	The overall goal for the national land use policy is "To achieve sustainable and equitable socio-economic development through optimal land management and utilization in Uganda"	The overall policy goal is to achieve sustainable and equitable socio-economic development through optimal land management and utilization in Uganda. The policy recognizes amongst others, the need for the protection and sustainable use of land resources through conducting environmental assessments and implementation of measures outlined in such assessment studies.
4	National Policy for the Conservation and Management of Wetland Resources, 1995	The policy aims at curtailing the rampant loss of wetland resources and ensuring that benefits from wetlands are sustainable and equitably distributed to all people of Uganda.	The Policy has established principles by which wetlands resources can be optimally used and their productivity maintained in the future and end existing unsustainable exploitative practices in wetlands. All proposed modifications and restorations on wetlands shall be subject to an ESIA, the result of which shall determine whether such restoration or modification shall proceed and if so to what extent. This ESMF provides for measures for controlling degradation of wetlands and controlling their siltation in line with NEMA and AF policies
5	The National HIV/AIDS Policy, 2004	The AIDS policy in Uganda is based on the implementation of operational measures to reduce the rate of carriers of the virus in the population. Uganda has really managed to stop the progression of this rate and in some cases to make it fall.	The policy applies to all current and prospective employees and workers, including applicants for work, within the public and private sectors. It also applies to all aspects of work, both formal and informal. The project will have to mainstream HIV/AIDS interventions into its plans, sub- Projects and activities
6	The National Cultural Policy, 2006	Specifically, this Policy shall provide a framework to; -Enhance the appreciation of the role of culture in National Development; Uganda National Culture Policy - Promote aspects of Uganda's cultural heritage that are cherished by its people; - Ensure effective intra and inter-cultural exchange for harmonious co- existence; - Facilitate community action against practices that impinge on human dignity; - Guide, harmonise, complement and promote the distinct and complementary interventions and roles of stakeholders at all levels; and - Guide the private sector, traditional/cultural institutions and civil society organisations to research on and advocate for culture promotion.	The National Culture Policy, 2006 complements, promotes, and strengthens the overall development goals of the country. Its specific objectives include amongst others, the need to promote and strengthen Uganda's diverse cultural identities and to conserve, protect, and promote Uganda's tangible and intangible cultural heritage. This ESMF outlines Chance Finds Procedures to ensure protection and conservation of any PCRs that will be encountered during project implementation

- **Legal Framework**

	Legislation	Purpose of the law	Relevance to the Project
1	The Constitution of the Republic of Uganda, 1995	It is the supreme regulation of the country.	The right to a clean and healthy environment is enshrined in Article 39 of the Constitution of Uganda, 1995 as well as integration of people in the development process. In particular, the Constitution guarantees a range of basic human rights to the people of Uganda which include: gender balance and fair representation of marginalized groups in development process; protection of the aged; the right to development; access to clean and safe water; basic medical services; and access to education. These are some of the fundamental socio-economic aspects which are key for sustainability of mankind. The project contributes to some of these goals.

2	The National Environment Act, Cap 153	It is a law that regulates all the regulatory aspects (impact study, environmental standards, ...) and the environmental aspects of the institutional environment in Uganda.	Section 20 of this Act obliges every developer to undertake an environmental assessment for projects listed in the Third Schedule of the Act. This ESMF has been prepared mainly to guide the implementers of the DRESS-EA project to fulfill this obligation and ensure that all project interventions are done within the law.
3	The Land Act, Cap 227	This Act makes provision with respect to a wide variety of matters regarding land in Uganda such as land tenure, customary ownership, grant of land in freehold, management of communal land, management of land by the Uganda Land Commission, land-use control and functioning of land tribunals.	The Act and the Constitution of the Republic of Uganda vest land ownership in Uganda in the hands of Ugandans and guide matters of land acquisition for development project through compensation which has to be fair, timely and adequate. DRESS-EA project investments will be done for the people on their lands with their consent and no compensation will be involved. Land is considered as part of community contribution.
4	The Occupational Safety and Health Act, 2006	The act provides to consolidate, harmonize, and update the law relating to occupational safety and health; to repeal the factories act Cap 220 and to provide for connected matters. An occupier of the work place or his or her agents shall furnish the means required by an inspector necessary for an entry, inspection, inquiry, examination, the taking of samples or any alterations for the exercise of his other powers, in relation to that workplace. The commissioner shall be responsible for the administration of this act.	The Act provides for the prevention and protection of persons at all workplaces from injuries, diseases, death and damage to property. The key provision of this Act is safety and welfare of workers. ESMF provides for safety gear for workers during implementation of project activities especially for water infrastructure works among other subprojects
	The Employment Act, 2006	It is the law that regulates and normalizes individual work and organizes the relationship between the employee and the employer in Uganda.	This Act spells out general principles regarding forced labor, discrimination in employment, sexual harassment and provisions to settle grievances. It further provides that, a child under the age of twelve years shall not be employed in any business, undertaking or workplace. Therefore, project implementers will not engage any child workers at the project sites at any one time during the project lifecycle
5	National Forestry And Tree Planting Act, 2003	It is a law that defines the measures and rules of conservation, management, reforestation .... for the promotion of forest areas. It also defines the benefits of the local population, the creation and management of forest reserves.	The National Forestry and Tree Planting Act 2003 is the main law that regulates and controls forest management in Uganda by ensuring forest conservation, sustainable use and enhancement of the productive capacity of forests, to provide for the promotion of tree planting and through the creation of forest reserves in which human activities are strictly controlled. Specifically, the Act will provide guidance for afforestation and other tree nursery subprojects under Project.
6	Historical Monument Act, 1967	An act to provide for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest and for other matters connected therewith.	The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. Section 10(2) requires that any person who discovers any such object takes such measures as may be reasonable for its protection. This implies that the project will undertake the Chance Finds Procedures in addressing possible encounters of any archaeological resources during project implementation

- **Institutional Framework**

	Institution	Mandate	Relevance to the project
1	National Environment Management Authority (NEMA)	Oversee, coordinate and supervise environmental management. NEMA's overall goal is to promote sound environmental management and prudent use of natural resources in Uganda.	This institution will be involved in the implementation of the different activities of the project.
2	Ministry of Water and Environment (MWE)	The Ministry, through its Directorate of Water Resources Management (DWRM) and Environmental Affairs will monitor all activities. Capacity building will include full time specialists in social and environmental	This ministry will be the national implementing entity at the level of Uganda. The involvement of this ministry in the implementation will be through the project will be ensured at the central level and at regional and local level.

		assessments review and monitoring and evaluation. They are also responsible to earmark budget and properly implement mitigation measures proposed by the general ESMP, ESIA studies and other relevant documents.	
3	Ministry of Gender, Labour and Social Development (MGLSD)	The objectives of the MGLSD are to minimize Occupational Accidents, Diseases and Injuries. promote good Health of the Worker at the Workplace promote good Working Conditions, promote construction of Safe and Healthy workplaces, promote awareness of Occupational Safety and Health among Workers, Employers and the General Public through Training.	This Ministry will closely monitor issues related to gender norms as well as work-related aspects throughout the implementation of project activities. The ministry, through its Department of Occupational Health and Safety (OHS), will be responsible for registering the workplace and monitoring of conditions.
4	Local Government Administration Structures	These are structuring whose mandate is to represent the central administration at the local level.	District and Local Council Administrations (LC1-5) are stakeholders in the Project and had input into the EIA and ESMP process and will be involved in implementation of the project as well as subsequent monitoring. They will also take part in grievance mechanisms and sensitization of communities especially HIV/AIDS aspect.
5	District Environment Officer (DEOs)	It is the administration that is responsible for environmental affairs at the level of a certain decree.	DEOs are expected to review and approve ESIA documents, and oversee the Environment and social aspects of the Project. They will carry out spot checks on programs to confirm that environmental and social screening and environmental management plans are properly done. They will also advise the implementers including contractors in regard to impacts beyond the generic issues, determining if the mitigation measures are acceptable or program redesign is required.
6	Catchment Management committees	It is a kind of population organization at the watershed level. It is a committee representing farmers and local people living in and around the watershed. In particular, they are responsible for water resources at the watershed level.	Catchment management committees will act on behalf of the community in planning and managing of natural resources management activities and water resources management activities within the catchment. Each Community Water and Sanitation Committee will be responsible for facilitating participatory planning and ensuring that implementation of mitigation measures is carried out.
7	Beneficiary communities	These are committees that represent the beneficiaries of the project.	Being the primary beneficiaries of the project, the community will be made to participate fully in all aspects of the program including project identification, preparation, implementation, operation and maintenance.

Annex 10: BIBLIOGRAHY AND LIST OF REFERENCES

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19 Take urgent action to combat climate change and its impacts. This is taken in combination with target 1.5 of goal 1 (to build the resilience of the poor and those who are in vulnerable situations and reduce their vulnerability to climate related extreme events and other economic social and environmental disasters

20 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation"

21 "By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies".

22 "Support and strengthen the participation of local communities in improving water and sanitation management"

23 End poverty in all its forms everywhere

24 End hunger, achieve food security and improved nutrition and promote sustainable agriculture

25 Achieve gender equality and empower all women and girls

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In any correspondence on
this subject please quote No. ALD 79/251/02

THE REPUBLIC OF UGANDA

Ministry of Finance, Planning &
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Plot 2-12, Apollo Kaggwa Road
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29th April 2019

The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
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Fax: 202 522 3240/5

ENDORSEMENT FOR A REGIONAL PROJECT: STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION.

I have the honor to refer to the above mentioned subject.

In my capacity as the Designated Authority for the Adaptation Fund in Uganda, I confirm that the above regional project proposal is in accordance with the national and regional climate Adaptation priorities of the Government of Uganda.

Accordingly, I am pleased to endorse the full project proposal for support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by Ministry of Water and Environment of Uganda in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Patrick Ocailap
FOR PERMANENT SECRETARY/ SECRETARY TO THE TREASURY/ DESIGNATED AUTHORITY FOR CLIMATE CHANGE

Copies to: The Permanent Secretary, Ministry of Water and Environment.
Kampala, Uganda.

The Regional Coordinator, Global Water Partnership, Eastern Africa
Entebbe, Uganda.

The Executive Secretary, Sahara and Sahel Observatory
Tunis, Tunisia.

596 VOL II

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Ref: DENR/EMC/6/VOL.III/45

14th March 2019

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ENDORSEMENT FOR A PROJECT
"STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION"

In my capacity, as designated authority for the Adaptation Fund in Republic of Kenya, I confirm that the above regional project proposal is in accordance with the Government's National and Regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Kenya and the IGAD region.

Accordingly, I am pleased to endorse the above project full proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by the Climate Change Directorate, Ministry of Environment and Forestry of Kenya in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Dr. Ibrahim M. Mohamed, CBS
PRINCIPAL SECRETARY

جمهورية السودان
Republic of Sudan
المجلس الأعلى للبيئة والموارد الطبيعية
The Higher Council for Environment and Natural Resources
General Secretariat
الأمانة العامة

Date: 03/04/2019

To: The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for a project "***Strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region***"

In my capacity, as designated authority for the Adaptation Fund in **Republic of Sudan**, I confirm that the above regional project proposal is in accordance with the government's national and regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Sudan and the IGAD region.

Accordingly, I am pleased to endorse the above project full proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by Ministry of Water Resources and Electricity of Sudan in close collaboration with the Higher Council of Environment and Natural Resources (HCENR) and in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Sincerely,

Dr. Noureldin Ahmed Abdalla
Secretary General (HCENR)
and National UNFCCC Focal Point

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REPUBLIQUE DE DJIBOUTI
UNITE – ÉGALITE – PAIX

MINISTERE DE L'HABITAT,
DE L'URBANISME ET DE
L'ENVIRONNEMENT

LE SECRÉTAIRE GÉNÉRAL

N° 198/ SG/2019
Djibouti, le 28 MARS 2019

MHUE

جـمـهـورية جيبوتي
الوحدة - المساواة - السلام

وزارة الإسكان والتعمير والبيئة

الأمين العام

رقم
جيبوتي في

To : The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Emai l : Secretariat@Adaptation-Fund.org
Fax : 202 522 324015

Subject: Endorsement for a project ***"strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region"***

In my capacity, as designated authority for the Adaptation Fund in Djibouti, I confirm that the above regional project proposal is in accordance with the government's national and regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Djibouti and the IGAD region.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by the Ministry of Agriculture, Water, Fisheries and Livestock of Djibouti in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Sincerely,

Dini Abdallah Omar
Secretary General of the Ministry of Environment

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REPUBLIQUE DE DJIBOUTI
UNITE – ÉGALITE – PAIX

MINISTERE DE L'HABITAT,
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L'ENVIRONNEMENT

LE SECRÉTAIRE GÉNÉRAL

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وزارة الإسكان والتعمير والبيئة

الأمين العام

رقم
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To : The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
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Fax : 202 522 324015

Subject: Endorsement for a project ***"strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region"***

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Sincerely,

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Date: 03/04/2019

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Subject: Endorsement for a project "***Strengthening Drought Resilience for small holder farmers and pastoralists in the IGAD region***"

In my capacity, as designated authority for the Adaptation Fund in **Republic of Sudan**, I confirm that the above regional project proposal is in accordance with the government's national and regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Sudan and the IGAD region.

Accordingly, I am pleased to endorse the above project full proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by Ministry of Water Resources and Electricity of Sudan in close collaboration with the Higher Council of Environment and Natural Resources (HCENR) and in partnership with the Global Water Partnership Eastern Africa (GWP-EA).

Sincerely,

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Secretary General (HCENR)
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OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

REPORT ON REGIONAL AND NATIONAL CONSULTATIVE WORKSHOPS

10th February – I3th March 2019

APRIL 2019

Contents

Background and context

The Intergovernmental Authority on Development (IGAD) region stretches over an area of 5.2 million km^2 and has a population of about 200 million people. The region comprises of eight countries including Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. A large part (about 70%) of the region's land area is Arid and Semi-Arid Lands (ASALs) and receive less than 600 mm of annual rainfall (IGAD 2013)[2]. The area is a majorly water scarce area with minimal perennial river flows, making groundwater be the main source of water for the majority of the people in the horn of Africa. It is estimated that more than 80% of the inhabitant communities live in rural areas, with less than 20% having access to improved water supplies. This situation demands address. The situation is further complicated significantly by illicit activities such as deforestation and poor agricultural practices that lead to reduced water retention capacities, surface runoffs and soil cover losses. The dominant livelihood of the people in the region is agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems. The rural communities, who are mainly small-scale farmers and pastoralists, are highly vulnerable to droughts. The causes for vulnerability in the region include low adaptive capacity by communities to droughts, inadequate innovative adaptation actions to droughts, poor early warning systems and inadequate knowledge and skills in drought management. The impacts of droughts in the region have been manifested in form of acute water scarcity, significantly reduced precipitation levels and drying up of rivers. The effects of droughts have had destructive impacts on the region's economy, ecosystems and community livelihoods. Smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been most affected due to their limited coping mechanisms. Global Water Partnership Eastern Africa (GWPEA) is collaborating with IGAD and governments of these countries through the Integrated Drought Management Programme (IDMP) and the Water, Climate and Development Programme (WACDEP) to enhance drought resilience in the region.

The proposed project entitled ***"Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region-DRESS-EA"*** will build on the existing initiatives and establish new mechanisms to address drought related challenges in the region through facilitating investments in early warning systems, building the capacity of targeted stakeholders, supporting innovative adaptation actions and enhancing knowledge management and skills.

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks, mainly those related to drought, through the establishment of appropriate early warning systems and the implementation of drought adaptation actions. More specifically, this project is intended to, promote investments in drought early warning systems (EWS) and improve the existing ones, strengthen and improve the capacity of key stakeholders in drought risks management at regional, national and local levels; Support communities to undertake innovative adaptation actions that reinforce their resilience to drought and enhance knowledge management and information sharing on drought resilience at the considered levels.

To address the drought challenges, the DRESS-EA project, has been developed by partners in the IGAD region. The project will be implemented by Sahara and Sahel Observatory (OSS), which is an accredited Regional Implementing Entity for the Adaptation Fund. Project execution will be done in partnership with GWPEA as a Regional Executing Entity in partnership with focal countries including Djibouti, Kenya, Sudan and Uganda. The four countries have fully endorsed the project due to current challenges in their countries and have expressed support to undertake the proposed interventions. The concept for the project was endorsed by the Adaptation Fund.

After endorsing the concept, the Adaptation Fund a full proposal is required. Consultative workshops were organized at national level in the respective countries (Figure 1) and a regional workshop was organized bringing country participants together for the final in puts into the proposal prior to submission to the Adaptation Fund.

Figure 1: Map showing the selected focal countries for the Project indicated by arrows

A one day regional workshop was organized by OSS and GWPEA at the Lake Victoria Hotel Entebbe, Uganda on 15th March 2019. The aim of the regional consultative workshop was present the status of proposal development to partners, gather additional input from key stakeholders especially on the appropriate interventions that are most critical in the targeted countries.

The workshop was carried out in an interactive manner- which included plenary discussions and group work based on focal countries as well as presentations of workshop objectives, project overview, Project objectives, presentation of the draft proposal, The impacts of drought felt by the countries, mitigation measures and potential adaptation mechanisms were also discussed. Additional information on potential activities and institutional arrangements and project sites were agreed up. Finally, a road map/wayforward binding to the partners to successful submission of the proposal was developed and agreed up. OSS offered financial and technical support for the workshop.

Figure 2: *Presentation of the draft proposal*

Participants in the consultative workshop

Participants were drawn from the focal countries that include Djibouti, Kenya, Sudan and Uganda. The participants included:

- Representatives of national partner institutions for the executing countries: These are:
    - Directorate of Rural Hydraulics (DRH), Djibouti
    - Ministry of Environment and Forestry (MWEF), Kenya
    - Ministry of Water Resources, Irrigation and Electricity (MWRIE)
    - Ministry of Water and Environment (MWE)
- Representatives of GWPEA
- Representatives of the OSS Executive Secretariat
- Members from the Uganda Water Partnership
- One representative of NGOs with vast experience in community engagement for drought adaptation

Figure 3: The participants that attended the regional consultative workshop on 15th March 2019.

WORKSHOP PROCEEDINGS

The workshop ***was*** facilitated by the Lead Consultant – Dr. Lawrence Orikiriza. The Facilitator welcomed participants to the consultative workshop and provided them with an amended workshop agenda. The agenda was adopted without further amendments. He requested them to register for the workshop. He thereafter invited representatives from GWPEA Regional office, the OSS Secretariat and the host, Ministry of Water and Environment (MWE) Uganda to take front seats for the official opening of the regional workshop.

Welcome Remarks –GWPEA – Dr. Ahmed Khalid

The GWPEA representative thanked everyone for coming to the workshop and specially welcomed them to Entebbe –Lake Victoria shores in Uganda. He thanked the delegates from other countries, MWE and OSS the project implementing Agency for having spared time to come and contribute to the development of the DRESS-EA project. He further thanked Dr. Orikiriza Lawrence and team for developing the project proposal to level it was at. He informed the meeting about the main purpose of the workshop being to support the Consultancy team with more data and information for the proposal development process. It was also a buildup on the country level consultations that had just been concluded. He requested participants to refine the project interventions so that they applicable on ground in the proposed project sites. He informed the meeting that the consultative process will continue with the team and the focal institutions selected in the target countries. He urged participants to provide maximum cooperation to develop a

successful project proposal. He invited Mr. Nabil Benhantra as the OSS Representative to give his opening remarks.

Welcome Remarks by OSS –Mr. Nabil Benkhantra

The OSS representative welcomed participants to the workshop and encouraged them to work together as a family to prepare the project concept. He was happy to participate in the regional workshop which was a crucial step in the development of a successful proposal. He had participated in country level workshops or Uganda and Djibouti and he was happy to see representatives from all the countries as well as a representative from IGAD. He pledged OSS support to helping countries to access funds from OSS and Adaptation Fund. He thanked members for their efforts in generating data and information and urged them to continue helping the consultancy team in this regard till full proposal and submission that is in within month. He urged members to assist in getting the required documents including endorsement letters and ESMF approval letters.

Welcome Remarks by MWE- Mr. Louis Mugisha

The representative of the Ministry of Water and Environment, Uganda, welcomed everyone to Uganda including the OSS team and the IGAD representative. He informed the meeting that the Ministry was busy involved in the activities of the Water and Environment week at regional and National levels. Thanked the project proponents for having selected Karamoja region as it is in dire need of the proposed interventions. Area Members of Parliament (MPs) and other stakeholders are asking what can be done to improve the situation therein. He noted that since the concept stage the proposal has gone a long way and expressed confidence that with GWPEA and OSS involved in the process it would eventually be approved. He noted that in Uganda catchment management plans have been developed but there is limited funding for their implementation and that this was an opportunity to attract funds for their implementation. He also emphasized the need to look beyond the proposal and to be honest to the poor people, the teams met in the field and the responsibility to help them. He declared the workshop opened.

Introductions and Expectations

The participants were called upon to introduce themselves to one another highlighting their expectations from the workshop. In summary the participants expected to:

- complete project proposal
- know how Issues of the project and OSS will be coordinated
- Share what each country is prepared to do
- address the resilience of communities which is key to communities
- Share information at regional level
- Know the inputs captured from the Local people
- Make sure that interests of each country are taken care of
- Know the role of social science in the project and be emphasized
- Know the benefit from the Local knowledge
- How to increase resilience which is at the heart of the people we work for
- See how the interests of target countries are catered for in the proposal
- Meet the objectives of the workshop to provide information for the completion of the proposal
- Generate focused component interventions
- Move the proposal development process forward
- Generate enough information to fill the gaps
- Bring out clearly the regional aspect of the project
- Emphasize the need for the participants to interact with the consultants and be able to fill the GAPs.

Objectives of the workshop

The workshop objectives were presented by Mr. Gerald Kairu from GWPEA. The objectives were to:

i. Gather additional input and needs of project stakeholders to be included in the full proposal
ii. Inform project partners about the status of the proposal,
iii. Validate the priority intervention areas of the project;
iv. Gather the needs and expectations expressed by the project stakeholders;
v. Validate interventions following national level consultations that respond to the specificities of the intervention areas and the needs of users
vi. Update draft proposal for submission to Adaptation Fund

Key outcomes of the workshop

The expected outcomes of the workshop presented were

a) Updated proposal
b) Project priority intervention areas and validated;
c) Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the region harmonized
d) New activities and specific intervention areas incorporated
e) Integration of activity ideas, recommendations and comments from stakeholders into the draft proposal.

Overview of the Project

Mr. Gerald Kairu from GWPEA presented an overview of the proposed project. He said that GWPEA has been implementing a project on integrated drought management in the Horn of Africa since 2014. It was through assessments done by this project that GWPEA discovered that pastoralists and small holder farmers are the most vulnerable to the impacts of drought. This revelation subsequently informed the development of concept on "*Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region*"- Project that is currently being developed into a full proposal after approval by the Adaptation Fund.

He highlighted the issues that led to the development of the project including

- Severe water constraints and prolonged droughts in the IGAD member states
- Inadequate rainfall in most of the region -60-70% of the region receive less than 600mm of rainfall annually
- Illicit activities e.g. deforestation and poor agricultural practices
- Dominant livelihood of the people in the region is agriculture, mainly by smallholder farmers and pastoralists or semi pastoralist production systems highly vulnerable to drought impacts
- low adaptive capacity by communities,
- Inadequate innovative adaptation actions to droughts,
- Poor early warning systems and
- Inadequate knowledge and skills in drought management

He informed the participants that the Pre-concept for the proposed project was already endorsed by the Adaptation Fund and only needed to be developed into a full concept. The project will be implemented by OSS and executed by GWPEA in partnership with the following national agencies:

a) **Djibouti**: Directorate of Rural Hydraulics,
b) **Kenya**: Ministry of Environment and Forestry,
c) **Sudan:** Ministry of Water Resources, Irrigation and Electricity
d) **Uganda**: Ministry of Water and Environment.

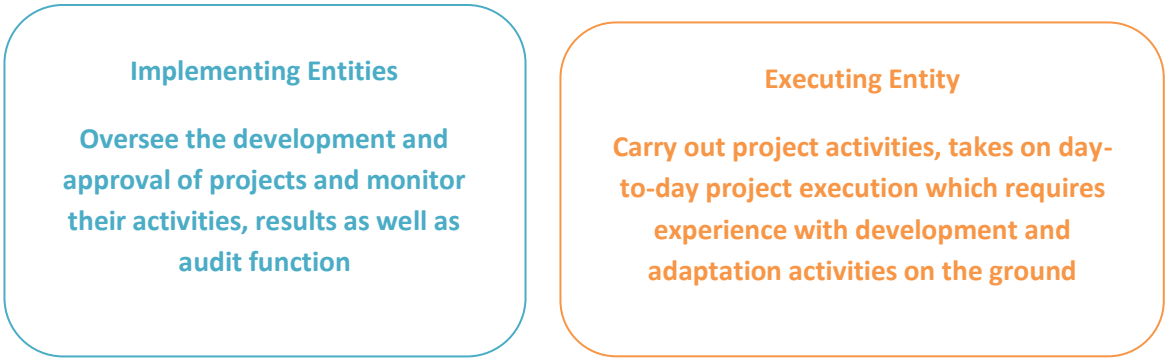
The National Designated Authorities (NDA) in the respective focal countries are;

Djibouti: Ministry of Environment
Kenya: Ministry of Environment and Natural Resources,
Sudan: Higher Council for Environment and Natural Resources
Uganda: Ministry Finance, Planning and Economic Development

Mr. Gerald Kairu emphasized the need for the focal Country representatives that attended the workshop to beginning pursue endorsement letters with urgency as there is limited time left to submit the documents.

The Adaptation Fund and institutional arrangements for DRESS-EA project

Information about the Adaptation Fund was presented by Mrs. Khaoula Jaoui. She said that the Adaptation Fund was established by the United Nations Framework Convention on Climate Change (UNFCCC) to finance concrete climate change adaptation projects and programmes in particularly climate vulnerable developing countries that are also parties to the Kyoto Protocol. It funds projects that reduce vulnerability and increase adaptive capacity to climate change impacts. She further said that:
The Adaptation Fund divides project roles between 'implementing' and 'executing' functions. It is important to distinguish the role of entities:



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Civil society and local community organizations often have relevant knowledge and can serve as EEs for adaptation projects under AF rules

Regarding the institutional arrangements for the project. The following were presented.

Implementing Entity	**Regional Implementing Entity (RIE)**: Observatoire du Sahara et du Sahel (OSS)
Executing Entities	**Regional Coordination:** Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat. **National Project Management Units (NPMUs):** Djibouti: Ministry of Agriculture Water Fisheries and Livestock / Directorate of Rural Hydraulics Kenya: Ministry of Environment and Forestry / Directorate of Climate Change Sudan: Ministry of Water Resources, Irrigation and Electricity / Hydraulics Research Center Uganda: Ministry of Water and Environment / Directorate of Water Resource Management

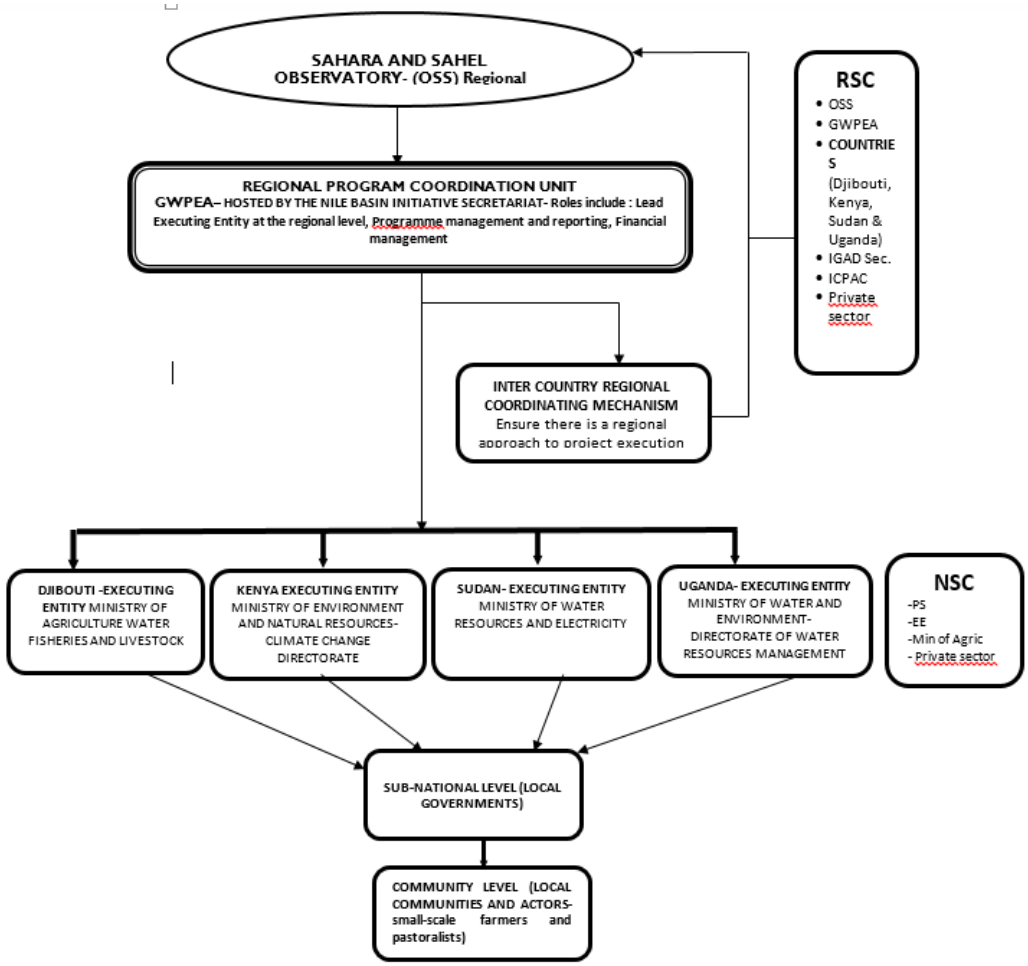

Figure 4: The organogram for the DRESS-EA project.

Mrs. Khaoula Jaqui also highlighted the Adaptation Fund requirements. She emphasized the need for proposals to precisely indicate the following key aspects that are mainly focused on by the reviewers.

- Country eligibility
- Endorsement by the respective Designated Authorities
- Concrete adaptation actions
- Environmental and socio-economic benefits
- Project cost effectiveness
- Consistency with national strategies and plans
- Meeting relevant national technical standards
- Duplication/overlap with other funding sources
- Knowledge management
- Consultations process
- Full adaptation reasoning
- Sustainability of project outcomes
- Adequacy of project management outcomes
- Detailed budget

She endeavored to elaborate on importance and relevance of each aspect and emphasized the specific issues considered while reviewing the proposal. These are outlined in the proceeding table.

Issue	Comments
Overview of Adaptation Fund	The goal is to produce 'visible and tangible results' on the ground The Adaptation Fund was established by the United Nations Framework Convention on Climate Change (UNFCCC) to finance concrete climate change adaptation projects and programmes in particularly climate vulnerable developing countries that are also parties to the Kyoto Protocol. It funds projects that reduce vulnerability and increase adaptive capacity to climate change impacts
Roles of implementing and executing entities	The Adaptation Fund divides project roles between 'implementing' and 'executing' functions It is important to distinguish the role of entities : ***Implementing Entities*** Oversee the development and approval of projects and monitor their activities, results as well as audit function ***Executing Entity*** Carry out project activities, takes on day-to-day project execution which requires experience with development and adaptation activities on the ground Civil society and local community organizations often have relevant knowledge and can serve as EEs for adaptation projects under AF rules
The project	➢ The IGAD region: ➢ Severe water constraints and prolonged droughts in IGAD region ➢ Anomalies in seasonal rainfall and temperature due to CC ➢ Increased frequency and intensity of droughts in the area according to predictions (IPCC) ➢ Rarefaction of natural resources ➢ Conflicts between farmers and pastoralists **Project Title:** Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region **Overall objective:** Increase the **resilience** of smallholder **farmers** and **pastoralists** to **climate change** risks mainly those related to drought, through the establishment of appropriate **early warning systems** and implementation of **drought adaptation actions** in the IGAD region. **Countries:** Djibouti, Kenya, Sudan and Uganda Donor : Adaptation Fund (AF) Requested Amount : 13,079,540 USD Duration: 04 years **Components** • Developing of drought early warning systems (EWS) • Improving capacity of key stakeholders in drought risk management

	• Innovative adaptation actions reinforcing the resilience to drought • Enhancing knowledge management and information sharing ***Regional Implementing Entity (RIE):*** Observatoire du Sahara et du Sahel (OSS) **Executing Entities** Regional Coordination: Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat. National Project Management Units (NPMUs): -Djibouti: Ministry of Agriculture Water Fisheries and Livestock / Directorate of Rural Hydraulics -Kenya: Ministry of Environment and Forestry / Directorate of Climate Change -Sudan: Ministry of Water Resources, Irrigation and Electricity / Hydraulics Research Center -Uganda: Ministry of Water and Environment / Directorate of Water Resource Management.
Timelines	• Pre-Concept Note October 2017 • Concept note July 2018 • Full Proposal development ongoing • Regional Workshop 15th March 2019 • Submission to AF 16th April 2019
THE AF REQUIREMENTS	A look at the review criteria •Country(ies) Eligibility –Country(ies) should be party to the Kyoto Protocol –Should be developing country(ies) particularly vulnerable to the adverse effects of climate change (all non-Annex I countries qualify) Endorsement by the government through its Designated Authority Most eligible countries have nominated DA • Letter template available under submission materials on AF website • Separate endorsement letter to be submitted for each submission
Concrete adaptation actions	The project / programme supports concrete adaptation actions to assist the country in addressing the adverse effects of climate change and builds in climate change resilience: description of activities • How the activities help with adaptation and resilience • Concrete: visible and tangible results. • Good project design: cohesion and alignment • Linking intervention to climate threat (not BAU, ENV) • Taking non-climatic barriers into account • Full proposal: details on specs, linking to CC scenario • Regional project to include both regional and country perspective/added value
Environmental, socio-economic benefits	The project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, including gender considerations •Who are the beneficiaries, particular reference to vulnerable groups; •Full proposal: whenever possible, quantifying the expected benefits;

	•Regional project: to demonstrate, whenever possible, how it promotes new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.
Cost-effectiveness	Logical explanation why the proposed scope and approach were selected to the particular adaptation challenge, given all other variables and available financing • Sustainability dimension is important • Full proposal: clear description of alternative options to the proposed measures, in the same sector, geographic region and/or community (typically 1 or 2 declined options) • Quantification in monetary terms not required as a rule • Regional project: should further explain how the regional approach would support cost-effectiveness
Others	• Consistency with national strategies and plans • Meeting relevant national technical standards • Duplication / overlap with other funding sources • Knowledge management • Consultation process • Full cost of adaptation reasoning • Adequacy of project management arrangements • Budget

She concluded her presentation with the status of project development (Figure 5) that had brought the participants together, i.e. to submit the full proposal to Adaptation Fund on April 16th 2019.

Submission 16th April 2019

Regional Workshop

15th March 2019

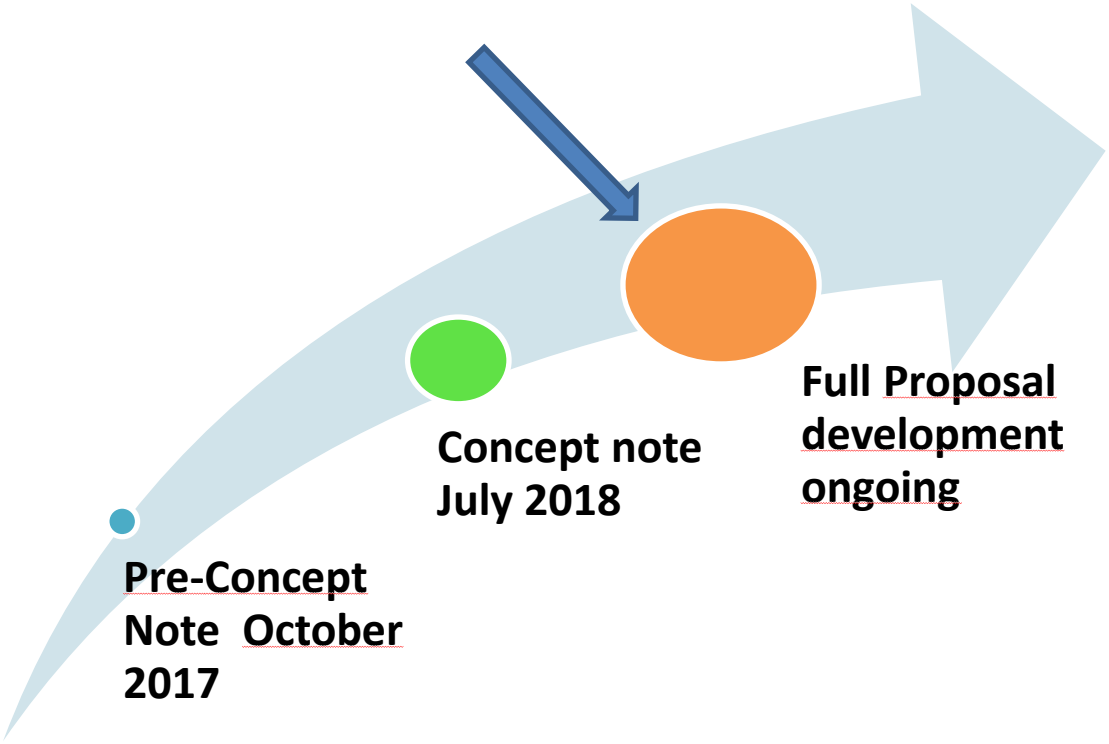

Figure 5: Status of the DRESS-EA proposal development process.

Presentation of Project Draft Proposal

The draft proposal was presented by the Consultant – Dr. Lawrence J.B. Orikiriza. He emphasized that the main purpose of the workshop was to gather information from the focal country teams such that concrete and detailed information regarding the proposed interventions, project sites and answers to the questions raised by the Adaptation Fund while reviewing the concept can be availed for improving the draft full proposal. He highlighted the problem being addressed by the project, objectives, components, outcomes and outputs of the project as well and the entire budget indicating the activities for the respective countries, regional implementing entity and executing entity fees. These are summarized below. .

Problem to be addressed

- The IGAD member states face severe water constraints and prolonged droughts
- Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm of rainfall annually.
- The dominant livelihood of the people in the region is agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems.
- These communities are highly vulnerable to drought risks due to low adaptive capacity by communities to droughts, inadequate innovative adaptation actions to droughts, poor early warning systems and inadequate knowledge and skills in drought management.
- Consequently, there is an urgent need to enhance drought resilience of these vulnerable communities.

Objectives

- Promote investments in drought early warning systems (EWS) and improve the existing ones
- Strengthen and improve the capacity of key stakeholders in drought risk management at regional, national and local levels
- Support communities to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhance knowledge management and information sharing on drought resilience at the considered levels

Project Components and outcomes

- Component 1: Promoting investments in early warning systems and improving on the existing ones (Investments in Early warning)
- Component 2: Strengthening capacities of key stakeholders at regional, national and local levels (Strengthening capacity of stakeholders)
- Component 3: Supporting innovative drought adaptation actions (Drought adaptation actions)
- Component 4: Knowledge management and information sharing (Knowledge management

Guidelines for selecting project areas

The Consultant also highlighted some of the key factors/issues that were considered in selecting the project focal areas. These include but are not limited to:

- High rainfall variability
- High frequency of drought occurrences
- Country priority (e.g. from NAPAs)
- Low income levels of the population/high poverty levels
- High environmental degradation
- Food insecurity
- High dependence on crop farming
- High dependence on livestock farming
- Vulnerable members (women, youth, disabled, elderly) in society (by Gender)
- Potentiality for alternative sources of livelihoods/income
- Potential conflict areas
- Issues of soil water retention
- Alignment and level of contribution to global initiatives e.g. SDGs
- He also stressed the need to furnish the Consultants with more information including socio-economic information relating to all these areas

Group work and Country level presentations

The participants were divided into groups based on the focal countries they represented. Groups were required to deliberate on the issues raised by the Adaptation Fund, answer and present in the plenary. The detailed presentations by the respective countries are indicated in Annexes III, IV, V and VI. The issues raised are as follows.

1. How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive.
2. What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?

3. What are the standard procedures and/or limitations to the flow of funds for project implementation in your country?
4. For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?
5. What are the existing channels for receiving, recording and handling complaints about the project in your country?
6. Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?
7. Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?
8. Any information/idea/input that is vital for project implementation

Key issues and comments raised during the workshop

Issues	Comments/Way forward
Commitment of Participating countries	It was observed that all participating countries had been committed to the development of the proposal
Relevance of the Project	It was noted that the project is good as it addresses the issue of resilience which is the main issue in the IDDRIS
Use of the Name IGAD	It was noted that the project had used IGAD in its title and it was suggested that unless IGAD has a specific role to play in the project the name may need to be changed to Horn of Africa instead The IGAD representative was happy with the project and promised to support it.
Co-financing Mechanisms	This need to crafted properly even to reflect other projects in the region
Ground water utilization Potential	These need to be understood better for proper analysis to be done. Meetings need to be held at specific sites Need to be developed further especially in Djibouti Need to undertake ground water assessment studies
Inclusivity	Everyone should have an opportunity to benefit from the project Specific numbers of women and men benefiting should be spelt out
Grievance Redress Mechanism	Project should have a GRM to handle all issues arising from the project are handled promptly
Role of Country Water partnerships	It was agreed that during GWPEA engages with Country water partnerships at Country and utilize their potential during project implementation

Action plan

At the end of the workshop an action plan in regard to providing the necessary information from the country teams for finalizing the proposal as well as providing the endorsement letters, ESMP approval letters and submission of the full proposal to AF.

Below is the summary of the Action plan.

Activity	**Responsible**	**Expected date**

Submission of draft reports	National Consultants	20/03/2019
Submission of Final draft proposal	Consultants	28/03/2019
Providing the Endorsement letters for each Country	QWPEA with support from Country level offices	29/03/29
Validation of the ESMFs and other studies	OSS	05/04/2019
Providing the approval letters for the ESMP in each Country	National Agencies/GWPEA	30/03/2019
Submission of final proposal to Adaptation Fund	OSS/GWPEA Consultant	10/04/2019

Workshop closure

OSS Representative

In his closing Mr. Nabil the OSS representative thanked the organizers and the participants for their commitment the workshop. He pointed out that a lot of information had been collected from the country teams although more was still needed. He urged the country teams to do their best to avail the remaining information and endorsement letters. He assured the participants and GWPEA that OSS is at their disposal to offer all the necessary support to ensure the success completion of the full proposal development process. He thanked GWPEA for organizing the workshop and the continued collaboration and confidence they have always placed in OSS. He also thanked all the participants for their valuable time spent in participating and providing useful information that will be used to elaborate the proposal for submission to the Adaptation Fund.

GWPEA Regional Coordinator

On behalf of GWPEA who were the main organizers of the workshop Dr. Ahmed Khalid invited Country Representatives to make their remarks before he could conclude his remarks. Lastly Dr. Ahmed Khalid thanked everyone for the good deliberations, information shared and consultants for leading the process. He was optimistic that the national consultants and regional consultant would be able to collect useful and good information for the full proposal. He said he was looking for more partnership between OSS and GWPEA in developing other proposals so as to improve the livelihoods and environment for the people of Uganda and the region in general.

IGAD Country Representative

The IGAD representative (Dr. Fred Mwango) gave closing remarks, thanking every one for the dedication and time so far put in the development of the project proposal. He urged everyone to put in a little more to ensure successful completion and submission of the proposal. He also thanked OSS and GWPEA for the facilitating role so far done in the process. Lastly he pledged total support to the project and urged the consulting team to put in more to ensure completion of the proposal in time. He declared the workshop closed.

Annexes

Annex I: List of participants for the régional workshop

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership
Eastern Africa

ADAPTATION FUND

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

***Lake Victoria Hotel* – Entebbe**

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
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7	Mazin Hallem Slman Bashir	HRC, MWRIE	Stakeholder	+24963496349	m-bashir@hrc-sudan.sd	[signature]
8	Ahmed K. ELDAW	GWPEA	Regional Coordinator	+256752680896	Ahmed.k.Eldaw@gwpea.org	[signature]

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

Lake Victoria Hotel – Entebbe

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
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11	ANGELLA ZACHARY	Moroto District Local Government	Senior Environment Officer	256772841806	angellazachary@yahoo.co.uk	[signature]
12	Asma Mohamed Farah	Ministry of agriculture and Water resources	ingenieure hydrologue	25377137561	Asmita12@hotmail.fr	[signature]
13	ISMAEL ELMI HABANEH	Ministère de l'Agriculture de l'eau	Consultant National	25377835640	Elmihabaneh@hotmail.fr	[signature]
14	Moustapha Hassan	Ministère de l'agriculture	conseiller TECHNIQUE	253817230	mhattulli@gmail.com	[signature]
15	MUGISHA Louis	Ministry of Water Env	TL- KUMZ	0772421618	mugishalouis@yahoo.com	[signature]
16	MUSANZI YUNIA	UGANDA WATER & SANITATION NGO NETWORK	EXECUTIVE DIRECTOR	0776451971	ymusanzi@uwasnet.org	[signature]

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY
OSS

Global Water Partnership Eastern Africa

ADAPTATION FUND

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

***Lake Victoria Hotel* – Entebbe**

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
17	KAIRU GERALD	GWPEA	Program Manager	0776446891	Gerald.Kairu @gwpea.org	[signature]
18	DENNIS KARIISA NDAMIRA	GWPEA	Regional Finance Officer	0757619853	dennis.Kariisa @gwpea.org	[signature]
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20	Chris Abesiwa	NILE SEC	MEDIA	+256 754390905	[illegible]	[signature]
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22						
23						
24						

Annex II: Agenda for the Regional Consultation Workshop

AGENDA
REGIONAL CONSULTATION WORKSHOP
STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION- DRESS EA

Date: ***15th March 2019*** ***Venue: Lake Victoria Hotel, Entebbe***

Time	Activities	Facilitators
8.30 – 9.00 a.m	Registration	GWPEA and OSS Secretariat
09.00 - 09.15	Welcome Remarks and Official opening of Workshop	GWPEA, MWE and OSS
09.15- 09.30	Introduction of workshop participants	GWPEA
09.30 – 09.45	Objectives of the workshop	GWPEA

09.45 – 10.30	• Brief of the DRESS-EA project (Background, project cycle, and status)
	• Institutional/implementation arrangements
	  ○ Proposed arrangements
	  ○ Key national institutions, roles and responsibilities
		OSS

10.30 – 11.00	• Presentation of the draft DRESS-EA proposal
	  ○ Objectives
	  ○ Project components
	  ○ Outcomes and outputs
	  ○ Project sites
	  ○ Budget
	• Key information needs
	• Requirements for submission to Adaptation Fund
		Consultant

11.00 – 10.30	***Coffee-break***	
11.30 – 13.00p.m	Additional information ○ Country specific information	Consultant
13.00 – 14.00	***Lunch***	
14.00 – 16.00	Country Presentations and discussions	All
16.00 – 16.30	***Coffee-break***	
16.30 – 17.00	Way forward	Consultant
17.00 – 17.15	Closing remarks	MWE, GWPEA and OSS

Annex III: Group work- Country presentations

Country Presentations
SUDAN

Issue	Response
How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive?	➢ In Sudan no restrictions to the involvement of women in all livelihood activities and one of the Sudan Water Policy principles and Objectives is to empower women role; ➢ Within the scope of the project women can involve in the followings: • Technical and managerial or activities of EWS; • Drinking water supply intervention; • Stakeholder leadership (organizing & implementing CB programs in collaborationS with the existing women associations and the general women union; • Implementation of innovative interventions (diary, agriculture … etc.).
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	• Gender equity. • Avoid ethnic dimension. • Marginalized and poor groups. • Avoid political categorization.
What are the standard procedures and/or limitations to the flow of funds for project implementation in For establishment and running the national executing unit, the activities have to financially facilitate your country?	The Hydraulics Research Center (HRC), the national executing entity, has special foreign account approved by law from the Federal Ministry of Finance & National economy - Sudan. Setup of the unit (tentative) – • Unit leader (Technical staff) ➢ Accountant ➢ Auditing ➢ Driver ➢ clerk • Logistics (car + consumables). • Incentives (topping). • Running cost.

What are the existing channels for receiving, recording and handling complaints about the project in your country?	Arising complains could be resolved through negotiation with steering committee members and the complainers. Confidence building and aware of ownership have to take care of from the start of the project.
Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	•Government locality administrative units. •The stakeholder participation in O&M through CBOs. •Private sector through tendering

9. Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?

Category	**Risk**	**Level**	**Mitigation**
Social	- Social resistance (tenure) - Conflict of interest	Low low	Compensation Negotiation and confidence building
Economical	Market instability	high	Procurement should be fixed in hard currency
Environmental	**Water quality**	**Low**	**- Introduce WQC** **- Awareness**
Gender	Lack of capacity	moderate	ToT, collaboration with governmental and NGOs, women associations and unions.
Financial management	Restrictions on hard currency exchange	high	To liaise with central bank

KENYA

Issue	**Response**

How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive.	• Inclusivity as prescribed the Constitution of Kenya 2010 and the one third gender rule • Engendering policies, strategies and plans where there is an aspect of gender mainstreaming into all activities of projects and programmes • Development of a climate change gender strategy as prescribed in the Climate Change act, 2016 • Engage with women and youth, PWD and marginalized groups projects specifically on the ground
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	• The beneficiaries should be registered as groups and have recognized registration certificate from the government; • The Community based organization (CBO) and women groups should be gender sensitive; • The CBO and women groups, PWD and marginalized groups needs to have been established and operational; • The CBO and women groups, PWD and marginalized groups should have been engaged in activities that are income generating; • The CBO and women groups, PWD and marginalized groups should have a records management system; and • The CBO and women groups, PWD and marginalized groups should be based locally and operate within the identified project areas inter alia.
What are the standard procedures and/or limitations to the flow of funds for project implementation in your country?	**LIMITATIONS** • Bureaucracy in the GoK system in terms of disbursement from The National Treasury – National Implementing Entity – Project implementation on the ground • Capacity reallocation with no institutional memory of the project • Procurement processes delays and turn over time • Status reporting of the project and its delays causing lag in implementation and execution of the project at country level

	• Setting up of new structures such as the Project coordination unit nomination which also reduces on the workload cause of other duties/ engagements
For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?	• Facilitate a focal point/ desk officer to be a liaise in the project for tracking and reporting/ administrative costs • Workshops • Field visits • Capacity building by training
What are the existing channels for receiving, recording and handling complaints about the project in your country?	National Environment Complaints Committee The National Environment Complaints Committee on Environment is an organ established by the EMCA whose role is to address complaints by the public on projects and investments that the public oppose due to environmental and social impacts. In an event that the public is dissatisfied with the proposed projects the PCC will serve as the first stop for getting redress and if this fails then the National Environmental Tribunal (NET) another organ set up by NET to resolve environmental and social disputes on investments will form the next avenue for redress. ***Land and Environment Courts*** The Constitution of Kenya (GoK) has further provided for specific courts to deal with land and environment (Land and Environment Courts) that are charged with playing a vital role in reconciling environmental related disputes and these courts will serve as the ultimate stop in the event of disputes or complaints that cannot be resolved through other alternative means.
Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	• Availability of other donors who are hosted in Kenya and we can submit applications for support • Internal structures and policies like the Constitution which advocates for sustainable projects with GoK involvement and the use of existing systems like National Drought Management Authority and policies such as the National

	Climate Change Action Plan 2018-2022, National Adaptation Plan 2030, Climate Change Directorate, other MDAs • Up-scaling of existing projects
GOVERNANCE STRUCTURE	• The project should be properly structure in terms on implementation with clear lines of deliverables • Inclusivity • Fiduciary matters as far as the project is involved as far as the financial

Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?

IDEA	**SOCIAL, ECONOMIC, ENVIRONMENTAL, GENDER**	**MITIGATION MEASURES**
Political good will	We need	Political buy in, advocacy and
Poverty	Social, economic	Poverty reduction measures such as enhanced crop production and livestock development, LIVELIHOOD ENHACEMENTS
Low income level	Social, economic	enhanced crop production and livestock development, LIVELIHOOD ENHACEMENTS
Disparities in the social set up	Social, economic	Capacity building, awareness and sensitization
Climate change risks – drought prone (inadequate precipitation and lack of water, high temperature variations	Environmental	Sensitization, advocacy and trainings (CSA)
Cultural issues	Social	Capacity building, awareness and sensitization

Gender inequality where a lot of work is left to the women	Social	Capacity building, awareness and sensitization - ADVOCACY
High unemployment level	Economic	Job creation activities through increased agriculture and livestock activities, capacity build, training, decentralization of the micro industries to sub-counties, enhance TIVET

UGANDA

Issue	**Response**
How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive	✓ Abide by MGLSD Gender policy, Gender mainstreaming, gender equity and budgeting (MDAs focal points) ✓ Specifically- stakeholder structures should be made up 50% and more by women ✓ Some intervention should specifically target women and the youth
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	✓ Follow the existing Govt procurement and disposal procedures ✓ Membership to GWP-EA CWP can be considered ✓ Local presence
What are the standard procedures and/or limitations to	✓ There are already govt procedures governing the flow of funds (TSA at BOU) ✓ The timeliness of decision making among institutions may delay the timely execution of the project

the flow of funds for project implementation in your country?	
For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?	✓ Provide a component dedicated to supporting the national project coordination unit-provision for M&E activities, capacity building and tooling of the coordination unit
What are the existing channels for receiving, recording and handling complaints about the project in your country?	✓ There are existing Grievance handling Mechanisms e.g. Whistle Blower policy. Inspector General of Govt, Monitoring Institutions e.g. the office of the RDCs, ISO ✓ Community monitoring groups, CSOs
Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks	✓ Socio- economic: Low Literacy levels, High poverty levels(High)-increase viable livelihood activities ✓ Environmental: Climate Change and Variability (high).Mitigation: Designing of intervention should put consider climate change variability put in place mitigation/adaptation measures. Refer to Climate Change Policy ✓ Gender: Low participation of women and youth during design and implementation of project. Decision making in most societies is mainly by men (moderate). More women and youth should be involved. ✓ Financial –Delays in disbursement of funds due to donor procedures (Moderate).Timely Release of funds ✓

(low, moderate or high)?	
Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	✓ Community contribution, ✓ provision within the annual budgets ✓ Provisions within the CMPs

Annex IV: National Consultations

The national consultative meetings were held in each of the four countries (Djibouti 10th – 12th February 2019; Kenya 19th – 22nd February 2019, Sudan 2nd to 4th March 2019 and Uganda 11th – 13th March 2019).

Objectives of the workshop

The workshop objectives were to:

i. Gather input and needs of project stakeholders to be included in the proposal to be submitted to the Adaptation Fund;
ii. Inform project stakeholders about the scope of the project;
iii. Gather the needs and expectations expressed by the project stakeholders;
iv. Propose new activities that respond to the specificities of the intervention areas and needs
v. Seek consent and endorsement for project implementation in the sites visited.

Key outcomes of the workshop

a) The expected outcomes of the workshop presented were:
b) Identified climate change threats and natural resources;
c) Understanding the project's aspirations and the measures to be implemented to address the effects of drought in the country harmonized;
d) New activities and specific intervention areas identified and incorporated; and
e) Integration of activity ideas, recommendations and comments from stakeholders into the final proposal.
f) Endorsed DRESS-EA project with signed consent forms and attendance lists.

ANNEX V RAPPORT DE CONSULTATIONS NATIONAL -DJIBOUTI

1. INTRODUCTION

Dans le cadre du projet régional de résilience dénommé « projet de renforcement de la résilience des agricultures et des éleveurs de petite échelle », une délégation composée des membres de l'Observatoire de Sahara et du Sahel (OSS), des membres du Partenariat Régional de l'Eau – Est de l'Afrique (GWP-EA) et du consultant régional ont effectué une mission de consultation à Djibouti du 10 au 14 février.

Cette mission de consultation avait pour objectives d'une part de travailler avec le gouvernement Djibouti sur les priorités nationales en matière du développement des moyens de subsistance des petits fermiers et, d'autres parts de rencontrer les populations cibles/bénéficiaires pour identifier leurs différents besoins.

2. Réunion de travail avec le ministre de l'agriculture (MAEPE-RH)

Une réunion de courtoisie et d'information s'est tenue à la salle de la réunion du Ministère de l'agriculture (MAEPE-RH) le 10 février 2019.

Etaient présents à cette réunion :

- S.E Mr Mohamed Ahmed Awaleh, Ministre de l'agriculture (MAEPE-RH) ;
- Mr Ibrahim Elmi, Secrétaire Général du Ministère de l'agriculture (MAEPE-RH) ;
- Mr Ali del Wais, Directeur de l'Administration et du Finance du Ministère ;
- Mr Ismael Elmi Habane, Consultant National;
- Mr Abdi Kayad, Direction de l'hydraulique rurale ;
- Mr Mouktar Directeur de la direction de l'agriculture et de forêt ;
- Mr Moustapha Nour, Direction de l'hydraulique rurale ;
- Mr Aouled Djama, Directeur des Grands Travaux ;
- Monsieur Nabil Ben Khatra expert et membre de la délégation de l'OSS ;
- Mademoiselle Khaoula Jaoui experte et membre de la délégation de l'OSS ;
- Monsieur Camille Karangwa expert et membre de la délégation de GWPEA ;
- Monsieur Lawrence Orikiriza consultant régional ;

3. Déroulement de la Réunion

Le ministre de l'agriculture donne le coup d'envoi de cette réunion en souhaitant Bienvenue les membres des différentes délégations. Ensuite, un tour de table a été organisé afin de permettre à l'ensemble des participants de la réunion de se présenter.

A l'issue de cette séance d'ouverture de la réunion, le Ministre donne la parole au chef de la délégation pour présenter le but de cette visite et l'objectif du projet de manière globale.

Par la même, le Ministre a, pour sa part, mis l'accent sur les priorités nationales en matière de la résilience à la sécheresse en soulignant l'importance qu'accorde le gouvernement djiboutien sur l'Eau.

Poursuivant sur son intervention, le Ministre a fait part de la délégation sa décision portant sur le fait que ce projet destiné aux petits fermiers sera coordonné par la direction de l'hydraulique rurale compte tenu des priorités gouvernementales.

Au terme de leur visite, la délégation a eu une réunion de travail avec la direction de l'hydraulique rurale. Réunion qui s'est déroulée à la salle de réunion de la direction de l'hydraulique rurale.

4. MISSION DE CONSULTATION SUR LE TERRAIN

Visite de terrain

Une mission de consultation s'est effectuée le lundi 11 février 2019 à Gobaad et Hanle afin d'écouter les agriculteurs et les éleveurs.

Ont participé à cette mission :

- Monsieur Nabil Ben Khatra expert et membre de la délégation de l'OSS ;
- Mademoiselle Khaoula Jaoui experte et membre de la délégation de l'OSS ;
- Monsieur Camille Karangwa expert et membre de la délégation de GWPEA ;
- Monsieur Lawrence Orikiriza consultant régional ;
- Monsieur Ismael Elmi Habane, consultant National ;
- Monsieur Mouktar Directeur de la direction de l'agriculture et de forêt ;
- Monsieur Abdourahman Omar Bengid sous-directeur régional de DIKHIL.

Visite du site 1 : GOBAAD

Les coopératifs agro-élevages de GOBAAD couvrent 5 secteurs qui s'étendent de 25 km.

Les 5 secteurs sont :

- Sissalou ;
- Garsaledabba ;
- Yalahlou ;
- Bonta.

Cadre organisationnel :

- Bureau exécutive :
    - Président : Mohamed Abdoulkader
    - 6 membres dont une femme
- Assemblée générale

C’est l’assemblée générale qui élit le bureau exécutif.

La coopérative agro-élevage de GOBAAD est composée de 300 adhérant actuellement : 100 membres dont 12 femmes sont actifs.

Propriété :

Chacun est propriétaire de son jardin. La plupart des propriétaires ont hérité de leurs parents.

Mode de vie de la population de GOBAAD :

La population de GOBAAD pratique l’élevage extensif ; l’agro-élevage et l’agriculture.

L’élevage extensif :

Elle pratique essentiellement de l’élevage des petits ruminants et l’élevage des dromadaires. Elle se déplace au gré des pluies et des pâturages.

Agro-élevage

Les bétails sont barqués dans un enclos situé dans le jardin.

L’agriculture

Les agriculteurs de GOBAAD cultive des légumes (tomates, oignions, etc..) des arbres fruitiers (manguiers, citronniers, etc…) et des dattiers. Ces derniers n’utilisent aucun produits chimique (pesticides, angrai chimiques) et leurs produits sont bio. Par contre, ils préparent leurs propres compostes à partir des feuilles mortes et des excréments de leurs bétails. Ils maitrisent les techniques de base agricole et les méthodes sophistiqués.

Alimentation en irrigation

Les périmètres agricoles de GOBAAD sont alimentés en eau à partir des puits équipés des motopompes. Ces derniers sont alimentés par les nappes inféroflux des l’oued de GOBAAD. Il s’agit d’un système d’irrigation traditionnel des canaux à ciel ouverts.

Site 2 : Oued HANLE

A HANLE 2 il existe les associations pour le développement de HANLE 2. Cette association comprend 200 membres dont 80 ménages actifs.

Cadre organisationnel :

- Comité des sages : 4 sages
- Comité exécutive : 5 membres dont 2 femmes
- Président de l'association : Ali HANLEH

IMAGES QUI METTENT EN EVIDENCE LA CONSULTATION AVEC LA POPULATION LOCAL

Annex V: National workshop- Kenya

CONSULTATIVE WORKSHOP

A one day consultative workshop was organized by MEF, OSS and GWPEA at the Kitui Enterprise Promotion Company (KEPC) Hall on the 22nd February, 2019 in Kitui County, Kenya. The aim of the consultative workshop was to gather inputs from the smallholder farmers and pastoralists towards their innovative adaptation actions that reinforce their resilience to droughts and the the appropriate interventions they are undertaking that are most critical in the targeted identified areas. The workshop was carried out in an interactive manner that engaged all participants present in discussions towards climate resilience and mitigation actions as well.

Picture 1: Participants during the workshop

WORKSHOP PROCEEDINGS

Opening Remarks

Mr Wambua Munyao a representaive of the community who had mobilized the participants welcomed them to the workshop. He requested for opening the session with a word of prayer. He

stressed that the farmers have been hit hard by the climate changes that Kitui is experiencing and that the Workshop would identify all interventions that they would employ on the ground to cushion the impacts and enhnace their livelihood. He wished the participants a fruitful and successful workshop. He invited Mr Steve Muhanji as the MEF Representative to give his opening remarks.

Picture 2: Opening remarks by Community representative/ leader Mr. Wambua Munyao

Remarks by National Consultant –Mr. Steve Muhanji

The National Consultant welcomed participants to the workshop and encouraged them to cooperate with the representaives and be as free as possible with sharing of information. He emphasied that the exercise is a regional project that brought together East Africa in its endeavour to combat the effects of Climate Change. He noted that climate change does not affect one person or one country but cross cuts borders and noted that the most hit were the women, youth, marginalised and people living with diabilities. Mr Muhanji highlighted how they have been working with the County Government and the public in various projects that would have institutional memory and hassist in the development and success of the DRESS-EA project as a conceited effort. He welcomed the GWPEA Representative who introduced the visiting team.

Remarks by GWPEA –Mr. Gerald Kairu

GWPEA Representative Mr Kairu introduced himself and thanked the team from Kenya for their efforts towards organising the workshop. He emphasized the importance of the workshop which was organized to enrich the project proposal which was at the final stages towards submission to the Adaptation Fund. He highlighted the importance of the representatives that encompased the local communities where the project shall be implemmented as they are the key informants on the ground and their input plays an important role. Mr. Gerald Kairu further gave an overview of the proposed project. He said that GWPEA has been implementing a project on integrated drought management in the Horn of Africa since 2014. It was through assessments done by this project that GWPEA discovered that pastoralists and small holder farmers are the most vulnerable to the impacts of drought. This revelation subsequently informed the development of the Pre-concept on "Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region" Project that is currently being developed into a proposal after implementation approval by the Adaptation Fund in the identified region.

Mr Kairu further went to introduce the Kenya Water Partnership (KWP) team with their chairman Mr Peter Macharia who is also the vice chair of GWPEA and Mr George Sanga. He noted that they are an integral part of the project and their input contributes towards implementation. He also introduced the Regional Consultant Dr Lawrence Orikiriza.

Remarks by Regional Consultant - Dr Lawrence Orikiriza

Dr Lawrence welcomed the participants to the consultative workshop and requested them to review the program and make amendments if necessary. The agenda was adopted without amendments and he requested the participants to register for the workshop. He emphasized on what Mr Kairu said about the project and gave a brief to the participants on the genesis. He noted that OSS is part of the process of developing the project proposal and that OSS was selected by GWPEA and Project focal countries as the implementing Entity for the regional project. He informed the participants that OSS pledged technical support as well as support in mobilizing resources needed for successful development of the project with the Adaptation Fund. He further informed participants that OSS has since October 2017, been accredited by the Green Climate Fund (GCF) highlighting that such accreditation also presents more opportunities for developing projects. He once again reiterated OSS's appreciation to be part of the entire process. He concluded by pledging OSS's continued support of providing oversight to the concept development and submission process in order to ensure that the proposal meets Adaptation Fund standards. He also informed the participants that the concept for the proposed project was already endorsed by the Adaptation Fund. The project will be implemented by OSS and executed by GWPEA in partnership with the national designated agencies.

Picture 3: Dr Lawrence giving opening remarks during the consultative workshop

Introductions and Expectations

The facilitator Dr Lawrence called upon the participants to introduce themselves and to highlight their expectations from the workshop. In summary the participants expected to:

1) Provide substantial input into the project
2) Support in the development of a proposal that will be submitted to the Adaptation Fund
3) Understand what the project is all about
4) Work together as a team towards the implementation of the project
5) Discuss the issues of climate change and their resilience
6) Suggest adaptation and mitigation measures that can be used to strengthen local innovations against drought with coping mechanisms
7) Learn from one another their status' on the ground
8) Share ideas from the different sub-counties represented
9) Understand how the project will contribute to their livelihoods

Objectives of the workshop

The workshop objectives were presented by Dr Lawrence Orikiriza. The objectives were to:

- Gather input and needs of project stakeholders to be included in the proposal to be submitted to the Adaptation Fund;
- Inform project stakeholders about the scope of the project;
- Gather the needs and expectations expressed by the project stakeholders;
- Propose new activities that respond to the specificities of the intervention areas and the needs of users

Key outcomes of the workshop

The expected outcomes of the workshop presented were:

a) Identified climate change threats and natural resources;
b) Identified and addressed the main risks of early warning systems to the project;
c) Identified and engage the grievance mechanism within the community that works;
d) Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the country harmonized;
e) New activities and specific intervention areas identified and incorporated; and
f) Integration of activity ideas, recommendations and comments from stakeholders into the final proposal.

Discussions

Dr Lawrence first engaged the participants by placing them according to their locations where the participants represented the whole of the Kitui sub-counties namely: Kitui South; Kitui East; Kitui Central; Kitui West; Kitui Rural; and Mwingi. He further engaged them by requesting what type of livestock and crops they were growing and keeping on their farms. These are shown in table 1 below:

Table 1: Crops grown and livestock reared	
Crops	Livestock
Cow peas	Bees
Chick peas	Goats
Mangoes	Sheep
Sorghum	Cattle
Millet	Pigs
Maize	Chickens
Sukuma wiki (kale)	

As per the programme, the discussion was as follows:

Discussion on Natural Resources and Climate Change threats

The participants noted that Kitui is mostly characterized by:

Seasonal rivers and ponds such as:

- River Kaui in Kitui West
- River Ngooni in Kitui Central
- River Mutendea in Kitui West
- Thua River in Kitui East
- Kalundu River in Kitui Central
- Nzeeu River in Kitui South

i. **Permanent Rivers such as:**
    - Athi River in Kitui South
    - Tana River in Mwingi

ii. **Forests**
    - Kavonge Forest in Kitui Cental

iii. Yatta Plateau in Kitui South

The participants informed the team that River Nzeeu had a lot of investment from the Government of Kenya which constructed a dam that serves the community surrounding it. They also informed the team that along Kalundu River, a dam was constructed that also served the community around the dam. The participants also noted that one of the seasonal rivers, River Thua was heavily polluted with asbestos which made water resource utilization difficult as asbestos is harmful to human health.

The participants noted that Kitui Central has seventeen (17) sand dams that they use as a natural resource and that the dams support about 5 villages by the Water Resources Utilization Authority (WRUA) They noted that they have earth dams along the rivers that serve about 2000 individuals across the water way.

The participants informed the team that they mostly experience the two rainy seasons annually and noted that they occur during the months of April-June and November-December. They informed the team they occasionally experience sporadic rainfall which sometimes causes flash floods and destruction. The participants emphasized that due to climate change, the rainfall seasons are not predictable as before and hence planting seasons are not as before.

Some of the threats that they mentioned in regard to climate change threats included:

i. Deforestation
ii. Farming practices
iii. Urbanization and migrations

The participants noted that the major issue in regard to crop farming and livestock rearing is availability of potable water. They noted that they needed to invest in water harvesting technologies and irrigation schemes as water management practices.

Interventions to address the impacts of Climate Change in Kitui County

The participants noted that they have been engaging in various interventions to address climate change impacts as discussed below:

a) Water Conservation and Management Interventions
   i. Building of sand dams across small rivers at small scale level to hold water for irrigation;
   ii. Digging of Zai pits around the crops and trees;
   iii. Buying of water reservoir tanks at communal level as part of the distribution system from sunken boreholes;
   iv. Digging of shallow wells; and
   v. Involving the county governments and WRUAs in the development of water management plans

b) Adaptive Crop farming and livestock rearing practices
   i. Brachiaria grass and Boma Rhodes are also forms of interventions towards increasing livestock fodder;
   ii. Planting of Napier grass during the rainy season and harvesting for storage during the drought season;
   iii. Keeping of drought resilient animals like goats, KALRO improved chicken breeds and bees which also help in pollination processes
   iv. Intercropping of drought resistant crop species with normal species like the cow peas and chick peas which are also leguminous (nitrogen fixing)
   v. Terracing of land with multipurpose trees which also host bees and reduction of surface run off from flash floods
   vi. Use of organic manure visa vie artificial to increase crop yields and reduce on alkalization of the soils due to high temperatures
   vii. Practicing Agroforestry where they plant trees and fruit crops for create calculated shading that assists in reducing evapotranspiration and maintain soil moisture content

Participants Views on Early warning systems and the main risks of the project

The facilitator moved the participants to the next discussion on Early warning systems (EWS) and the main risks of the project. He introduced them to the concept and noted that the intensity and frequency of climate-driven natural disasters and conflicts is increasing. He noted that climate driven natural disasters now occur nearly five times as often as 40 years ago. The impact on local economies, on peoples' livelihoods and lives has similarly grown. In some of the worst-hit places, it can seem unrelenting. One drought will follow another, every time stripping away at the limited assets of poor and vulnerable people, robbing them of their self-reliance and wounding their humanity and dignity.

Dr Lawrence noted that carefully-timed support also protects and empowers people the most, giving them the confidence to keep going or to resume their livelihoods. He noted advancements and investing in early action means that the DRESS-EA project can help shelter longer-term development gains and increase resilience to the impacts of climate change and increase crop yield and livestock productivity. He engaged the participants to identify some of the EWS that they are familiar with and they mentioned the following:

- Mass media – television, radio and newspaper
- Kenya Meteorological Department bulletins
- Climate Information network bulletins
- Short message services from agriculture extension workers

The participants noted that currently some of the systems mentioned above were not effective and sorted for enhancement of:

- Short message system
- Use of the RANNET radio from KMD
- Engage in participatory scenario planning

The participants brought forth the risk that the project is well developed and can easily be adopted by the community yet the issue came about when it comes to implementation. They noted that many projects have been developed and a lot of information sharing has been exchanged but then the projects become "paper projects" that are eventually shelved and no outcome on the ground. The team noted their concerns and assured the participants that the DRESS-EA project was a very inclusive and implementable project that had regional and National support. This was also heightened by the courtesy call to the local county government through the County Executive Committee Member for Agriculture, Water and Livestock Development, Mr. Emmanuel Kisangau who embraced and endorsed the project.

Participants Views on Criteria for selecting beneficiaries for competitive small grants and Unidentified sub projects and other needs

Dr Lawrence introduced the participants to the next discussion item on criteria for selecting beneficiaries for competitive small grants. He noted that the DRESS – EA projects had developed a criterion that was inclusive and representative (*picture 17*). He highlighted the criterion as follows:

- The beneficiaries should be registered as groups and have recognized registration certificate from the government;

- They Community based organization (CBO) and women groups should be gender sensitive;
- The CBO and women groups needs to have been established and operational;
- The CBO and women groups should have been engaged in activities that are income generating;
- The CBO and women groups should have a records management system; and
- The CBO and women groups should be based locally and operate within the identified project areas inter alia..

Picture 4: Participants submitting views on criteria for selecting beneficiaries for competitive small grants

The participants were requested to submit the names of the CBOs and women groups in the area, their representation (membership and gender), activities and issues if any. (*Annex 4*)

The team noted as the participants were submitting the CBOs and women group organizations, they also were identifying unidentified sub-projects and other needs that the DRESS-EA projects can support. Some of the projects identified included:

1. Rehabilitation of existing water pans
2. Up-scaling of water reservoir systems

3. Capacity building of the communities and local government

Picture 5: Participants during the workshop submitting unidentified sub-projects and other needs

Participants Views on Grievance Mechanism within the community

Dr Lawrence thanked the participants for the progress and inputs towards the projects and noted that the information was very critical in the proposal development. He noted that the insights gave a clear picture towards implementation of the project. Furthermore, he noted that the project also has a grievance redress mechanism which the community occasionally encounters conflict and what resolutions they implement. He requested the participants to share experiences that cause conflict. Some of them included:

- Bee keepers and crop farmers – the farmers use pesticides on their crops which affect the bees in the production of honey and sometimes cause fatalities to the bees.
- Farmers and livestock herders and conflicts caused by their livestock wandering into the farmers and destroying the crops
- Human wildlife conflicts when the animals from the national reserves in Kitui County and destroy crops causing conflicts

- Social conflicts from natural resource management use

Dr Lawrence invoked the participants to propose conflict resolution mechanisms that the community engages in and were as follows:

- Resolution from courts
- Administrative resolution from the chief
- Traditional conflict resolution using elders

The participants were further probed by the consultant who noted that some conflicts sometimes but rarely remain unresolved. Further probing highlighted that the main mechanism for conflict resolution was traditional conflict resolution. It was noted that village elders interceded and representatives were scoped from the families around the conflict or resources under dispute and they nominated members of equal numbers and gender inclusivity to form the committee. The committee also appointed local authorities that consist of organizations represented a resource under conflict for autonomy purposes and technical support. This was the best mechanism portrayed on the ground and the local leaders kept a record for institutional memory.

Participants Views on Alternative Income generating activities

The community was engaged by Dr Lawrence to list some of the alternative income generating activities they are pursing. These include:

1. Establishment of tree nurseries for selling of seedlings
2. Calabash making
3. Own and managing retail shops
4. Brick making
5. Briquette making
6. Table banking
7. Boda boda operation
8. Sand mining and selling
9. Charcoal production
10. Basket making and rope making by the women groups
11. Ornament making
12. Firewood selling
13. Formal employment
14. Detergent and disinfectant making
15. Pot making (KCJ) Ceramic jiko making

Dr Lawrence thanked the participants for the in-depth participation and knowledge towards their area and noted that the information would be used appropriately towards finalization of the proposal. He handed back the programme to Mr. Kairu who gave closing remarks.

Closing Remarks

In his closing remarks, Mr. Kairu the GWPEA representative thanked the organizers and the participants for their commitment during the workshop and achieving the objectives of the workshop. He pointed out that a lot of information had been collected from the participants. He urged the consultants to do their best to avail the remaining information and finalise the proposal.

He assured the participants that the consultants are up tp the task and that GWPEA and OSS is at their disposal to offer all the necessary support to ensure the success of the full proposal development process for the proposed Project. He thanked Mr Muhanji with the local facilitator, Mr Wambua for organizing the workshop and the continued collaboration. He also thanked all the participants for their valuable time spent in participating and providing useful information that will be used to elaborate the proposal for submission to Adaptation Fund through OSS.

Annex VI: National workshop – Sudan

PROJECT: STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

Awareness Meeting & Consultative Workshop

Report - **Sudan**

March, 2019

1. Within the framework of the preparation of the full proposal of DRESS-EA Project: **"Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region"**, awareness meeting and consultative workshop at national level were organized. The main objective of such activities, is to endorse the project by countries, and hence grantee the ownership.

2. **The awareness meeting** was held at the premises of the Ministry of Water Resources, Irrigation and Electricity (MWRIE) at Khartoum on the 3rd of March 2019. It was attended by twenty one participants most of them are from the MWRIE with accumulated experience and three of them are former ministers (Minister of Irrigation & hydroelectric power, Minister of Agriculture & Forest, and minister of Physical Planning – Gezira State). The list of participants is shown in **Annex I**.

Photo 1: Awareness meeting (03/03/2019 – Khartoum).

3. The meeting was opened with a welcoming remark from the national consultant, followed by a speech from DR. Ahmed Khalid ElDaw - the GWP_EA Regional Coordinator, reflecting the role and mandate of the GWP-EA and the regional and national dimensions of the proposed project. He also stated the reasons behind selecting Es Salaam Locality at the White Nile State, as study area. Then after, the

chance was given to Prof. Lawrence Orikiriza, the Regional Consultant, to give an overview on the project and enumerated the main components of the project. The floor was then open for discussion.

4. The main findings of the awareness meeting are summarized as follows:
    - The selected study area "Es Salaam Locality" is witnesses decline in rainfall during the last decades (Drought is chasing the south) and it is an area of conflict among different stakeholders: farmers, pastoralists, refugees … etc. So, it fits the selection criteria of the project.
    - The project should be tangible and it has to be community oriented addressing the actual needs of the people.
    - The success of the project, lessons learned and sustainability, lead to upscaling and extension to neighboring communities.
    - Water points and agroforestry come as the first interventions to be think of.
    - Ownership and Synergies with local partners (government institutes, NGOs … etc.) is essential for the success of the project and optimal use of available resources.
    - The Social Sciences such as: Sociology, Social Anthropology, Political Science, and other relevant disciplines, have crucial roles in this project in terms of building a strong understanding of the social context of local communities in Sudan. Considering the multidimensional characteristics of the local communities in Sudan, we will pay special attention to the whole social context in which the Sudanese farmers and pastoralists are interacting. This could be done through benefiting from the Participatory Rural Appraisal methods and other participatory approaches. We strongly believe that the violence of the climate might lead to the climate of violence between our stakeholders, but the potentiality of cooperation between them is an inevitable issue in order to strengthen their capacity to resilience, cope and adapt with the climate challenges in general and the droughts in particular.

5. **The Consultative Workshop** was held at the premises of the General Union of the Sudanese Women, at Kosti (the capital of the White Nile State) on the 4th of March 2019. It was attended by

thirty-four participants most of them are representing Um Galala, El Keywaik, El Naeem, El Rawat and El Zeylate administrative units of Es Salaam Locality. Also the former minister of Agriculture & Forest and the Mayor of Es Salaam Locality are ones of the attendees. The list of participants is shown in **Annex II**.

Photo 2: Consultative Workshop (04/03/2019 – Kosti)

6. Prior to the workshop, three-hours site visit was organized. The regional consultant accompanied by El Rawat Administrative Unit representative, former minister of agriculture and forests, the gwp-ea representative, DR. Younis of the Hydraulics Research Center and the national consultant, have visited different locations within the unit. This includes, water points: shallow hand-dug wells, artificial ponds

(haffirs), local market at El Sabaat village and the surrounding environment. The main observations noticed during the visit are summarized as follows (see photos below):

- Vast fertile land (clayey soil) with some scattered trees (sign of deforestation).
- Shallow hand-dug wells provide good water quality, while the artificial ones are of low quality. Both males and females are sharing home water delivery.
- Local products are dominating the market, although some vegetables such as tomatoes are available.
- Scattered herds of camels and sheep.

Photo 3: Vast Fertile Land at El Rawat administrative unit – Es Salaam Locality.

Photo 4: Shallow Hand-Dug Wells.

Photo 5: Artificial water pond (Haffir).

Photo 6: Local Market at El Sabaat – El Rawat Administrative Unit.

7. **The consultative workshop** was opened with welcoming remarks from the national consultant, Mayor Nasr Elzain Musa and officially opened by the former minister of agriculture and forests. Overview on the project was delivered by the national consultant and then after floor was opened for discussion and listening to the participants to reflect their ideas and the associated problems and explain what they propose and expect as solutions.

8. The main findings from the consultative workshop are summarized below, while the participants' interventions are given in **ANNEX III.**

- In case of drought and dry seasons, pastoralists use to move to the south (South Sudan) and east (White Nile river) looking for water. After cessation of South Sudan and the extension of the traditional and irrigated farming along the left bank of the White Nile river, more conflicts appear to the surface.
- The present of refugees and returnees, increase the rate of deforestation, as wood is the main source of energy.
- Spread of animal diseases and shortage of drugs and vaccinations, are dominant phenomena within the locality.
- Lack of capacity building programs from the government side.
- Technical, managerial and financial capacities are not enough to coup with drought.
- Farmer use and concentrate to purchase biomass, as a fodder, rather than producing seeds.
- Both males and females are sharing the different livelihood activities at the locality (farming, animal breeding, drinking water supply, marketing … etc.).
- It is essential to open windows for youth to participate in the production process.
- Some of the villagers participate in the O&M of the water point (Haffirs).
- Irrigated schemes along the left bank of the River are in bad need for rehabilitation.

- Animal routes act as head-ache to pastoralists.
- Spread of Mosquite trees is a real thread to productive land.
- Construction of water point, animal routes, establishment and activation of existing legislations … etc. are some proposal for solving the accumulated problems emerged during dry years and drought.
- …. Etc.

9. All the participants, on behalf of the selected study area population (Es Salaam Locality – The White Nile State – Sudan), gave the consent to the implementation of the regional project entitled " "Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region" proposed by the Global Water Partnership – East Africa (GWP_EA) and executed by the Ministry of Water Resources, Irrigation and Electricity (MWRIE) at national level with the support of the Sahar & Sahel Observatory (SSO), for fund to the Adaptation Fund (AF). Upon this, Mr. Nasr Elzain Musa Ali, the Mayor of Es Salaam Locality, has signed the letter of consent.

Global Water Partnership
Eastern Africa
Towards a water secure world

DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Osman Mustafa Ahmed	WRTO	+249912910034	omaduri@hotmail.com
2	Wagdi Ata Ali	DIU	+249123494414	wagdiata@yahoo.com
3	Mohamed Hassan Abdelrahman	Dams Safety Unit (DSU)	+249123847700	mohdbaly@yahoo.com
4	Abd Elaziz Abdalla Nour eldin	DIU	+249123494744	azizadiu@gmail.com
5	Balla Ahmed Abd Elrahman	Nile Waters & Dams Affairs (NWDA)	+249912693455	ballashaheen1@yahoo.com
6	Younis Abdalla Gismalla	HRC	+24912833773	hrs_younis@hotmail.com
7	Abdelhafiz Younis Mohd.	El Sugya Charity Organization	+249122517176	
8	Ahmed Abdalla Dafalla	DSU	+249123494366	a.dafalla13@gmail.com
9	Ahmed Mohamed Adam	Adviser – WRTO	+249912320485	Ahmoadam293@gmail.com
10	ElRayah AbdelSalaam El Haj	Adviser – MWRIE	+249912309609	Elhaj.10966@gmail.cm
11	Osman Eltom Hamad	Adviser – WRTO	+249912541351	oehamad@hotmail.com

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (2)

No.	Name	Organization	Phone (mobile)	e.mail
12	Hassan Aboalbashar Ali	MWRIE – Irrigation	+249912325145	Abosha.99999@gmail.com
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18	Abu Obieda B. Ahmed	HRC	+249123813813	hrs_abdo@hotmail.com
19	Ahmed Khaild ElDaw	GWP-EA	+249912258047	ahmed.k.eldaw@gwpea.org
20	Gerad Kairu	GWP-EA	+256776446892	Geraldkairu@gwpea.org
21	Lawrence Orikiriza	Regional Consultant	+256772570985	orikirizalaw@gmail.com

DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Rahma Gubair Salih	El Naeem administrative unit (NAU)	+249913412574	
2	Alemama Mohamed Abdalla	El Zeylate administrative unit (ZAU)	+249906248336	
3	Maha Elnoour Belala Elkhalifa	ZAU	+249906248336	
4	Fayiza Elhaj Mohamed Ageed	El Rawat administrative unit (RAU)	+249911027753	
5	Khadija Eisa Mohamed	NAU		
6	Salma Hago Mahadi	NAU		
7	Shebair Elkhidir Shebair	NAU	+24915870756	

8	Ibrahim Yousif Mohamed	El Keywaik administrative unit (KAU)		
9	Gamal eldin Mohamed Ahmed	KAU	+249917755499	
10	Kabir Gamal eldin Mohamed	KAU	+24995084487	
11	Saeed Khairalla Saeed Khairalla	NAU	+249914716172	

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (2)

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12	Shebair Elshaikh Elnour	NAU	+249919187083	
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14	Idress Mohamed Adam Sulliman	ZAU	+249900824825	
15	Siddig Rebaih Shiekh Nour	ZAU	+249919369334	
16	Musa Khalid Musa	ZAU	+249909002420	
17	Saeed Musa Mohamed	Um Galala (GAU)	+249917743378	

18	Mostafa Hamid Adam	NAU	+249918234248	
19	Nasr Elzain Musa	GAU	+249912284459	
20	Khalifa Basheer Mohamed	KAU	+249912111382	
21	Khalifa Abu Talib Elnour	NAU	+249122706371	
22	Mahadi Daydan Ismail	NAU	+249914668897	

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DRESS-EA Project: Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (3)

No.	Name	Organization	Phone (mobile)	e.mail
23	Adam Ismail Adam Ismail	NAU	+249913643122	
24	Elsadig Hasabelnabi Mohamed	NAU	+249915684472	
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26	Fakhreldin Khalifa Belal	ZAU	+249923416696	
27	Elsadig Mohamed Osman	Irrigated sector	+249907677741	
28	Mohamed Omara Mohamed	ZAU	+249913630407	
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31	Abu Obieda B. Ahmed	HRC	+249123813813	hrs_abdo@hotmail.com
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34	Lawrence Orikiriza	Regional Consultant	+256772570985	orikirizalaw@gmail.com

ANNEX VII : National workshop report - Uganda

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION - DRESS-EA PROJECT

National Consultations Report

For Uganda

March 11th -13th 2019

PROCEEDINGS

1. **Welcome remarks by The Chief Administrative Officer Moroto district**

The Chief Administrative Officer welcomed the OSS, GWPEA and Consulting team to Moroto ditrict. In his welcome remarks he said that:

- Overall, the Karamoja region to which Moroto district lies, has a population of about one million people vulnerable people including the elderly, women and children. This is an area where nomadism is practiced. The region has faced insecurity stemming from catlle rastlers for many years until recently when the disarmament process was concluded. Therefore, there is relative peace and people need to settle and engage in agricultural crop and animal production as well as other income generating activities.

- Karamoja is the driest area of Uganda. The most vulnerable area to drought is Rupa Subcounty. Rupa sub county was for instance the most drought hit area in the year 2016. It was so, to an extent that whatever was planted then, wilted and dried up. The area is vulnerable to high rates of evaporation due to very high temperatures. It has only one farming season with very short rains characterised by flash floods.

- The people are consequently highly dependent on relief provided by various Non-Governmental Organisations operating in the district and Rupa sub-county in particular.

- Community members have resorted to other livelihood alternatives such as charcoal burning that has eminently depleted the environment and aggravated by climate change.

  Communities also engage in:

  - cattle, sheep and goats (Livestock) rearing
  - low scale Gold mining
  - agricultural crop farming,
  - charcoal burning and
  - petty trade
- The local communities earn very little (approximately 1USD = UGX 3,600 (three thousand shillings). Many intiatives previously undertaken by the Uganda Government through the Office of the Prime Minister and Non-Governmental Organisation have failed. A case in point is the diging up of boreholes to provide water to communities. Many boreholes have dried up.
- The dug boreholes have failed even if they are dug up to 130 metres depth. The water table is extremely low.
- The valley dams that were previously dug by the Government of Uganda and other supportivee Non-Governmental Organisations have all dried up. The water scarcity in Karamoja region and specifically Rupa sub county is worse than any other part of Uganda.
- The topograpghy of the area is majorly characterised by hills and flat plains that are susceptible to erosion and flooding when water comes in large volumes in a very short time.

Figure A: Location of homesteads downhill in Rupa Subcounty

Therefore, the DRESS-EA project presents another opportunity for communties especially in Rupa Sub county to improve their livlihoods, conserve the environment, learn and acquire skills in drought management and adaptation. He flagged off the OSS and consulting team to travel to Rupa Subounty and interact with the local population about the DRESS-EA project.

2. Field Visit

prior to the community meeting, the OSS, GWPEA and consulting team conducted a field visit to Rupa Sub county, Musupo Parish, Musupo village in Lokere catchment. Some of the community mebers gathered and interated with the team on the livelihood opportunities, challenges faced and likely risks.

In terms of livelihood options, cows, goats and sheep are reared. Communities survive on milk and milk products such as cheese and cheese butter. They also sell such products and livestock to earn an income.

Figure B: The Consulting team, OSS and GWPEA representatives interactiing with community members

Food shortage is evident. Children of school going age remain home and invade neighboring schools at lunch tine for food. Water scarcity was also evident. Humans and livestock use the same exisitng water points. Sorgum growing is the main drought reisistant crop planted. Scattered trees of *Melia volkensii* planted were seen.

Figure C: A functional borehole used to provide water for household domestic and livestock use.

Indeed flash floods evidenced by deep gullies were encountered. Apart from sorghum growing, bee keeping was observed as a candidate income generating activity that could be promoted in the area as an alternative income generating activity.

Figure D: Exposed gullies as a result of flush floods

3. Community meeting at Rupa sub county

The meeting commenced with introduction of the participants. The OSS, GWPEA and consulting team introduced themseolves to the local communities. Similarly the local communities lead by theor elders and local leaders also introduced themselves to the visiting team. Welocme remarks were made as follows.

Figure E: A community meeting held in Rupa Sub-county, Moroto district, Karamoja region.

Wecome remarks- Community Development Officer Rupa Sub County

The Community Development Officer, as the main facilitator, opened the community meeting by welcoming the elders and other members including women and youth to the meeting. He also welcomed the OSS, GWPEA and Consulting team to the meeting. He thanked the team for their efforts aimed at supporting the people of Rupa sub county to be resilient to drought and effects of climate change. He appealed to communities to interact freely with the team so that appropriate interventions and diagnosis of the issues affecting their community are developed for implemntation during the DRESS-EA project.

Remarks by GWPEA

The GWPEA representative thanked the people for attending the meeting in large numbers. He acknowledged that drought and climate change seemed to be major challenges in Rupa. He emphasized that the community members should tell the team how they deal with drought and climate change so that approriate needs and aspirations are captured for the proposed DRESS-EA project for implemntation in that sub county.

4. Impacts of climate change and drought

During the meeting the following impacts of drought and climate change were mentioned:

- Impacts of drought and climate change
- Water scarcity: perceived to be the biggest issue
- Unfavourable rain fall patterns
- Desertification characterised by a lot of heat, wind and deforestation

- Hunger/famine
- Reduced crop harvests
- Unpredictable cropping seasons athat have affected the time for planting crops
- Flush floods whenever it rains and extremely prolonged dry spells

5. Proposed interventions to address the impacts of Climate Change and drought in Rupa Sub-County

The main needs and interventions mentioned by the local communities in the sub county were:

- More water points for human separate from those of livestock
- Fodder production for their livestock
- Tree planting to reduce the heat and wind
- Providing communities with seeds for planting
- Providing water harvesting reservoirs to tap the running water/floods
- Construction of water reservoirs, points and ponds
- Small scale irrigation schemes
- Construction of check dams and channels to stop run off
- Conserving some trees that are spiritually and culturally important in appeasing the Gods to release rainfall to the region.
- Restoration of degraded environment
- Establishing and managing apiaries for honey and income generation.
- Support vegetable growing
- Support women with farm tools to cultivate
- Encourage and support block or group farming

Figure F: Bee keeping a potential Income Generating Activity in Karamoja region

6. Vulnerable groups, Gender roles and Grievance mechanism

It was mentioned that women are the most vulnerable members of the society. Traditional norms have in the past and continue at present to disadvantage both women and youth in Uganda and most especially Karamoja, in terms of access to resources and decision making. It was agreed in the meeting

that women would be accorded deliberate attention and involvement in various activities during project implementation. The specific gender roles mentioned were that:
Although traditionally, women were expected to be household keepers as well as cultivate crops near homesteads, in modern times, their roles have been changing. Currently, women play even more roles including.

- Collecting construction materials
- Undertake tree planting
- Cultivating land,
- Cattle grazing and watering the livestock

The men assist women in ploughing especially when the oxen are needed. Otherwise men are expected to earn income for their families by providing hired labour for various activities including cultivation and grazing. Men were said to be responsible for land clearance to prepare the land for women to cultivate. In terms of handling grievances in the Karamoja region, community members said that there exists Elders' club /council with clan heads. These constitute the first line of filing, and handling grievances. Once such grievances are not handled at the Elders' level, they proceed to the lower local governments, LC I, LC II, LC III, district and courts accordingly.

Figure G: Community members assenting to the proposed DRESS-EA project and a group photo thereafter

7. Closing remarks

After assenting to the DRESS-EA project and committing their participation in project activities, the community leaders said that they hoped to start implementation of project activities. The meeting was the closed at 1.00 pm. The CDO thanked everyone that had participated in the meeting and wished them safe journeys.

Annex VIII: Letters of Consent from Communities

Letters of consent for DRESS-EA project by communities
The following are the letters consenting to the implementation of the DRESS-EA project.

Djibouti

(Ville, Pays) DJIBOUTI

(Date) 11-02-19

Lettre de Consentement de [DEBNÉ DE GOBAAD]

Madame, Monsieur,

Je soussigné M./Mme [MOHAMED ABDOULKADER HASSAN] en ma qualité de représentant(e) de la population de [tribu / DEBNÉ DE GOBAAD] rattachée administrativement à [Ville / pays: DIKHIL], l'un des sites d'intervention identifiés, donne son approbation à la mise en œuvre du projet régional intitulé «Renforcement de la résilience à la sécheresse pour les petits exploitants et pasteurs de la région de l'IGAD: Djibouti, Kenya, Soudan et Ouganda», proposé par le Partenariat Mondial pour l'Eau en Afrique de l'Est (GWPEA), exécuté par [MIN. AGRI.] au niveau national avec le soutien de l'Observatoire du Sahara et du Sahel (OSS), pour un financement auprès du Fonds d'Adaptation (FA).

Je reconnais avoir pris connaissance et accepte les objectifs du projet et je suis conscient de l'importance de l'implication de la population locale aux différentes étapes de la préparation et de la mise en œuvre du projet proposé.

Ainsi, cette lettre vient souligner que tout au long du processus de formulation du projet, la population de [DEBNÉ GOBAAD] / communauté) a été convenablement sensibilisée aux risques environnementaux et sociaux liés aux activités à entreprendre, à leurs mesures d'atténuation ainsi qu'au mécanisme de doléances spécifique mis en place.

A cet effet, cette lettre confirme notre approbation et notre participation à la prise de décision dans le cadre du projet susmentionné. Nous nous engageons à collaborer avec les parties nationales et régionales pour la bonne exécution des différentes activités.

Fait pour servir et valoir ce que de droit.

Nom et Prénom

MOHAMED ABDOULKADER HASSAN
Président de la coopérative agro-élevage de Gobaad.
TEL = 77.12-39.45
(AS-Eyla)

Signature

(Ville, Pays) Djibouti Region Dikhil

(Date) Le 11/02/2019

Lettre de Consentement de [Afar Hanleh]

Madame, Monsieur,

Je soussigné M./Mme [Ali Hamad Ali] en ma qualité de représentant(e) de la population de [tribu / Afars] rattachée administrativement à [ville / pays], l'un des sites d'intervention identifiés, donne son approbation à la mise en œuvre du projet régional intitulé «Renforcement de la résilience à la sécheresse pour les petits exploitants et pasteurs de la région de l'IGAD: Djibouti, Kenya, Somalie et Ouganda», proposé par le Partenariat Mondial pour l'Eau en Afrique de l'Est (GWPEA), exécuté par [MADR] au niveau national avec le soutien de l'Observatoire du Sahara et du Sahel (OSS), pour un financement auprès du Fonds d'Adaptation (FA).

Je reconnais avoir pris connaissance et accepte les objectifs du projet et je suis conscient de l'importance de l'implication de la population locale aux différentes étapes de la préparation et de la mise en œuvre du projet proposé.

Ainsi, cette lettre vient souligner que tout au long du processus de formulation du projet, la population de [de Hanleh] / communauté) a été convenablement sensibilisée aux risques environnementaux et sociaux liés aux activités à entreprendre, à leurs mesures d'atténuation ainsi qu'au mécanisme de doléances spécifique mis en place.

A cet effet cette lettre confirme notre approbation et notre participation à la prise de décision dans le cadre du projet susmentionné. Nous nous engageons à collaborer avec les parties nationales et régionales pour la bonne exécution des différentes activités.

Fait pour servir et valoir ce que de droit.

Telp = 77 60 26 31

Nom et Prénom

Ali Hamad Ali

President Cooperative

Signature

ASSOCIATION POUR LE DEVELOPPEMENT AGRO-PASTORALE DE HANLE ★ Le President

Kenya

(City, Country) KITUI, KENYA

(Date) 22nd FEB, 2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/~~Mrs~~ [CRACK WAMBUA MUNYAO.....] in my capacity as representative of the ~~**[tribe/**~~**community]** population attached administratively to **[city/country]** KITUI COUNTY, KENYA, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [.....MEF.....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the ~~(tribe/~~community name).KITUI.....population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name)
CRACK WAMBUA MUNYAO
MANAGING DIRECTOR
Signature

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22nd Feb 2019
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(City, Country)..... KITUI, KENYA

(Date)..... 22.02.2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned ~~Mr~~/Mrs [RHODA MUSYOKA] in my capacity as representative of the **[~~tribe~~/community]** population attached administratively to **[city/country]** KITUI / KENYA, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [...MEF.....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (~~tribe~~/community name).....KITUI.....population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) RHODA M. MUSYOKA
ASST. CHIEF KAVALULA SUB-LOCATION
KYANIKA LOCATION
DATE 22.2.2019 SIGN.
Ag. chief.

Signature

+254 0721 674051

Sudan

(City, Country) Es.Salaam, Sudan

(Date) 04 March 2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/Ms Nasr ELzain Musa Ali [.....] in my capacity as representative of the **[~~tribe~~/community]** population attached administratively to **[city/country]**, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [.MWRI.E....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (~~tribe~~/community name) Es.Salaam...population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) Nasr ELzain Musa Ali

Mayor EsSalaam Locality, Chair the Center of Conflic Resolution

Signature

Kosti, ON March 2019

Uganda

(City, Country) MORUTO, UGANDA

(Date) 13/03/2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/~~Mrs~~ MR & MRS PAUL OTYANG and ACHOK VERONICA [.....] in my capacity as representative of the **[tribe/community]** population attached administratively to **[city/country]** MORUTO/UGANDA, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [..MWE.....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (tribe/community name) RUPA Sub-County population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

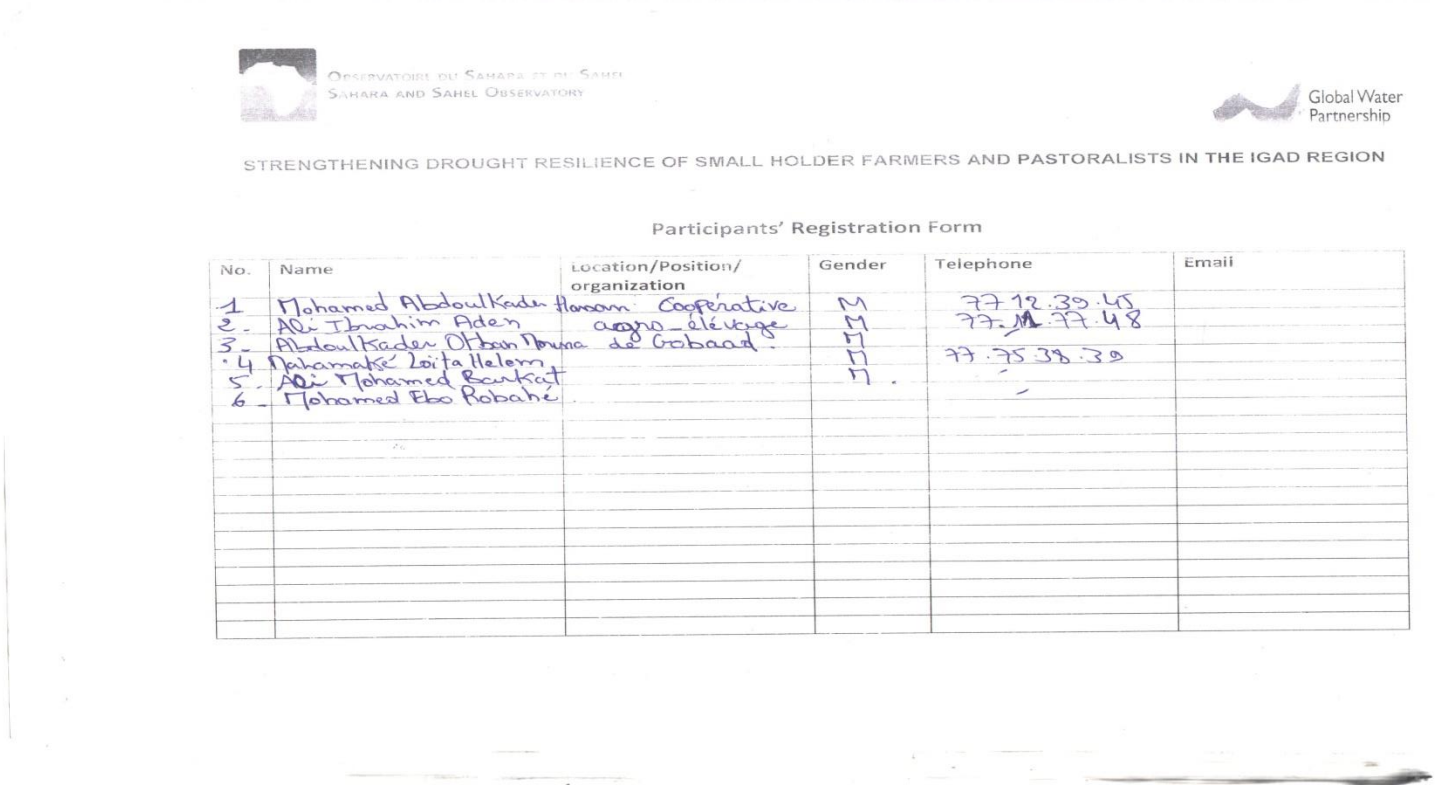
Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) 1. OTYANG PAUL (LOCAL LEADER)

Signature 2. ACHOK VERONICA (WOMEN COUNCIL)

Annex VIII: Participants for national consultative workshops



OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
1	Mohamed Abdoulkader	Hanaam Coopérative	M	77 12 39 45	
2	Ali Ibrahim Aden	agro-éleveur	M	77 M 77 48	
3	Abdoulkader Otban Nouna	de Gobaad	M		
4	Mahamadé Zaïta Halem		M	77 75 38 39	
5	Ali Mohamed Roukiat		M	-	
6	Mohamed Ebo Robahé			-	

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender F H	Telephone	Email
01	Ali Hamad Ali	President	Homme	77 60 26 31	
02	Hamad Kalita	Vice President	Homme	77 78 82 30	
03	Mohamed Boriito Ali	Secretaire general	Homme	77 05 48 55	
04	Hawa Wais Adou	Membre	Homme	77 84 47 33	
05	Fatouma Mohamed Farchah	Tresorier Adjointe	Femme	77 13 76 65	
06	Yamina Abdoul Hamadou	membre		77 80 96 09	
07	Assia Houmed Wais	Controleur Adjointe	Femme	77 34 31 98	
08	Adou Houmed Adou	comite de sage	Homme	77 28 30 88	
09	Hariam Ked Hassan	membre	Femme	77 28 30 86	
10	Ogass Ali Adou	membre comite sage	Femme	77 42 93 32	
11	Hawa Abdoulkader	membre comite sage	Femme	77 72 93 72	
12	Oudoum Houmed Ked	Membre	Homme	77 35 13 86	
13	Daba Haigama Ali	Membre	Femme	77 35 13 86	
14	Ali Sabah Ahmed	membre	Homme	77 18 00 96	
15	Reima Adou Hamadou	membre	Femme	77 17 00 97	
16	Hamad Hawa Abdallah	membre	Homme	77 53 02 19	
17	Houmed Ali Abdallah	membre comite sage	Homme	77 42 42 17	
18	Adou Moussa Hassan	Controleur	Homme	77 06 20 46	

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

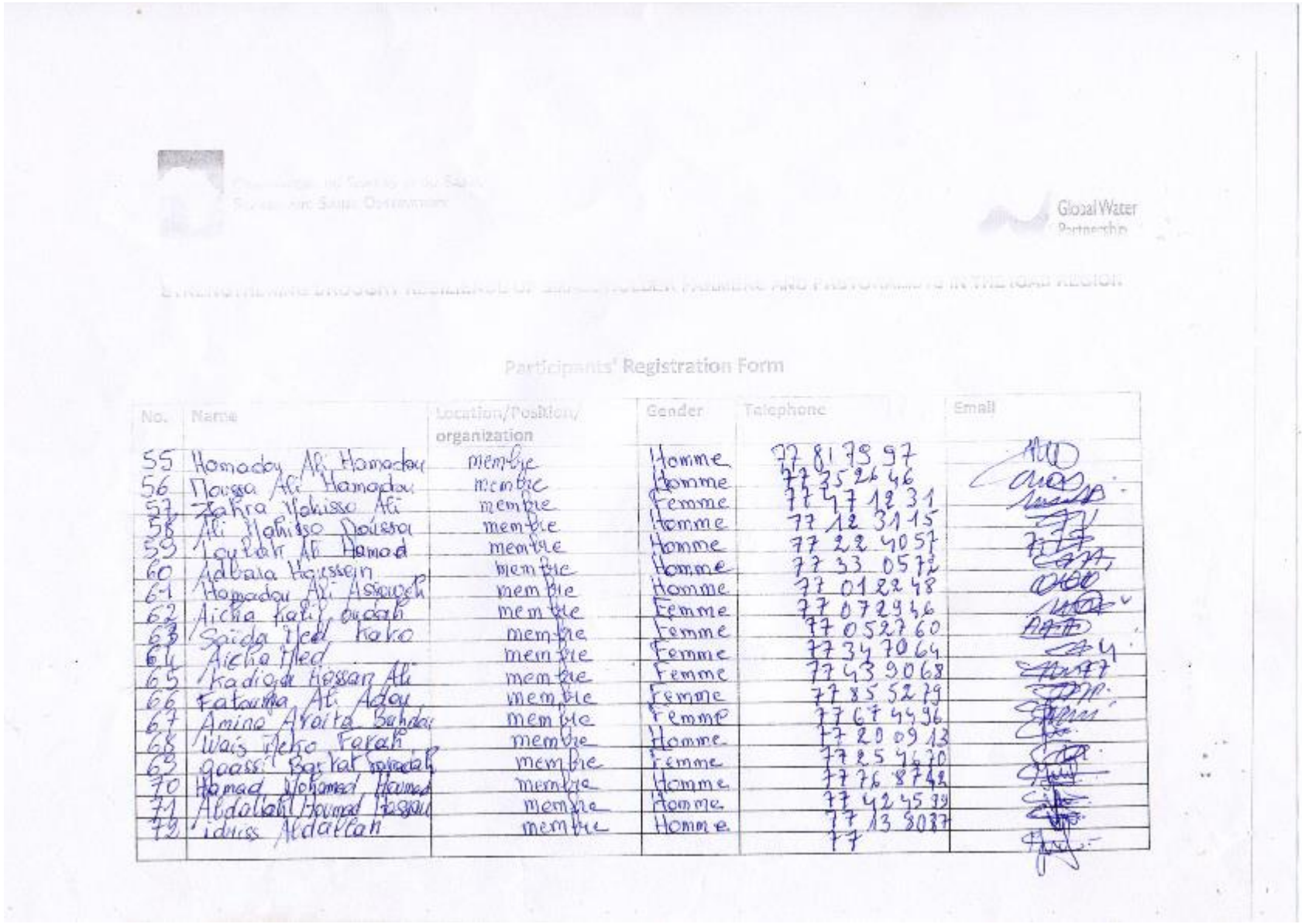
STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
19	Ahmed Med Ali	Tresorier	Homme	77 60 72 31	
20	Abahind kamil Ali	membre	Femme	77 72 87 00	
21	Sifari Araita Hamad	Comité Sage	Femme	77 42 60 70	
22	Kadiga Med Ali	membre	Femme	77 06 20 17	
23	Goumati Hassan Adan	membre	Femme	77 06 20 48	
24	Ebass Hamadou Fouad	membre	Femme	77 35 22 52	
25	Goumati Bonne Adouh	membre	Femme	77 72 42 17	
26	Sabira Ali Med	membre	Femme	77 13 76 75	
27	Mariam Hamad Med	membre	Femme	77 76 87 43	
28	Hasna Ali Hamad	membre	Femme	77 31 64 42	
29	Med Abdillada Omar	membre	Homme	77 72 87 00	
30	Wais Mero Farah	membre	Homme	77 72 93 72	
31	Abdallah Ali Abdallah	Comité Sage	Homme	77 31 65 18	
32	Fatouma Idriss Med	membre	Femme	77 13 89 72	
33	Laita Med Hamad	membre	Homme	77 13 50 02	
34	Med Araita Hamad	membre	Homme	77 77 53 12	
35	Abdallah Adam Bouh	membre	Homme	77 33 11 80	
36	Youssouf Gohan	membre	Homme	77 25 33 99	

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
37	Mohamed Mouka Hassan[illegible]	membre	Homme	77 42 66 70	
38	Mohamed Tahir Mohamed	membre	Homme	77 01 44 28	
39	Houmed Ali Mohamed	membre	Homme	77 06 20 46	
40	Hassan Abdallah Bisleh	membre	Homme	77 06 20 49	
41	Aganeh Houmed Adou	membre	Femme	77 05 20 47	
42	Mohamed Hamad Adou	membre	Homme	77 87 56 02	
43	Hamad Adou Hamadou	membre	Homme	77 87 76 82	
44	Mohamed Gadito Hamadou	membre	Homme	77 82 57 82	
45	Dourat Adou Hamadou	membre	Homme	77 82 59 18	
46	Said Med Adou	membre	Homme	77 82 56 99	
47	As Hamadou Hamed Med	membre	Homme	77 87 78 17	
48	Med Houmed Hassan	membre	Homme	77 87 76 18	
49	Hasson Said ibrahim	membre	Femme	77 84 36 42	
50	Bassoma Hamadou cheiko	membre	Femme	77 84 36 35	
51	Ahadi Hamadou Ali	membre	Homme	77 81 27 18	
52	Hamadou Med Okolrar	membre	Homme	77 81 26 15	
53	Ali Nina Ali	membre	Homme	77 81 18 15	
54	Assoweh Houmed Assoueh	membre	Homme	77 06 20 40	



Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
55	Hamadou Ali Hamadou	membre	Homme	77 81 78 97	
56	Moussa Ali Hamadou	membre	Homme	77 35 26 46	
57	Zahra Yahaya Ali	membre	Femme	77 47 12 31	
58	Ali Yahaya Moussa	membre	Homme	77 12 31 15	
59	Loutar Ali Hamad	membre	Homme	77 22 40 57	
60	Adbara Hassein	membre	Homme	77 33 05 72	
61	Hamadou Ali Asgaweh	membre	Homme	77 01 22 48	
62	Aicha Kali Oudah	membre	Femme	77 07 29 46	
63	Saida Med Kaka	membre	Femme	77 05 27 60	
64	Aicha Med	membre	Femme	77 34 70 64	
65	Kadidja Hassan Ali	membre	Femme	77 43 90 68	
66	Fatouma Ali Adou	membre	Femme	77 85 52 79	
67	Amina Awaita Bahdon	membre	Femme	77 67 44 96	
68	Wais Ifeko Farah	membre	Homme	77 20 09 13	
69	Gaassi Barkat Ismaël	membre	Femme	77 85 46 70	
70	Hamad Mohamed Hamad	membre	Homme	77 76 87 48	
71	Abdallah Hamad Hassan	membre	Homme	77 42 45 99	
72	Idriss Abdallah	membre	Homme	77 13 30 37	
				77	

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
			Hom/F	77 76 87 40	
73	Obakar Mcd Ali	Membre	Homme	77 76 82 00	
74	Sanafasse idriss		Homme	77 76 83 01	
75	Robleh Abdallah Dawa	membre	Homme	77 76 87 40	
76	Hamadou Adnan Barilla	Comite sage	Homme	77 05 10 20	
77	Doomo Hamadou Ali	membre	Homme	77 05 11 18	
78	Youssouf Sanafassé	membre	Homme	77 12 31 15	
79	Loubak Ali Hamad	membre	Homme	77 12 18 20	
80	Houned Mcd Obakar	membre	Homme	77 87 76 82	
				77	

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SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

Subcounty —

No.	Name	Location/~~Position~~/ organization County	Gender	Telephone	~~Email~~ // SIGN
1	JANUARIUS MWAKA	Maktani/Zombe/Mwitika	M	0721826364	
		KITUI EAST.			
2	VINCENT M. MUIEMBI	Nzeveni/Mulango			
		KITUI CENTRAL	M	0722432618	
3	REGINA JOHN	IKANGA MUTUMO	F	0721960705	
4	Simon Nyamai	Nyanyaa	M		
		Kitui Rural		0721315303	
5	Esther Kanini	MUTOMO SOUTH	f	0700560609	esther
6	ROSE M. KAVII	KITUI WEST	F	0706408969	Rose
7	Doris K.N. Kilaka	MUTONGUNI KYUMONI	F		
		Kitui Rural		0717212902	
8	SAMMY MUSILU	KANYANGI WARD	M		
		KITUI RURAL		0723528685	
9	Felix Syomine	KAVIVI	M		
		KITUI-West		0714266715	
10	WAMBUA KAKANZA	KITUI RURAL KWA-VONZA	M	0726459124	

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Location/~~Position~~/ organization / village (Sub-county)	Gender	Telephone	~~Email~~ Signature
11	KIEMA MUTHOKA	KANYONGI/KANYANGAU	M	0717034164	
12	Elizabeth M. David	K/vonza Kitui Rural	F	0725687193	
13	Julius M. Mbusi	Kitui West Matinyani	M	0718111857	
14	DOROTHY SEYYIDA	KIVONZA/KITUI RURAL	F	0727813627	
15	JETHRO KITILI	KWAVONZA/KITUI RURAL	M	0700902239	
16	LILIAN MWAMBILI	KWA VONZA/KITUI RURAL	F	0705050598	
17	ALEX MUTHOKIA	KEP - CHAIRMAN	M	0721406207	
18	REUBEN MUTUA	KIVONZA	M	0717756018	
~~18~~ 19 ~~19~~	FREDRICK MUKELE	KITUI RURAL CON. MULUTU KITUI CENTRAL	M	0721690649	
20	ROLEX MULWA	KWA VONZA	M	0715837643	

Rural

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SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Location/~~Position~~/ VILLAGE ~~organization~~ SUB COUNTY	Gender	Telephone	~~Email~~ SIGNATURE
21	George M. Nzou	Nzunguni village Central/C. East	M	0722 689 618	[illegible]
22	BRIAN MUTISA	KAMUTI VILLAGE KITUI CENTRAL	M	0722 763 164	[illegible]
23	ERIC KIATU MUTIHI	MUTONGUNI	M	0710324872	[illegible]
24	DANSON MBUTHU KIMULU	Kitui South / Kanyangi	M	0718 767951	[illegible]
25	Florence MBUIA KATUKA	Kyanika / Kitui East	F	0716661877	[illegible]
26	Nancy munyithya	Kyanika / Kitui East	F	0792351857	[illegible]
27	Margaret Titus	Mulango Kitui Central	F	0713017551	[illegible]
28	JOSPHINE K. KATINGU	Kanyangi	F	0718510346	[illegible]
	Francis Mwanzia	Migwani	M	0723605819	[illegible]
29	Virginia Kivuku	Migwani	F	0712975303	[illegible]
30	Shadrack Mutinda	Nzambani	M	0725305317	[illegible]
31	Geoffrey M. Mutambu	Kyanika / Kitui East	M	0713422232	[illegible]
32	Emmanuel Musangangi	Kyanika Kitui East	M	0727 466 268	[illegible]
33	Penninah K. Mwangangi	~~NZ~~ Kyanika Kitui East	F	0722251829	[illegible]
34	LINCOLN M. NGULI	KYANIKA Kitui EAST	M	0790833131	[illegible]
35	RHODA N. MUSYOKA	KYANIKA	F	0721674051	[illegible]

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SAHARA AND SAHEL OBSERVATORY

OSS

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Location/~~Position~~/ VILLAGE ~~organization~~ SUB COUNTY	Gender	Telephone	~~Email~~ SIGNATURE
36	Jane M Zakayo	Lower Yatta	F	0719852001	
37	Catherine Musyoki	Lower Yatta	F	0727133080	
38	Tiko Mu nye	Leaves Yatta	F	0718584184	
39	Nathan Joel	Kyanika	M	0712691360	
40	Rosemary Wambua	Rural Yatta	F	0721699488	
41	Scholar Mueni Mboga	Ikanga – Kitui South	F	0726833050	
42	Gilbert Kasimbi	Inyuu	M	0704993724	
43	Crack W. Munyao	Kitui Ent. Promotion	M	0722584365	
44	George Sanga	KWP	M	0725905901	
45	Kairu Gerald	GWPEA	M	0776446892	
46	Steve Muhanji	MEF	M	0700059797	
48	Peter M. Mbevaria	KWP/GWPEA	M	0722484413	
49	Lawrence J.B. Orikiriza	GWPEA/OSS Consultant	M	+256772570985	
50	Jairus Kitheka	Mutomo	M	0707538272	

Global Water Partnership
Eastern Africa
Towards a water secure world

DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Ahmed Khalid Eldaw	GWPEA	+249-912758417	Ahmed.k-Eldaw @gwpea.org
2	Osman Mustafa Ahmed	MWRIE-WRTO	+249-912910034	omaburi@hotmail.com
3	Wagdi Atarelmanan Ali	DIU	0123494414	wagdiata@Yahoo
4	Mohammed Hassan AbdulRahman	MWRIE - Dams surveillance unit	0123847700	mohdbeily@yahoo.com
5	Abdel Aziz Abdalla Nour Eldin	DIU	0123494744	azizodin@gmail.com
6	Balla Ahmed	MWRIE	0912693455	[illegible]
7	Younis Abdalla Gismalla	MWRIE-HRC	0912833773	hrs_younis@hotmail.com
8	Abdelhafiz Younis Mohd	El Sugya ch. org.	0122517176	[illegible]@hotmail
9	Ahmed Abdalla Dafalla	DIU	0123494366	a-dafalla13@gmail.com
10	Ahmed Mohamed Adam	WRTO	0912320485	ahmoadam293@gmail.com
11	ElRayah Abdel Salam	M.W.R.I.E	0912309609	alhag.10966 at gmail.com

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (2)

No.	Name	Organization	Phone (mobile)	e.mail
12	Osman Eltom Hamad	WRTO	+249912549751	oehamad@hotmail.com
13	Abu Obieda B. Ahmed	HRC, MWRI&E	+249123813813	hrsabdo@hotmail.com
14	Hassan Abodbashar Ali	MWRI&E	+249912325145	abashar9999@gmail
15	Nasla ELTayib Elzain	MWRI&E	+249123484239	naslaeltayib@yahoo.com
16	El-Sidig Hamid	Savvana org	+249122275991	KAEF0756@gmail.com
17	Safiya Abdallah Zaroug	MWRI&E	+249911276533	safyzaroug@hotmail.com
18	Mazin Bashir	The HRC, MWRI&E	+249634963 49	m.bashir@hrc-sudan.sd
19	Hasabelnabi M. M	Ex-minister MA		
20				
21				
22				

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Khalifa Beshir			
2				
3				
4				
5				
6				
7				
8			0912324454	
9				
10				
11				

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (2)

No.	Name	Organization	Phone (mobile)	e.mail
12				
13				
14				
15				
16				
17				
18				
19				
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21				
22				

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (3)

No.	Name	Organization	Phone (mobile)	e.mail
23				
24				
25				
26				
27	Faizal Elhaj Ahmed	Elhamat	0911027753	Faiza
28				
29				
30				
31				
32				
33				

Global Water Partnership
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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (4)

No.	Name	Organization	Phone (mobile)	-e.mail Singature
34	Mohamed Omara Mohd	Elslam/Elslait	0913630407	[signature]
35	Musa Khalid Musa	ELSLAM ELSlyt	0909002620	[signature]
36	~~Talal Ali Aman~~			
37				
38	بلال علي امين عيسى	النعيم الادارية	٠٩١٢٧٩٤٨٨٤	[signature]
39				
40				
41				
42				
43				
44				

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	SIGN
01	LOKIDON RICHARD	RUPA PARISH	M	0774077025	
02	NAKORDI REGINA	LORUKUMO VILLAGE	F		
03	NASIKE BETTY	KADILAKENY VILLAG	F		
04	TEKA NAPORGA	KADILAKENY VILLAGE	F	0786625015	
05	JAIKOL AGNES	RUPA PARISH	F		
06	LOGITEL VICKY	RUPA PARISH	F		
07	ANGELLA LUCIA	RUPA PARISH	F		
08	ACHOK VERANICA	LOBUNETY PARISH	F		
09	LOTHANG NAKIRABWO	LOBUNETY PARISH	F		
10	NABUR CHRISTINE	KADILAKENY	F		
11	LOKERIS THERESA	RUPA PARISH	F		

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	SIGN
12	ANYIK RUTH	MOGOTH PARISH	F		
13	NAKUT VERONICA	MOGOTH PARISH	F		
14	LOREMON OWALINGA	LOBUNEIT PARISH	M		
15	ANGELLA MARK	LOBUNEIT PARISH	M	0770556280	
16	YOKI NANGIR	LOBUNEIT PARISH	M		
17	OTMANG KOMIEN	RUPA PARISH	M		
18	NAKUT VERONICA	LOBUNEIT PARISH	F		
19	NAMUR PASCA	LOBUNEIT PARISH	F		
20	LOKALEI JAMES	RUPA PARISH	M		
21	CHILE LOSIAME	RUPA PARISH	M		
22	NAKUMA NTWALA	RUPA PARISH	M		

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	SIGN
23	ANYGORING LOTEE	RUPA PARISH	M		
24	KORIANG PAUL	RUPA PARISH	M	0777654265	
25	LOMOLO MARTIN	RUPA PARISH	M		
26	MOJO PAUL	RUPA PARISH	M		
27	LOKOLE THERESA	RUPA PARISH	F		
28	NALIM JOYCE	RUPA PARISH	F		
29	OLYANG PAUL	RUPA PARISH	M		
30	ANGELLA ZACHARY	ENVIRONMENT OFFICE	M	0772841806	
31	NACHAP PAULINA	PUPU PARISH	F		
32	LOGIRI ANTHONY ABBOTT	RUPA	M	0778047544	

REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT AND FORESTRY

AN ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK FOR THE STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

MARCH 2019

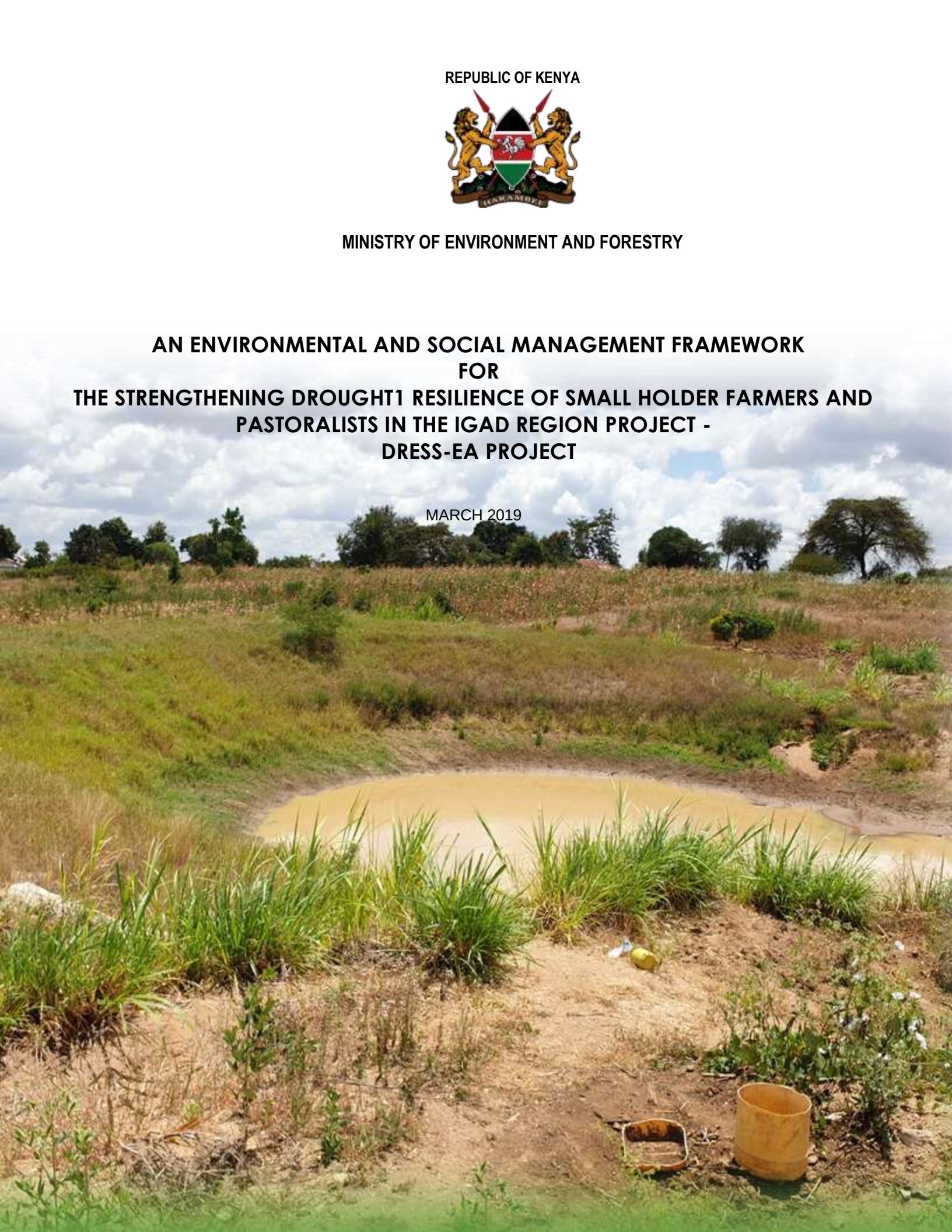

TABLE OF CONTENTS

List of Acronyms

AF	Adaptation Fund
ASAL	Arid and Semi-Arid Land
CCD	Climate Change Directorate
CIC	Commission for Implementation of the Constitution
DRESS-EA	Drought Resilience of Small Holder Farmers and Pastoralists East Africa
EDE	Ending Drought Emergencies
EMCA	Environment Management Coordination Act
ESIA	Environmental Social Impact Assessment
ESMF	Environmental Social Management Framework
EWS	Early Warning System
GDP	
GHG	Green House Gas
GoK	Government of Kenya
GRC	
GRM	Grievance Redress Mechanism
GWPEA	Global Water Partnership East Africa
IFC	International Finance Corporation
IGAD	Intergovernmental Authority
KARI	
KIRDI	
KMFRI	
KNBS	Kenya National Bureau of Statistics
KWP	Kenya Water Partnership
LULUCF	
MEF	
NAP	
NARS	
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NDC	Nationally Determined Contribution
NECC	National Environment Complaints Committee
NEMA	National Environment Management Authority
NET	National Environment Tribunal
OSS	Sahara and Sahel Observatory
UNFCCC	

List of Tables

1.0. INTRODUCTION

About 80% of Kenya's landscape is classified as arid and semi-arid (ASAL). This land is however home to over 15 million individuals. Poverty level in most of the country's drylands is extremely high with an average poverty level above 70%. In these regions the main livelihood activity is pastoralism and small-scale crop farming. Communities living in these areas are also prone to changes in climate with the major threat being droughts which in the recent past have increased both in frequency and severity. The recent 2016/2017 drought spell can be described as an extreme event, but it was not as extreme as the 2010/2011 drought that cost the country Ksh 12.1 billion in drought related losses. In addition, the drought condition has witnessed pupils dropping out of school to accompany their parents in search of water, food and fodder, as well as high levels of malnutrition particularly in ASAL counties.

Kenya continues to experience the adverse impacts of climate change such as droughts and floods, which are felt across all sectors including agriculture, energy, transport and water. This has led to loss of lives, diminished livelihoods, reduced crop and livestock production, and damaged infrastructure, among other adverse impacts.

Kenya's total greenhouse gas (GHG) emissions are relatively low, standing at 73MtCO2eq in 2010, out of which 75% are from the land use, land-use change and forestry (LULUCF) and agriculture sectors, which are not gender neutral.

Kenya's Nationally Determined Contributions (NDC) under the Paris Agreement of the UN Climate Change Convention (UNFCCC) includes mitigation and adaptation contributions. The country is finalizing the development of its second National Climate Change Action Plan (NCCAP) for the period 2018-2022, with a vision of low carbon climate resilient development, which forms the framework under which Kenya is implementing its NDC. Women, men and youth respond differently to the impacts of climate change as well as the shift towards low carbon and climate-resilient development pathways under the NDC and NCCAP. Therefore, collective and inclusive climate related decisions and actions by youth, women and men and other vulnerable groups are required to achieve gender-responsive approaches.

The Climate Change Act, 2016 requires the national and county governments to mainstream intergenerational and gender equity in all aspects of climate change responses. The NDC implementation needs to recognize and support the role of the youth, women and men as active agents in climate change adaptation and mitigation. Thus, insufficient involvement of women and other vulnerable groups presents a needless barrier to successful national climate actions, not to mention

full achievement of the Sustainable Development Goals (SDGs) and Kenya's Vision 2030.

Kenya, like other countries in the region, is bearing the brunt of climate change impacts and the associated socio-economic losses. The situation is exacerbated by the high dependence on climate sensitive natural resources; rain fed agriculture; pastoral livestock production systems and tourism which are all dependent on nature. Kenya is increasingly placing climate change at the core of its poverty reduction strategy. The Advancing Principles of Equality and Inclusion in Climate Change government appreciates that changing climate poses serious threats to the economic and social future of the country, and consequently to the livelihoods and prosperity of its people. This is demonstrated by the fact that only about 18% of Kenya's land is arable supporting almost 75% of the country's 37 million people with half of the agricultural sector's production being used for subsistence purposes and contributing about 26% of the country's GDP. Kenya follows a bimodal seasonal rainfall that has become highly unreliable due to climate change-resulting in frequent droughts and crop failures.

Adverse weather conditions affect agriculture leaving the low-income households and pastoralists most affected-mainly because they have less resources and capacity to cope. Also affected are livelihood systems, contributing to fluctuating market prices for their produce, both locally and internationally. Additionally, a long history of environmental degradation, deforestation, pollution of water bodies, conversation of wetlands, unsustainable agricultural practices, and overgrazing are contributing to the current high level of climate change vulnerability of many communities. For Kenya, climate change is acknowledged in all key national policy documents: Vision 2030, Medium Term Plan II, National Climate Change Response Strategy (NCCRS 2010), National Climate Change Action Plan (NCCAP 2018), National Adaptation Plan (NAP), National Climate Change Framework Policy and Climate Change Act to facilitate effective response to climate change.

Kenya is operationalizing these policies and plans through the reforestation, geothermal and other clean energy development, energy efficiency, climate smart agriculture, and drought management. In response to decisions adopted at the 19th and 20th sessions of the conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), Kenya developed its Nationally Determined Contribution (NDC) towards achieving the objectives of UNFCCC as set in Article 2 of the Convention and submitted the same to UNFCCC secretariat before the Paris conference. The NDC will contribute towards the delivery of the Constitution of Kenya 2010 and the attainment of Vision 2030, the country's blueprint.

The latest KIHBS results show that 30.2 per cent of female headed households are poor compared to 26 per cent of their male counterparts. The female labor participation rate (75.9% is lower than the male labor participation rate (79.2%). In 2017, the Gender Inequality Index ranked Kenya 137 of 159 countries with a score of 0.549, illustrating significant gender gaps in human development.

In the long-term development blue print, Kenya Vision 2030, the government prioritizes containment of drought effects in achieving the national development agenda and commits to Ending Drought Emergencies (EDE) in Kenya by 2022. The Ending Drought Emergencies (EDE) strategy builds on the National Policy for the Sustainable Development of Northern Kenya and other Arid Lands, using two approaches to reduce the impact of drought. The first approach is to strengthen the basic foundations for growth and development, such as security, infrastructure and human capital which fits well with the interventions planned for this project while the second is to strengthen the institutional and financing framework for drought risk management (DRM).

The Ending Drought Emergencies (EDE) strategy is also in line with the African Union Agenda 2063 priority on climate resilience and natural disasters preparedness and prevention and on renewable energy. Accordingly, the Intergovernmental Authority on Development (IGAD) of which Kenya is a member country has Drought Disaster Resilience and Sustainability Initiative (DDRSI) that is relevant with drought management. The initiative recognizes that though drought-prone communities face common challenges and are often interconnected through shared natural resources, individual IGAD member states may have their own specificities and areas of emphasis.

The project will focus is:

- Developing and promoting regional investments in drought early warning systems (EWS) and improving the existing ones
- Strengthening and improving the capacity of key stakeholders in drought risk management at regional, national and local levels
- Facilitating smallholder farmers and pastoralists inputs to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhancing knowledge management and information sharing on drought resilience at the considered levels.

Socio-economic sustainability: The project will promote socio-economic sustainability through supporting existing and or new community groups through supporting and linking them with financial institutions that can offer competitive low interest loans, grants and innovative financing models such as establishing a disaster management trust fund and Disaster insurance products that enable

them to scale up the innovative drought adaptation actions that generate additional incomes. Also, the communities will be supported in the identification of priority actions and the development of implementation plans that will contribute to owning the project interventions by the stakeholders.

Environmental sustainability: The project will contribute to the reduction of environmental degradation by promoting the implementation of agroforestry practices integrated into the small holder farms. It will also promote environmental sustainability through undertaking a sector wide approach in the implementation of project activities that take into consideration indigenous knowledge and local natural resources to enhance climate resilience and actions. The project will also ensure that it conducts Social and Environmental Impact Assessments to ensure that no adverse negative impact are experienced during project implementation for sustainability.

1.2. Purpose of the ESMF

The purpose of the Environmental and Social Management Framework (ESMF) will be to ensure that its activities and sub-projects comply with The National Climate Change Action Plan 2018-2022, Kenya Environment Policy 2013, the Constitution of Kenya 2010 and the Environment Management and Coordination Act, Cap 387.

The ESMF is also to ensure compliance of the project with the Environmental policies, regulations and legislations and Social Policy of the adaptation Fund and its environmental and social principles. The objective of this ESMF is to set out the principles, rules, guidelines and procedure to assess the environmental and social impacts and monitoring to ensure that environment and social aspects are duly considered. The policy requires that all projects be screened for their environmental and social impacts, that those impacts be identified, and that the proposed project be categorized according to its potential environmental and social impacts. All projects supported by the Fund have to be designed and implemented to meet its environmental and social principles, although it is recognized that depending on the nature and scale of a project all of the principles may not be relevant to every project.

From the initial analysis this project has been categorized as Category B according to the Adaptation Fund's categorization. It's a project with potential adverse impacts that are less adverse, fewer in number, smaller in scale, less widespread, reversible or easily mitigated.

This Environmental and Social Management Framework (ESMF) shall help to identify the environmental and social management and mitigation actions and provide guidance for the preparation of specific EIAs and ESMPs before physical

project implementation in regard to activities and sub-projects that require them under the law.

1.3. Objectives of the ESMF

The Environmental and Social Management Framework (ESMF) is developed to manage the Environmental and social risks that may arise during the implementation of the project. It's a policy and legal requirement for project implementers to ensure that all the negative environmental and social impacts of a project on the environment and communities are adequately mitigated while the positive ones are enhanced. The objective of the Environmental and Social Management Framework (ESMF) is, among others to provide an environmental and social screening process for the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project. It also provides guidance to the project implementation Staff, communities, and others stakeholders participating in the project regarding the sound environmental and social management of sub- projects/Activities. In general, this ESMF is prepared with the following objectives:

I. Screen for potential environmental and social impacts of the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project, components and sub- projects
II. Identify possible impacts and propose appropriate mitigation measures
III. Monitor implementation of the proposed mitigation and Enhancement measures

2. PROJECT DESCRIPTION AND COMPONENTS

2.1. Overall Objective

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

The project is intended to strengthen the drought resilience of smallholder farmers and pastoralists by:

- Developing and promoting regional investments in drought early warning systems (EWS) and improving the existing ones
- Strengthening and improving the capacity of key stakeholders in drought risk management at regional, national and local levels
- Facilitating smallholder farmers and pastoralists inputs to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhancing knowledge management and information sharing on drought resilience at the considered levels

2.2. Project Components

The Project has four components. Component 1: Development and enhancement of a regional Drought Early Warning System, Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects, Component 3: Drought and Climate Change adaptation actions and Component 4: Knowledge management and awareness creation.

2.2.1. Component 1: Development and enhancement of a regional Drought Early Warning System

Key activities under this component will include:

- Conducting baseline studies and assessments to understand the current status of the existing EWS for different types of hazards
- Updating options of traditional EWS with modern EW technologies
- development of an EWS prototype to be used at the regional and national levels,
- equipping /upgrading selected weather stations
- Construction/renovation and equipping of EW information centers
- Supporting/equipping project beneficiaries to access EW information (e.g. devices including, brochure, SMS, Radio etc.)
- Development/Review EW information sharing frameworks
- Implementation action plan to operationalize the frameworks
- Inter-ministerial and sectorial meetings for data sharing
- National, regional and local EW information sharing Forums
- Incorporation of EW information into planning and budgeting processes of targeted countries
- Regular stakeholder EW information feedback platforms for farmers and pastoralists
- Quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders
- Conducting KAP surveys on EW information as well as developing periodic feedback user-friendly tools on accessing, utilizing
- Reporting EW information to mandated institutions

2.2.2. Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects

Key activities under this Component shall include;

- Development/updating of existing Disaster/Drought management plans (DMPs) at national and sub-national levels integrating CC aspects and adaptation actions into DMPs

- popularization and dissemination of the reviewed DMPs for use by the farmers and pastoralists
- Integration of DMPs into the national and sub-national development plans formulation of bye-laws and ordinances at sub-national and lower political units.
- Capacity needs assessment to identify gaps and hindrances to effective drought management,
- development of capacity building plans and capacity building materials exchange visits and learning tours for cross-learning in areas with successful drought management innovations
- Training staff in managing EW information centers and extension staff and artisans in drought adaptation interventions
- community training workshops for farmers and pastoralists in drought risk management and adaptation measures and
- establishment of learning centers by farmers and pastoral groups for innovative Climate Smart agriculture interventions
- review/development of MoUs, protocols and stock route agreements for Drought Management and reducing conflict between farmers and pastoralists
- establishment of regional and national drought management multi-sectoral/stakeholder platforms to coordinate partner efforts and
- mobilization of resources for Drought Management jointly by regional and national partners

2.2.3. Component 3: Drought and Climate Change adaptation actions

Key activities under this Component shall include;

- assessment of surface water utilization potential and availability
- development of water Management Plans in project sites,
- construction of appropriate, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation).
- construction of mini-irrigation and water delivery systems (e.g. gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),
- Protection of water wells and springs and promotion of soil and water conservation measures (e.g. terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening).
- Assessment on groundwater utilization potential and availability

- Development of groundwater Management Plans in project sites, Review/develop regulatory framework and guidelines on groundwater sources
- Restoration of degraded water catchments
- Promotion of **fast** growing and drought resistant crop and agrosilvopastoral systems (dryland agroforestry),
- Provision of inputs for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)
- Promotion of climate-smart agricultural practices
- Developing of rangeland management plans,
- Reduction of livestock stocking,
- Integrated pest and disease management,
- Introduction of drought-tolerant livestock breeds as well as those with low feed requirements.
- Promotion of hydroponic systems for growing nutritious fast-growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells and formation and/or facilitation of existing livestock associations/groups/cooperatives at the community level.
- Introduction and promotion of Index-based weather insurance in partnership with insurance companies,
- Drought risk assessments, generation,
- Analysis and sharing of market information and creating linkages between farmer and pastoralists associations at regional, national and sub-national levels to enable sharing of market information
- Pottery**,** Beekeeping, Energy saving stoves, Briquettes making, and interlocking bricks, growing of sisal and Aloe spp such *Aloe ferox* that grow in dryland and produce quick returns,
- Production of ropes and art crafts, making and marketing of aloe gel and provision of grants for undertaking innovative IGAs or drought adaptation actions Provision of inputs for value addition crop and livestock products.

2.2.4. Component 4: Knowledge management and awareness creation

Key activities under this Component shall include;

- Documenting lessons and best practices from project interventions
- Generating and packaging information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders
- Sharing knowledge and information through the use of existing and popular platforms e.g. electronic and print media, telecom that is easily accessible to the stakeholders.

- Information generation an (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms,

- engagement of policymakers in the dissemination of drought management information and best practices and
- sharing and dissemination of information by drought management working groups

3. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORKS

The implementation of the strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project in regard to environment and social issues shall be guided by the Country specific policy, legal and Institutional frameworks and other international acceptable policies standards and guidelines.

3.1. Policy Framework

No	Policy	Purpose of the Policy	Relevance to the Project
1	Kenya Environment Policy, 2013	proposes a broad range of measures and actions responding to key environmental issues and challenges.	- It seeks to provide the framework for an integrated approach to planning and sustainable management of natural resources in the country.
2	National Agricultural Research System Policy	Establishes a national institutional framework that captures the complementarities of the diverse actors engaged in agricultural research and development aims at addressing these shortcomings.	- integrating public funded research with research product delivery; - mainstreaming social, human and environmental concerns
3	Vision 2030	A national long-term development blueprint to create a globally competitive and prosperous nation with a high quality of life by 2030, that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment.	- To reduce drought vulnerability and enhance adaptation to climate change, to provide drought and climate information to facilitate concerted actions by relevant stakeholders, to protect the livelihoods of vulnerable households during drought crises, to ensure coordinated action by government and other stakeholders and to develop and apply knowledge management approaches that generate evidence for decision-making and practice.
4	The National Disaster Risk Management Policy	The Policy aims to increase and sustain resilience of vulnerable communities to hazards through diversification of their livelihoods and coping mechanisms.	- The Policy will go a long way in preserving life and minimizing suffering by providing sufficient and

			timely early warning information on potential hazards and droughts that may result to disasters. - It will also aim at alleviating suffering by providing timely and appropriate response mechanisms for disaster victims.
5	Policy Framework on Nomadic Education in Kenya, 2015	The policy aims to coordinate education programmes in these regions and mobilize additional to support investment in education in these regions.	- Provide for protection of the environment and institutional arrangements in ASAL, which are so essential to economic productive systems and way of life in ASAL areas across the country and promote sustainable development

3.2. Legal Framework

No.	Laws	Purpose of the Law	Relevance to the Project
1.	The Constitution of Kenya, 2010.	This is the Supreme law of the Republic of Kenya and binds all persons and all State organs at both levels of government	- The Constitution under Article 42 guarantees every person a right to a clean and healthy environment
2.	the Environment Management and Coordination Act, Cap 387.	EMCA is the principle legislation on all matters environment and creates the National Environment Management Authority (NEMA)	- EMCA establishes the EIA rules for the preparation of the mandatory EIA reports - Establishes the requirement for an annual environmental Audit for projects
3.	The Climate Change Act, No 11 of 2016	The principal Kenyan legislation on for the development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.	-
4.	The Land Act, 2012	An Act of Parliament to give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes	- Provides for the different land tenure and management of land in areas the projects are implemented.
5.	The Forest and Conservation Act, No. 34 of 2016	The Legislation that applies to all forests on public, community and private lands	- The Act provides for licensing for Licenses/permits in relation to forest resources.

6.	The County Governments Act, 2012	The Act gives effect to the objects and principles of devolution as set out in Articles 174 and 175 of the Constitution.	- The Act provides for governance, transfer of functions and powers from one level of government to another and the procedure for County assemblies.
7.	The intergovernmental relations Act, No. 4 of 2012	The Act establishes a framework for consultation and cooperation between the national and county governments and amongst county governments; The Act provides a framework for consultation and co-operation amongst county governments;	- The Act establish institutional structures and mechanisms for intergovernmental relations.
8.	Agriculture Fisheries and Food Authority **Act**, **2013**	The Act provides for the regulation and promotion of agriculture	- The Act Establishes the Agriculture, Fisheries and Food Authority, to make provision for the respective roles of the national and county governments in agriculture excluding livestock
9.	The Crops Act, No. 16 of2013	An Act of Parliament to accelerate the growth and development of agriculture in general, enhance productivity and incomes of farmers and the rural population, improve investment climate and efficiency of agribusiness and develop agricultural crops as export crops that will augment the foreign exchange earnings	- The Act provides for promotion of subsistence crops for smallholder farms and promote the farming of drought resistant crops
10	Science and Technology Act	Establishes the key building blocks of the national agricultural research system (NARS), namely: the Kenya Agricultural Research Institute (KARI), the Kenya Forestry Research Institute (KEFRI), the Kenya Marine Fisheries Research Institute (KMFRI) and the Kenya Industrial Research Institute (KIRDI).	- Provides for a systematic rationalization, integration and alignment of the various research programs with national goals on providing drought resilience led research.
11	National Drought Management Authority Act	AN ACT of Parliament establishing the National Drought Management Authority, to provide for the membership, powers and functions of the Authority and for connected purposes	- To provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management

3.3. Institutional Framework

No	Institution	Mandate	Relevance to the Project
1	National Environment Management Authority (NEMA)	- To exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment.	- Accept and review project reports articulating the effects on the environment in respect to project under the project - Approve and issue Environmental Impact Assessment (EIA) Licenses to projects - identify projects and programs for which environmental audit or environmental monitoring must be conducted - All its activities are guided by the Environment Management and Coordination Act 2015
2.	Kenya Forest Service (KFS)	- manage water catchment areas in relation to soil and water conservation, carbon sequestration and other environmental services in collaboration with relevant stakeholders; - conserve, protect and manage all public forests - receive and consider applications for licenses or permits in relation to forest resources	- Management of water catchment areas in areas the project are to be implemented - Issuance of permits/licenses for forest resources
3	The Council of Governors	COG provides a mechanism for consultation amongst County Governments, share information on performance of the counties in execution of their functions, facilitate capacity building for Governors, and consider reports from other intergovernmental forums on national and county interests amongst other functions	- The COG provides a forum for consultation amongst County governments.
	the Climate Change Directorate		- Render advice and technical support, where possible, in natural resources management and environmental protection - Provision of technical assistance on climate change programmes based on needs identified by national and county governments agencies - Collaboration with relevant institutions on promoting

			innovation, research & development and technology transfer on climate change - Promotion of public participation, awareness, sensitization and capacity building on the relevant programmes
	Kenya Meteorological Department	Provision of meteorological and climatological services to agriculture, forestry, water resources management, civil aviation and the private sector including industry, commerce and public utilities for the better exploitation and utilization of natural resources for national development	- The KMD provides metrological service for the areas the project will be implemented for best exploitation and utilization of natural resources for resilience to drought and the use of EWS
	Kenya Forest Research Institute (KEFRI)	A state corporation established in 1986 and mandated to undertake research in forestry and allied natural resources	- Research theme focusing on development of technologies for: i. rehabilitation and sustainable management of natural forests and woodlands including water towers, wetland and riparian ecosystems; ii. integration of high value trees on farms iii. mitigation and adaptation to climate change & drought; iv. development and promotion of efficient technologies for processing and utilization of scarce forest resources
	National Drought Management Authority	To provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management	- To respond and coordinate all matters relating to drought management develop, in consultation with stakeholders, an efficient, drought early warning system and operate the system
	Food and Agriculture Authority	To promote best practices in and regulate the processes in agricultural processes To advise the national government and the county governments on agricultural and aquatic levies for purposes of planning, enhancing harmony and equity in the sector	- To promote the best practices for agriculture and enhance drought mitigation measures

	Kenya Agricultural and Livestock Research Organization	Aimed at restructuring agricultural and livestock research into a dynamic, innovative, responsive and well-coordinated system driven by a common vision and goal. It emphasizes to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology in Kenya	- It emphasizes to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology

3.4. Other international institutions policies, Guidelines, operational safeguards and Standards relevant to the project.

3.4.1. Environmental and Social Policy for the adaptation Fund (Revised March 2016)

The policy is intended to ensure that in furthering the Fund's mission of addressing the adverse impacts of and risks posed by climate change, projects and programmes supported by the Fund do not result in unnecessary environmental and social harms. It is intended to help the fund to identify and manage the environmental and social risks of their activities, by assessing potential environmental and social harms and then by identifying and implementing steps to avoid, minimize, or mitigate those harms.

3.4.2. Adaptation Funds Environmental and Social Principles

All projects and programmes supported by the Fund shall be designed and implemented to meet the following environmental and social principles, although it is recognized that depending on the nature and scale of a project or programme all of the principles may not be relevant to every project or programme.

3.5. Environmental and Social Principles

No	Principle	Scope	Triggered or not triggered
1	Compliance with the Law	Projects and programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	**Triggered**
2	Access and Equity	Projects and programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights neither they exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups	**Triggered**
3	Marginalized and Vulnerable Groups	Projects and programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including	**Triggered**

		children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	
4	Human Rights	Projects and programmes supported by the Fund shall respect and where applicable promote international human rights.	**Triggered**
5	Gender Equality and Women's Empowerment	Projects and programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund gender policy (b) receive comparable social and economic benefits; (c) receive comparable social and economic benefits; and (d) do not suffer disproportionate adverse effects during the development process.	**Triggered**
6	Core Labor Rights	Projects/programmes supported by the Fund shall meet the core labor standards as identified by the International Labor Organization	**Not Triggered**
7	Indigenous Peoples	The Fund shall not support projects and programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	**Triggered**
8	Involuntary Resettlement	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation	**Not Triggered**
9	Protection of Natural Habitats	The Fund shall not support projects and programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities.	**Triggered**
10	Conservation of Biological Diversity	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species.	**Triggered**
11	Climate Change	Projects and programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	**Triggered**

12	Pollution Prevention and Resource Efficiency	Projects and programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants	**Triggered**
13	Public Health	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health.	**Triggered**
14	Physical and Cultural Heritage	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects and programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	**Not Triggered**
15	Lands and Soil Conservation	Projects and programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	**Triggered**

3.6. Environmental and Social Policy of Sahara and Sahel Observatory (OSS) of 2016

The Policy lays down principles and procedures to assess the environmental, social and gender impacts during the preparation and implementation of projects supported by OSS in the following circumstances:

a. Direct access under the GCF
b. Role as regional implementing entity for the Adaptation Fund

The policy also applies to projects receiving funding from

- the World Bank Group,
- the African Development Bank Group,
- the Global Environment Facility,
- the Green Climate Fund and
- the Adaptation Fund.

The project shall be designed and implemented to meet OSS Environmental and Social Performance Standards (PSs). However only the relevant ones shall be considered. These Performance Standards are in line with the international best practices for assessment of environmental and social risks e.g. those of

the International Finance Corporation (IFC), Adaptation Fund, etc. These include;

- PS1: Assessment and management of environmental and social risks and impacts
- PS2: Labour and working conditions
- PS3: Resource efficiency and pollution prevention
- PS4: Community health, safety and security
- PS5: Land acquisition and involuntary resettlement
- PS6: Biodiversity Conservation and sustainable management of living natural resources
- PS7: Indigenous peoples
- PS8: Cultural heritage
- PS9: Gender Equity and Women's Empowerment
- PS10: Access and Equity and protection of Human Rights

3.6.1. Environmental and Social Performance Standards (PSs)

Item	Performance Standard (PSs).	Scope	Triggered or Not Triggered
1	PS1: Assessment and management of environmental and social risks and impacts	PS1 outlines the need of OSS to establish and maintain an organizational structure that defines roles, responsibilities, and authority to implement the ESMS. This means designating personnel with E&S responsibilities and ensuring that resources are available for the effective implementation of the ESMS across OSS PS1 also requires that OSS identify the E&S risks and impacts associated with the project activities This means conducting an environmental and social due diligence (ESDD) at the project level to identify the risks and impacts associated with environmental, social, labour, occupational health and safety, and security of the activities considered for financing. As an outcome of the ESDD process, OSS can identify necessary mitigation or corrective measures for executing partners	**Triggered**
2	PS2: Labour and working conditions	a. Fair treatment, non-discrimination, equal opportunity; b. Good worker–management relationship; c. Comply with national employment and labour laws;	**Not Triggered**

		d. Protect workers, in particular those in vulnerable categories; e. Promote occupational safety and health; f. Avoid use of forced labour or child labour	
3	PS3: Resource efficiency and pollution prevention	a. Avoid, minimize or reduce project-related pollution (Air, Water, Land, Noise, etc.); b. More sustainable use of resources, including land, energy and water; c. Reduced project-related greenhouse gas emissions.	**Triggered**
4	PS4: Community health, safety and security	a. To anticipate and avoid adverse impacts on the health and safety of the affected community; b. To safeguard personnel and property in accordance with relevant human rights principles.	**Triggered**
5	PS5: Land acquisition and involuntary resettlement	a. Avoid/minimize adverse social and economic impacts from land acquisition or restrictions on land use: ➢ Avoid/minimize displacement; ➢ Provide alternative project designs; ➢ Avoid forced eviction. b. Improve or restore livelihoods and standards of living; c Improve living conditions among displaced persons by providing: ➢ Adequate housing; ➢ (ii) Security of tenure.	**Not Triggered**
6	PS6: Biodiversity Conservation and sustainable management of living natural resources	(a) Protection and conservation of biodiversity; (b) Maintenance of benefits from ecosystem services; (c) Promotion of sustainable management of living natural resources; (d) Integration of conservation needs and development priorities.	**Triggered**
7	PS7: Indigenous peoples	(a) Ensure full respect for indigenous peoples • human rights, dignity, aspirations; • livelihoods; • culture, knowledge, practices; (b) Avoid/minimize adverse impacts; (c) Sustainable and culturally appropriate development benefits and opportunities; (d) Free, prior and informed consent in certain circumstances.	**Triggered**
8	PS8: Cultural heritage	a. Protection and preservation of cultural heritage including avoiding the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level.	**Triggered**

		b. Promotion of equitable sharing of cultural heritage benefits.	
9	PS9: Gender Equity and Women's Empowerment	Both women and men: a. Participate fully and equitably; b. Receive comparable social and economic benefits; and c. (c) Do not suffer disproportionate adverse effects	**Triggered**
10	PS10: Access and Equity and protection of Human Rights	a. (a)Provide fair and equitable access in an inclusive manner b. (b)Does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. c. (c) Does not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups including children, women and girls, the elderly, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. d. (d) Respect and where applicable promote human rights.	**Triggered**

In addition, PSs emphasizes Environmental and Social Risk Assessment for all projects using the attached checklist.

4. ENVIRONMENTAL AND SOCIAL BASELINE INFORMATION AT THE NATIONAL AND PROJECT AREA LEVELS

4.1. Kenya

Figure 1: Map of Kenya showing features in Kenya

Kenya is located in the Greater Horn of Africa region, which is highly vulnerable to the impacts of climate change. Kenya's main land-cover types include forests, savannahs, grasslands, wetlands, fresh and saline water bodies and forests. These land covers are used for agriculture, pastoralism, water catchments, nature reserves, urban and rural settlements, industry, mining, transport and communications, tourism, recreation, fishing, forestry, cultural sites and energy. More than 80% of the country's landmass is Arid and Semi-Arid Land (ASAL) with

poor infrastructure and other developmental challenges. Kenya is home to several natural and mixed World Heritage Sites including seven Woodland/Savannah sites. Mount Kenya National Park/Natural Forest, Fort Jesus in Mombasa, Kenya Lake System in the Great Rift Valley, Lake Turkana National Parks, Lamu Old Town, Sibiloi National Park, and the Sacred Mijikenda Kaya Forests are World Heritage Sites in Kenya. Kenya has 5 endangered Ramsar sites in the Greater Rift Valley including Lake Naivasha, Elementaita, Nakuru, Bogoria and Baringo. The Eastern Arc Mountains and coastal forests of Kenya are part of the 25 global biodiversity hotspots. Other Endemic Bird Areas not containing Natural World Heritage Sites are the East African coastal forests in Kenya and the mangroves and montane moorlands.

Kenya is the 47th largest country in the world in terms of pure land mass. It is relatively sparsely populated, however, and for every square kilometer of land, there is an average of 79.2 people (205 per square mile) and this means that Kenya is the 140th most densely populated country on earth. Kenya's population is very diverse and home to most of Africa's linguistic and ethno-racial groups. There are believed to be at least 42 communities, although Nilotes (30%) and Bantus (67%) account for a majority, followed by Cushitic groups, Arabs, Indians, and Europeans.

Many of the forest ecosystems and landscapes in Kenya are under threat due to population pressure, encroachment of forest land for farming, use of forest resources for construction raw materials and other products to secure peoples' livelihoods. In Kenya, both livelihoods and economic development are dependent on natural resources. Rural and urban communities depend on these resources directly or indirectly for their subsistence including the cash economy. The impacts of climate change are undermining the natural resource base in the country leading to declining agricultural and livestock yields. For example, droughts and floods have become frequent, generating severe food shortages and related deaths.

Kenya like other sub-Saharan African countries faces the uncertainty and potential risks of climate change. The country's fragile ecosystem will be put under intensive pressure arising from species migration due to habitat destruction and reduction. Already, almost 50 per cent of the country's key biodiversity warehouse is at risk due to reduced habitat and other human induced pressures. Kenya's vulnerability to climate change is furthermore affected by relatively weak institutional capacity, low resource management capabilities, inadequate technology and information infrastructure as well as land degradation, which

combined pose serious hurdles to effective climate change responses. Therefore, if not proactively addressed, climate change is anticipated to adversely affect the country's sustainable development efforts including its ability to attain the Sustainable Development Goals (SDGs) as well as the objectives set out in the Government's Vision 2030 development plan.

Kenya's economy is highly dependent on climate sensitive sectors such as agriculture that is mainly rain-fed, energy, tourism, water and health. Climate hazards, mostly droughts and floods, have caused considerable losses across the country's different sectors over the years. A study undertaken by the Stockholm Environment Institute (SEI) clearly showed that existing climate variability has significant economic costs in Kenya and future climate change will lead to additional and potentially very large economic costs.

Kenya, like other countries in the East African region, is bearing the brunt of climate change impacts and the associated socio-economic losses. The situation is exacerbated by the high dependence on climate sensitive natural resources, which account for about 42 per cent of the country's GDP. The ASALs are particularly vulnerable to climate change impacts. They are currently under threat from land degradation and desertification caused by climatic variations, and human impacts such as overgrazing of livestock and the creation of small cities or towns. Impacts include droughts and floods, loss of biodiversity including threatening of species, change in vegetation composition and structure, decrease in forest coverage, rapid deterioration in land cover, depletion of water quality and quantity through the destruction of catchments and underground aquifers and food security.

Increased scarcity of water resources is a core concern, making resource management more difficult and increasing the likelihood of conflict. Water scarcity affects energy production and agricultural systems. Relevant indicators include declining forest coverage, reduced water quality and quantity for domestic and industrial use, high water pricing and increases in water borne diseases. Forests are highly sensitive to climate change. According to the KFS, a report on national forest resource mapping and capacity development for the republic of Kenya volume 2:2013, which was based on a wall to wall mapping exercise, revealed that the forest cover experienced a decline from 8 percent in 1990 to 6 per cent in 2000 before a gradual increase to 7 percent in 2010.

Kenya has a constitutional target of increasing the forest cover to 10 per cent. The five major water towers, Mt. Kenya, Mau Forests Complex, Cherangany Hills,

Mt. Elgon and the Aberdares Ranges, act as the main water catchment areas whose sustainability is dependent on proper land use management and forest protection. The country's energy needs are also derived mainly from hydropower which depends on water sources from these water towers. Forest degradation and deforestation, exacerbated by climate change have led to reduced canopy cover and altered biodiversity composition. This affects the ecosystem services that forests provide, such as reducing soil erosion, natural pest control, preserving water availability, and maintaining water quality. Deforestation and forest degradation also increase GHG emissions.

Kenya's economy is highly dependent on climate sensitive sectors such as rain-fed agriculture, energy, tourism, water, pastoralism, industry, fishing and forestry among others. Agriculture, which occupies up to 7 per cent of total land surface area in Kenya and which is mostly rain-fed, is the mainstay of the country's economy and contributes to 24 per cent of Gross Domestic Product (GDP) annually. The sector accounts for 65 per cent of Kenya's total exports, offers 18 per cent of formal employment and provides more than 60 per cent of informal employment in the rural areas. Climate change is threatening the sector and related ecosystems, together with the livelihoods that depend on them, and it is estimated that the country needs about 2.6 to 5 per cent of the national GDP to address current climate change adaptation needs. The rural populations, who derive their livelihoods from agricultural activities, are particularly vulnerable to impacts of Climate Change on the agricultural sector. Such impacts include crop failures and consequent reduced yields, reduced fish stocks, impacts on prices of food, farmers' incomes and livelihoods. Pastoralism on the other hand is practiced in the Arid and Semi-Arid Lands (ASALs) regions of the country, which are characterized by high spatial temporal variability in rainfall and which account for about 80 per cent of Kenya's land surface area. Pastoralists are usually worst hit by climatic changes (including seasonal weather changes, increasing temperatures, rainfall variability and extreme weather events) which often result in livestock losses and associated income and livelihood losses. Climate change impacts have continued to cause considerable losses across Kenya over the years resulting in severe environmental hazards. Economic activities that are natural resource intensive such as pastoralism, agriculture and fishing among others have greatly been impacted by the effects of climate change resulting in harmful consequences on pastoralists' livestock and other assets. Population pressure as a result of the need for more arable land for farming and livestock keeping has brought about the rapid deforestation of the land surrounding the Kaya forests, for instance, at the Coastal region of Kenya. The forests face encroachment by settlements and farms for food crops.

In addition to the above, the loss of forest cover in Kenya because of human population pressure, overreliance on biomass for cooking (80 per cent of the rural populations depend on fuelwood) and increased demand for arable land has resulted in rapid loss of biodiversity and habitats. Tourism, which is Kenya's main source of foreign exchange at about 4 per cent of the country's total GDP in 2014, has also resulted in the loss of significant national heritage sites, environmental resources and culture as local businessmen and politicians scramble for land in fragile ecosystems to create prime sites for tourist development. This reliance on land-based resources creates the need for adequate and accurate data and information to advise land policy and related decisions in Kenya.

4.2. Kitui

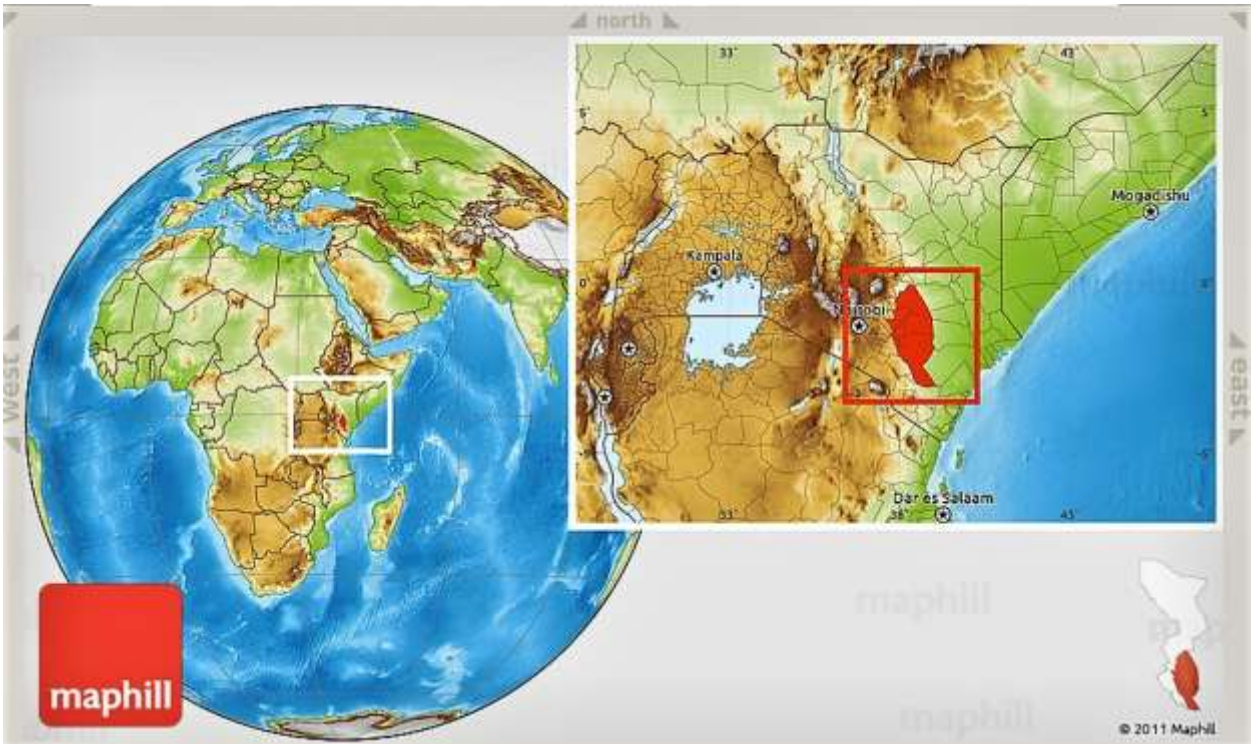

Figure 2: Map of Location of Kitui County

Kitui County is one of the 47 counties in the country located about 160 km east of Nairobi City. It is the sixth largest county in the country, covering an area of 30,496.4 km^2 including 6,369 km2 occupied by Tsavo East National park. The County shares its borders with seven other counties: Machakos and Makueni counties to the west, Tana River county to the east and south-east, Taita Taveta county to the south, Embu to the north-west, and Tharaka-Nithi and Meru counties

to the north. It is located between latitudes 0°10" and 3°0" south and longitudes 37°50" and 39°0" east.

Kitui has three different climates: Hot semi-arid climates, Tropical savanna climate, and Warm-summer Mediterranean climate. The county receives between 500mm and 1050mm of rainfall annually, with average rainfall of 900mm a year. It has two rainy seasons; May-June (long rains) and September-October (short rains).

Kitui County is mostly dry and hot with temperatures ranging between 14°C during the coldest months (July-August) and 34°C during the hottest months (January-March).

Generally, soils are predominantly sandy to loamy sand texture, hence they are susceptible to erosion and are limited in their capacity to retain water and nutrients. The major soil type of the proposed project area is lixisols (red soils). Alluvial deposits (fluvisols) occur in isolated patches along rivers and on hill slopes. The soils are generally poorly drained and easily eroded by runoff.

The distribution of drainage is determined by the watershed of the Kitui hills which form an axis between the south-westerly trending tributaries of the Tiva and those of the main watercourses passing through the area. the Thowa and Ikoo. The Thowa leaves the area in the south and thence trends eastwards towards the Tana. but eventually peters out in the semi-desert. plainlands. In the extreme north and east drainage is northwards to the Nzui, which ultimately joins the Thowa outside the area, whilst the Tyaa leaves the north-western corner, and flows north-westwards towards the Tana.

The western half of the area is dissected by a trellised drainage pattern in which secondary tributaries of the Thowa and Ikoo are deeply entrenched parallel to the prevailing strike, and follow the softer members of a contrasting series of metamorphic rocks. The land surface here has reached a stage of maturity with maximum amplitude between the crests of ridges and their intervening narrow valley floors, which are incised to a depth of several hundred feet. Many of the minor stream profiles remain in a stage of youth, and are characterized by highly irregular gradients accompanied by falls and rapids. On reaching the eastern plains the main streams assume gentle gradients and broaden into sand-rivers in which lateral erosion dominates. The lower courses of the Ikoo and Thowa build sand-bars and develop braided channels.

Most streams within the area only carry flowing water for a few weeks during each rainy season, when they may become torrents for short periods. With the cessation of seasonal rain, they rapidly dry up, but during the dry seasons water can usually be found by digging in their sand beds to a depth of a few feet.

Figure 1: Farmer fetching water using animals.

Kitui County has 14 gazetted and 15 ungazetted forests. Taking all forms of forests into account, there are about 35,592.6 Ha of forest cover in Kitui County, under different forms of ownership. The forest cover is crucial for climate change mitigation, water resource management, control of soil erosion and boosting of agriculture in the County.

Agriculture is the backbone of Kitui County. In the highlands of Kitui, farmers are involved in subsistence agriculture - mainly growing cotton, tobacco, sisal, mangoes, maize, beans, cassava, sorghum, millet and pigeon peas. These crops are well adapted to the climatic conditions of Kitui. Crops produced are consumed locally with the surplus being sold to traders from Nairobi and neighbouring towns.

In the lowlands, farmers keep livestock - mainly cattle, sheep, goats and chicken - as a means to supplement crop farming as their source of income. Tourism is a low-key economic activity with some of the residents building hotels and lodges

that serve visitors coming to the main towns for business and leisure, Mwingi National Reserve, South Kitui National Reserve as well as the Tsavo East National Park. These tourist attractions also offer a thriving market for local artefacts such as baskets and soapstone/woodcarvings - another major source of revenue to the people of Kitui.

Kitui County has several hospitals and health centers to meet the health needs of residents, among them Kitui County Referral Hospital, Mwingi Sub-County General Hospital, Kitui Nursing Home, Neema Hospital, Jordan Hospital, mission-run hospitals such as Muthale Mission hospital and some private health centers. Kitui County has commissioned 23 new health facilities to reduce the distance, time and cost to accessing healthcare services. There are 240 functional public health facilities in the County, accounting for 6% of the country's 4, 000 public health facilities. This exceeds the national average of 85 health facilities per County by 145 (63%) facilities. However, a health facility distribution analysis conducted by the former Commission for Implementation of the Constitution (CIC) showed that the 230 health facilities were unevenly and inequitably distributed in the County. In three Sub-Counties, Kitui Central, Kitui West and Mwingi West, over 95% of the residents live within an average distance of 5 kilometers from their homes to the nearest health facility. Similarly, due to terrain and condition of the roads, it takes people

Population dynamics form an integral part of socio-economic and cultural development for the county. According to KNBS (2009), the county has population of 1,012,709. According to KNBS (2009) 531,427 are females while 481,282 are males. The population was projected to grow to 1,065,330 by 2013. The population growth rate of the county at 2.1% is slightly lower than the national rate of 2.6%. High population exerts pressure on social and natural resources, and it is imperative for the county to develop strategies in addressing the population growth rate.

The main types of houses are classified in terms of the different materials used in construction. Roofing materials in the County are mainly Corrugated Iron sheets roofs at 94.5 percent. A large percentage of households use earth/sand, and cement as floor material at 58.6 percent and 40.4 percent, respectively. Walling of houses also varies with 33 percent having cement finish, 25.8 percent with bricks, and 23.5 percent with bamboo with mud/cow-dung.

Improved sources of water comprise protected spring, protected well, borehole, piped into dwelling, piped and rain water collection while unimproved sources include pond, dam, lake, stream/river, unprotected spring, unprotected well, jabia, water vendor and others. In Kitui County, 26% of residents use improved sources of water, with the rest relying on unimproved sources. There is no significant gender differential in use of improved sources as seen in 27% of male headed households and 25% in female headed households. Mwingi Central

constituency has the highest share of residents using improved sources of water at 39%. That is twice Kitui Rural constituency, which has the lowest share using improved sources of water. Mwingi Central constituency is 13 percentage points above the county average. Township ward has the highest share of residents using improved sources of water at 66%. This is 65 percentage points above Miambani ward, which has the lowest share using improved sources of water. Township ward is 40 percentage points above the county average.

A total of 52% of residents in Kitui County use improved sanitation, while the rest use unimproved sanitation. There is no significant gender differential in use of improved sanitation as seen in 53% of male headed households and 52% in female headed households. Kitui West constituency has the highest share of residents using improved sanitation at 76%. That is twice Kitui East constituency, which has the lowest share using improved sanitation. Kitui West constituency is 24 percentage points above the county average. Mutonguni ward has the highest share of residents using improved sanitation at 88%. That is eight times Endau/Malalani ward, which has the lowest share using improved sanitation. Mutonguni ward is 36 percentage points above the county average.

The county has a total area of 30,496.4 km2 of which; 6,369 km2 of the County land consists of the Tsavo East National Park and is not available for agriculture, 14,137.2 km2 is arable agricultural land and 6,364.4 km2 nonarable land. Over 85% of the County's population lives in rural areas. The average population density is 44 persons/km2 which is generally sparse. The average size of land holding in the County is 0.12 km2 per person (12 ha per person).

Over 46% of the County land falls in the arable category with 83% of the inhabitants lacking title deeds because most of the land has not been adjudicated. Only about 17% of land owners in the County have title 56 deeds. The process of land adjudication and registration has been particularly slow. Without titles, land owners are constrained with regards to securing investment loans from banks and Micro Finance Institutions. The County Ministry of Lands, Infrastructure and Urban Development has started the process of land adjudication so as to fast track the issuance of title deeds to land owners in the county.

Christianity is the dominant religion in Kitui County. Roman Catholics make about 15% of the county's population. Other Christian denominations in the county include the African Inland Church, Anglican Church of Kenya, Presbyterian Church of East Africa, Independent Presbyterian Church (IPC), Redeemed Gospel Church and many others. Kitui county has a significant number of Muslims and several mosques can be spotted around the county's major urban centres. Few people in the county still hold on to traditional beliefs.

Kitui County has eight (8) sub-counties namely Kitui Central, Kitui West, Kitui East, Kitui South, Kitui Rural, Mwingi North, Mwingi Central and Mwingi West. It is further

sub-divided into forty (40) wards. The sub-counties are administrated by the Sub-county administrators and the wards by the ward administrators. The County has proposed through a bill to create 200 villages and recruit village administrators to oversee the villages which will be the lowest level of the county administrative units.

4.3. Samburu

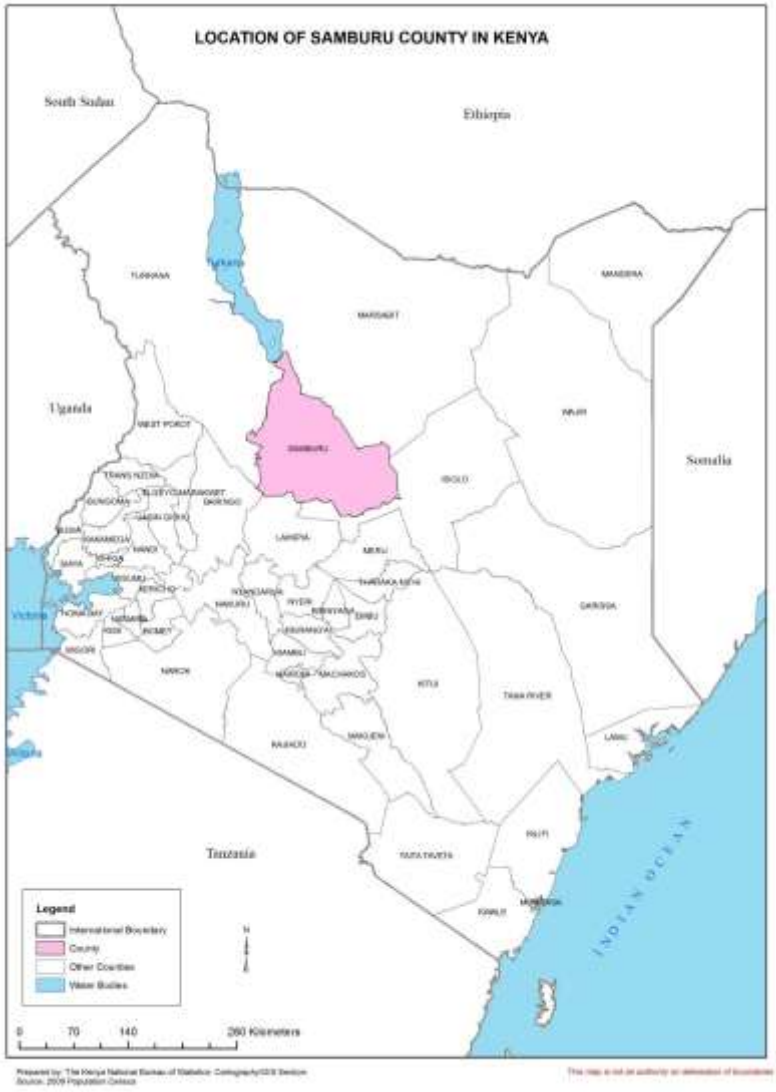

Figure 4: Map Showing location of Samburu County

Samburu County (0030' – 2 045'N and 36015' – 38010'E) is within the northern parts of Great Rift Valley in Kenya. The County lies within ASAL region covering an area of 21,022 square kilometers, and is bordered by the following Counties Turkana (Northwest), Baringo (Southwest), Marsabit (Northeast), Isiolo (East) and Laikipia (South). The County is a member of North Rift Economic Block (NOREB). Samburu is one of the driest counties in Kenya with temperatures ranging between 25°C

during the coldest months (June and July) and 35°C during the hottest months (January to March).

The county receives between 200mm and 250mm of rainfall annually. The rainfall pattern is unpredictable and at times the county receives no rain in a whole year. The elevation and orientation of the major topographic features such as Mathew ranges and Ndoto hills influences rainfall distribution. Apart from South Horr and Wamba areas, short rains occur during the months of July and August, sometimes extending into September. At Wamba and South Horr areas, the short rainy season is usually delayed and occurs in October and November and sometimes extends into December. The southwest plains and the Lorroki Plateau receive between 500 mm and 700 mm of rain annually. The Nyiro and Ndoto Mountains and Matthews range receive the highest amount of rainfall between 750 mm and 1250 mm per annum. The central basin and the plains east of the Matthews Range are the driest parts of the county with annual rainfall of between 250 mm and 500mm.

Annually, the county has annual mean temperature of 29^0c with the maximum range being 33^0c and minimum of 24^0c. The central plains and the region east of the Matthews Range have the highest temperatures while the highland belts in the North Eastern side of Lorroki Plateau are cooler.

In the western parts of the county, the soil is mostly Sandy loam soils. Kirisia area has sandy loam and sandy clay soils, which are lithosol (shallow stony soils) and cambisols. In the areas covered by lithosols water run-off is common and erosion quite prevalent. Just as Kiriasia, Lorroki has loam soils as the dominant one. These soils are mostly well-drained phaezems. However, some parts of it is covered by shallow lithosols, including the surrounding of Suguta Marmar where the risk of flooding is classified as medium. The lithic phase of the soils encourages run-off during periods of high precipitation.

In the northern part of the County consisting of Baragoi and Nyiro areas, the predominant soil covers are bouldery cambisols and lithosol. The soils are particularly more stoney and rocky on the southern slopes of Mt Nyiro and Ndoto mountains. These soils are shallow and have a lithic (stoney) phase, a characteristic that makes the soils prone to run off. On the eastern side that include Wamba and Waso areas, is significantly covered by weakly developed soils, mostly sandy and low in organic matter and in some places in Waso Division the soils are saline and sodic (mostly cambisols and solonetz).

The physiography of the region influences the drainage pattern. The County fall in drainage areas number two (Kerio Valley) and number five (Ewaso Nyiro). Main water sources in the county constitute surface and ground water. The Ewaso Ng ‘iro River flows northwards about 30 km, then changes the direction to flow eastwards. After turning sharply east through the gap between the Mukogodo hills in the south and the Karissa hills in the north, the river flows through a 70m

deep gorge for about 60 km in Barselinga. There are several seasonal riverbeds or "laggas" which during rainy seasons are filled with runoff water, making roads impassable and often leaving the area cut-off from the rest of the country.

Figure 5: Residents in Maralal Samburu County fetching water for their livestock.

There is a total of 3,250 km^2 of gazetted forests translating to a 15.4percent forest cover in the county. This mainly consists of indigenous forests uniformly distributed across the county. The main tree species are the acacia, commisera, brocella which are dominant in the lowlands of Samburu North and Samburu East as well as sections of Samburu Central. The highland species include: cedar, podo, chepnuts and olea, Africana amongst others these are mainly found in kirisia and porror areas. The most endangered species are the Cedar and Podo because of their value in construction of houses particularly in upcoming urban/trading centers.

The County boasts of having the largest number of wildlife outside the game reserve. Some of the wild animals found in the County include; Reticulated Giraffe, the endangered bevy zebra, Besia Oryx, Grater and Lesser Kudu, Gerenuk, Somali ostrich, Pun cake tortoise, Wild Dog, lions, elephants, and buffalos in addition to the small wildlife.

Livestock rearing is the backbone of Samburu County's economy. The majority of people are nomadic pastoralists who mainly keep cattle, camels, sheep and goats. These animals are mainly sold to the Kenya Meat Commission as well as traders from Nairobi and other neighbouring towns especially during droughts. Bee-keeping is also a major economic activity.

Despite the harsh climatic conditions, some Samburu residents have recently started growing crops in effort to fight starvation. Drought-resistant crops such as

millet, sorghum and certain species of maize are grown in areas such as Lpartuk, Poros and Malaso.

Tourism is also a major source of revenue to the Samburu people, with some of the residents being employed in the county's safari lodges and others working as tourist guides. The county's main attraction sites offer a thriving market for Samburu artifacts such as beads, necklaces and bracelets.

The County has one level four hospital situated in Maralal town, one faith-based hospital in Wamba and one sub-county hospital in Baragoi town in Samburu North. The county also has 15 level three health facilities, 54 dispensaries (47 owned by GoK, 6 faith based and one owned by NGO,) and 15 private clinics in the county. Currently the county has a total of 30 functional Community Health Units accounting for 48% of the total expected units in the County. These Community Health Units are distributed across the three sub counties in the following order, S- North 9, S-East 10 and S-Central=11 respectively.

According to the 2009 Population and Housing Census, the population of Samburu County was 223,947. Given a population growth rate of 4.45 percent per annum, as opposed to the national growth rate of 3 percent, the County population is projected to increase to 399,378 by 2022 and 456,418 by 2025. These changes represent about 25% population rise between 2017 and 2022.

The Population and Housing Census of 2009 indicate that 103,987 people were in the labour force age category. This is projected to rise to 185,446 by 2022. The population density was expected to rise to 15 and 19 persons per Km2 by 2017 and 2022 respectively. Samburu West constituency had the highest population density of 29 persons per Km^2. Samburu north and Samburu East had 17 and 8 persons per Km^2 respectively.

The housing sector within the County is mostly private sector driven with most individuals striving to construct their houses or avail houses for rental purposes. Most of permanent housing units are mostly evident in urban areas with distinct types like marionettes, bungalows, flats and bed seaters. The county has five high grade houses, fifty-four middle grades, fifty-six low grades under the National government and forty-seven houses previously owned by local authority. The towns however lack key infrastructure such as a functional sewerage systems and basic social amenities. Other centers are characterized by semi-permanent houses mainly built using cedar post walls and iron roofs.

The county has two permanent rivers. There are 35 protected springs and 104 boreholes. Households with piped water are 17,133 while 5,500 households have access to potable water. There are 112 water pans and 213 surface dams. The county has 141 shallow wells, 37 unprotected springs and 9800 houses with roof catchment. In the entire county, only 13.5% of the population has piped water. To ensure water quality at household level, the county department of health

provides water treatment chemicals (Aqua tabs) and there is ongoing health education on water quality and safety. Samburu is generally a water scarce County. The main sources of water for domestic and Livestock uses are; Boreholes (137), Water conservation structures (83 water Pans, 29 Dams, Rock Catchments, Roof catchments), Shallow wells, and 21 springs of which 5 have been improved and protected. The department continues to increase water sources through drilling and equipping of boreholes, construction of dams/pans, rock catchments, subsurface dams, and Pipeline extensions on developed sources. Water quality in the county is generally poor with most surface water and shallow wells not protected hence contamination may occur. Human habitation is common along Catchment areas, lack of proper sanitation and sewerage services in the major urban centres are the main causes of water contamination. The county has inadequate data for both domestic and agricultural use.

In Samburu County, latrine coverage is at 34% which is far below the national target of 100%. Only 116 villages (20 %) have been triggered with seven villages reaching an open defecation free (ODF) status. 477 villages (80%) still need to be reached for triggering. Samburu County does not have a sewerage system in all urban centres. According to June 2017 SMART Nutrition survey, the percentage of people washing hands during four critical times in the county was at 5% and hand washing with water and soap at 25%. There are only two public toilets in Wamba and Maralal town. Sanitation in the county is poor due various factors such as lack of awareness on proper hygiene and sanitation leading to low latrine coverage. The public health department in collaboration with stakeholders undertakes Chlorination of water sources through provision of chlorination tablets across the county. The water Department also undertakes health education on sanitation, water treatment and safe storage before consumption. The county 's sanitation figures include flush toilet-1 percent, uncovered pit Latrine- 20 percent and covered pit latrine- 12 percent.

Land is an important resource as it anchors most human development activities. Moreover, land is used not only as economic resource but also as a socio - cultural tool. Land in the County is either owned as registered community land (group ranches), unregistered community land (held in trust by County Government), public and private land as leasehold or freehold. The County is blessed with huge land mass of an approximate size of 21, 022. 01 square kilometers and it host numerous natural resources and human activities. Of the total area, 3,103.41km2 (15.5% of the County land area) is under gazetted forests; 170km2 (0.85%) is under game reserves and animal sanctuary; 1.8 km2 (0.0085%) is under surface water and 16,746.8 Km2 or 83.64% is the land remaining for occupation under urban centers, Group Ranches, land set aside for public uses, individual ownership and hosting other natural features.

The significant land cover within the county is rangeland and gazetted forest that occupies15.5% of the county. On the other hand, the dominant land uses include

nomadic pastoralism, wildlife conservation areas such as West Gate, Namunyak, Kalama & Samburu National Reserve, urban development and crop farming.

Majority of people living in Samburu County adhere to traditional beliefs, although some Samburu have converted to Christianity.

The Samburu believe in a god called Nkai - a distant creator who lives on top of mountains. Nkai is the protector of the community against all calamities. The Samburu language is similar to that of the Maasais, although Samburus usually speak with a faster tongue than Maasais. They are renowned for their brightly coloured shukas, which they wrap loose around their bodies. Samburu men usually dye their hair with red earth colour, whereas their women wear colourful multi-beaded necklaces and bracelets.

Figure 6: Cultures in Samburu County

Samburu County has Cultural manyattas in Ltungai, Malaso, Baragoi, Southhorr, Latakweny, Lorubai, Umoja, Meagari, Ngoteiya and Matakwani Manyatta. Cultural sites in the county include Loimugi Lolkiama at Wamba town, Naya Nkainito in Nkaroni, Naisimu Rrug hill in Mathews ranges, Lpusi Laampasion in Lodungokwe, Lmaarteun, Ngaji ya Ngai, Kisima Maladwa and Naibor Ajijik for resins collection in Nkare Narok. Kenyatta House in Maralal town is the only museum n Samburu County.

Samburu County is administratively divided into three sub-counties, 15 wards and 108 villages.

SUB-COUNTY	WARD	AREA (KM^2)	VILLAGES
Samburu West	Lodokejek Suguta Marmar Maralal Loosuk Poro	3937.3	33
Samburu East	Waso Wamba West Wamba East Wamba North	3937.3	29
Samburu North	El Barta Nachola Ndoto Nyiro Angata Nanyokie Baawa	7035.1	46
Total		21,022.10	108

5. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

This section summarizes the main environmental and social impacts/risks during project implementation.

5.1. Positive impacts

Below is a summary of likely positive environment and social (direct and indirect) impacts of the Project that will contribute to other benefits of the Project:

a) Establish food security and drought information platform - To develop an integrated food security information system and a harmonised data gathering & processing mechanism with Open-access data-base of food security information in place

b) Develop a national integrated early warning system - To ensure that early warning information is objective & relevant to provide early response which with a methodology for improved early warning data collection & analysis developed

c) Water Catchment Management strategies - To increase availability of sustainable water resources through effective management & protection of water sources where This will increase availability of sustainable water resources in rural & ASAL areas through rainwater harvesting & construction of sand dams with indicators as the number of rainwater structures & sand dams constructed

d) Dryland forestry with Participatory forest management – to promote commercial tree growing on dryland farms and involve stakeholders & communities in joint forest management activities which will increase the area under commercial tree growing and establishment and management of improved forest by hectares.

e) Support the implementation of safety net programmes that are on budget and scaled up as part of the national disaster risk management system which will protect & support chronically food insecure households

1. Provision of timely early warning information to farmers –The rehabilitated or newly constructed weather stations will enable collection, analysis and dissemination of early warning information to farmers to enable them plan their activities properly

2. Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks as well as deep and shallow wells, will make safe water for communities improving their health as well as reducing or eliminating prevailing agriculturalist/pastoralist conflicts-Mitigation of tension/conflict over water: as scarcity of water is one of the sources of conflict in the beneficiary communities

3. Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems), protection of water wells and springs) will increase the amount of water available for agricultural and livestock production. This will enable the small-scale farmers to increases their production, realize more benefits and increase their drought and climate change adaptive capacity.
4. Creation of short-term employment opportunities: use of appropriate labor-intensive during construction of weather stations and water harvesting, storage and delivery infrastructure will provide direct income to the households;
5. Investments in river banks restoration will protect the rivers from siltation and sedimentation from run-off;

6. The contour and stone bands will help in checking erosion on hilly areas and this will lead to improved productivity in these areas;
7. Afforestation programmes will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels;
8. The activities of the program will help to identify and to implement the necessary measures or the protection of biodiversity areas thus conserving the wealth of the species at the local and national level. Also, these investments will contribute to combating desertification; enhancing reforestation, soil restoration and the implementation of national conservation activities
9. Enhance women participation in household and socio-economic activities through sustainable water supply which will create more time for them to engage in other income generating activities
10. Capacity building and training in drought adaptation actions for the community, and resulting enhancement of organizational, financial and technical capacities of communities in the catchment.

5.2. Negative/Adverse impacts

The implementation of the proposed DRESS-EA Project is anticipated to have a number of negative environmental and social impacts both direct and indirect. These may include but are not limited to the following.

1. Loss of vegetation and disturbance of floral and faunal communities – The program activities are likely to destroy vegetation with subsequent loss of trees, shrubs and grasses from the areas highlighted for infrastructure sub-projects. This is likely to cause loss of habitat and disturbance to faunal communities in the affected sites.

2. Increased soil erosion –Increased vegetation clearance and soil erosion is likely to occur in the vicinity of program sites during the construction of the water harvesting, storage and delivery infrastructure
3. Increased siltation of the aquatic habitats- Some of the excavated sediments from the sub-project sites and the construction spoils emanating from excess excavated material and construction debris are likely to increase siltation of the nearby aquatic habitats associated with nearby rivers& streams wetlands and other sensitive ecological zones.
4. Increased noise levels- Noise levels are likely to increase in the program area during the construction of the water infrastructure due to the use of heavy machinery in construction activities and operations at the quarries, borrow pits and crushing plants.
5. Increased accidents and occupational hazards- mainly due construction activities for the water harvesting, storage and delivery systems that will

involve use of machinery and transportation of materials. This is likely to result in a higher risk of accidents and occupational hazards occurring in the area of operation.

6. Dust pollution– Program activities have the potential to generate high levels of dust in the program area especially where construction is taking place. In addition, activities taking place in the quarries, borrow pits and crushing plant sites have great potential to generate high quantities of dust thus creating a hostile environment and a health hazard to the workers and the affected local community
7. Ponding- The program activities may lead to creation of stagnant water bodies in quarries, borrow pits and depressions created during the construction works. The resultant stagnant water bodies are likely to be suitable habitats for the breeding of mosquitoes and snails that are disease vectors for malaria and bilharzias respectively.
8. Gaseous emissions- Pollution through gaseous emissions in the program area will emanate from exhaust pipes for vehicles and machinery used in the construction works.
9. Strain on social services -*Influx of workers for construction activities may put pressure on social services in the areas though temporarily including hospitals, housing among others*
10. Increased incidences of diseases- The influx of workers with specialized skills to work on the infrastructure projects is likely to increase the incidences of diseases in the program area especially sexually transmitted diseases including HIV/AIDS among the program workers and local communities.
11. Use of agro-chemicals may result in soil and water contamination.
12. Potential conflicts over water use especially amongst pastoral and host communities can arise especially where those with large herds tend to dominate the small herd owners;
13. Maintenance of some of the infrastructures such as dams will generate dredge materials whose disposal can pose environmental and public health challenges;
14. Generation of cut to spoil materials whose transportation and disposal will require proper management as well as other solid waste during construction and operation of the planned facilities;
15. Abstraction of substantial quantities of water from the water bodies especially for irrigation can bring about hydrological impacts on the main water bodies.

6. ENHANCEMENT AND MITIGATION MEASURES

6.1. Enhancement measures

Table 1: **Possible enhancement measures for the positive impacts identified**

No	Impact	Enhancement measures

Table 2: Mitigation Measures for the negative impacts identified

No	Impact	Mitigation measures

7. PROPOSED ESIA MANAGEMENT CYCLE FOR THE PROJECT

The Environmental Management and Coordination Act (EMCA) require that all projects be subjected to a review and screening process in order to determine whether a full scale ESIA is necessary or otherwise. This is done through preparation of a sub project report, which will be prepared by the DRESS EA/PCU for each sub component. Each sub component will need to be reviewed independently for potential environmental and social impacts. In cases where a full scale ESIA is required, it will be paramount that the feasibility studies occur concurrent with the ESIA study in order to ensure that the findings of the ESIA are incorporated in the feasibility study at the design stage. This will ensure that environmental sound design including proposed adaptation and mitigation measures as well as alternatives are incorporated in the feasibility reports at the design stage hence avoiding design change at an advanced stage.

The DRESS-EA has been rated as category B this requires an ESIA which must be conducted parallel to the feasibility studies to ensure that the findings of the ESIA are incorporated in the feasibility study at the design stage. The Environmental

Management and Coordination Act (EMCA) require that all sub components of the project be subjected to a review and screening process in order to determine whether an ESIA is necessary or otherwise. The sub components will each need to be reviewed independently for potential environmental and social impacts.

A completed appraisal package comprises all of the results of the ESIA procedures in order to permit a full environmental review. If the World Bank determines that the appraisal package is not complete because the environmental procedures have not been completed, or because after further review it is discovered that the information provided earlier for the screening procedures was incorrect or misleading and that further information is required, the appraisal package will be deemed incomplete and the Task Manager will promptly notify the applicant of the deficiencies.

Development of project reports follows systematic process as follows;

- Review of TORs with the implementing partners for adequacy
- Familiarization with project design
- Familiarization with projects area of influence
- Identification of the relevant statutes and WB safeguard policies
- Determination/ Identification of all stakeholders to project
- On-the-ground investigations of the bio-physical baseline
- Consultations with stakeholders
- Impact prediction and interpretation
- Identification of mitigation measures
- Development of an environmental management plan complete with budget and identification of responsibilities
- Finalization of project report

Statutory content of Project Reports:

Regulation 7(1) of Legal Notice 101 stipulates content of Project Reports to include the following;

- The nature of the project;
- The location of the project including the physical area that may be affected by the project's activities;
- The activities that shall be undertaken during the project construction, operation, and decommissioning phases;
- The design of the project;
- The materials to be used, products, by-products, including waste to be generated by the

- project and the methods of disposal;
- The potential environmental impacts of the project and the mitigation measures to be
- taken during and after implementation;
- An action plan for the prevention and management of possible accidents during the
- project cycle;
- A plan to ensure the health and safety of the workers and neighbouring communities;
- The economic and socio-cultural impacts to the local community and the nation in
- general;
- The project budget;
- Any other information that the Authority may require.

Once a project report is submitted to NEMA, a decision is made by NEMA and in the event that NEMA, based on the project report submitted makes a decision that an ESIA report must be prepared, the RPLRP will be required to identify independent NEMA registered expert(s) to prepare an ESIA report in accordance with the EMCA.

Project Reports are normally prepared as a means of informing NEMA of the proposed development such that after review of the report, NEMA advises on the need or otherwise for an ESIA. The ESIA regulations allow for approval of proposed projects at the Project Report Stage and have been effectively used by NEMA to grant Environmental Licenses to small projects without requiring an ESIA.

Table 3: NEMA Process for approving Investment Projects Reports

Steps	Action	Actor	Time requirement
1.	Submission of PR to NEMA. NEMA receives PR, issues a receipt and acknowledgement.	DRESS-EA and Implementing partners	To be undertaken by DRESS-EA and Implementing partners environmental and social specialists with input from the Safeguards Advisor
2.	NEMA mails PR to Lead Agencies	NEMA	7 days assuming all requirements are fulfilled
3.	Lead agencies review PR and issue comments	Lead Agencies	21 days (minimum) after receipt of PR from NEMA.
4.	Review of PR by NEMA	NEMA	30 days after receipt of PR.

5.	Communication of findings from NEMA review	NEMA	45 days after receipt of PR.

Typical outcomes of review of Project Reports from NEMA are likely to be as shown as follows:

1. ***Project investment is approved***. Where NEMA and lead agencies ascertain that a project report has disclosed adequate mitigation for identified impacts, the project is approved by NEMA upon which, conditions attached to grant of an Environmental License are issued. Once these are fulfilled, an Environmental License is also issued subject to conditions which will be specific to the sub project in question. Among these is the requirement that the scheme design should not be altered without approval by NEMA. As well, an audit report is required of each project after the first year of completion.
2. ***Project Report discloses potential for major irreversible adverse impacts***. In this case, NEMA may not approve the project.

Table 4: Possible Outcomes of NEMA Review of Project Reports

Outcome	Recommendation	Important precautions
Project found to have no significant Social and Environmental Impacts or Project report discloses sufficient adaptation and mitigation measures	An Environmental License will be issued by NEMA	Project report must disclose adequate adaptation and mitigation measures and show proof of comprehensive consultations within the area of influence.
Significant adverse social and environmental impacts found or Project Report fails to disclose adequate adaptation and mitigation measures.	ESIA will be required by NEMA	As Above
A proponent is dissatisfied with the outcome of the NEMA review.	An Appeal is provided for	

In the eventuality that a Project cannot be approved by NEMA on the basis of a Project Report, the proponent will be advised to undertake an ESIA leading to development of a fully-fledged Environmental and Social Impact Assessment Study Report. Figure 1 below outlines the ESIA process and review to be followed in an event that a determination for a full scale ESIA is arrived at by NEMA.

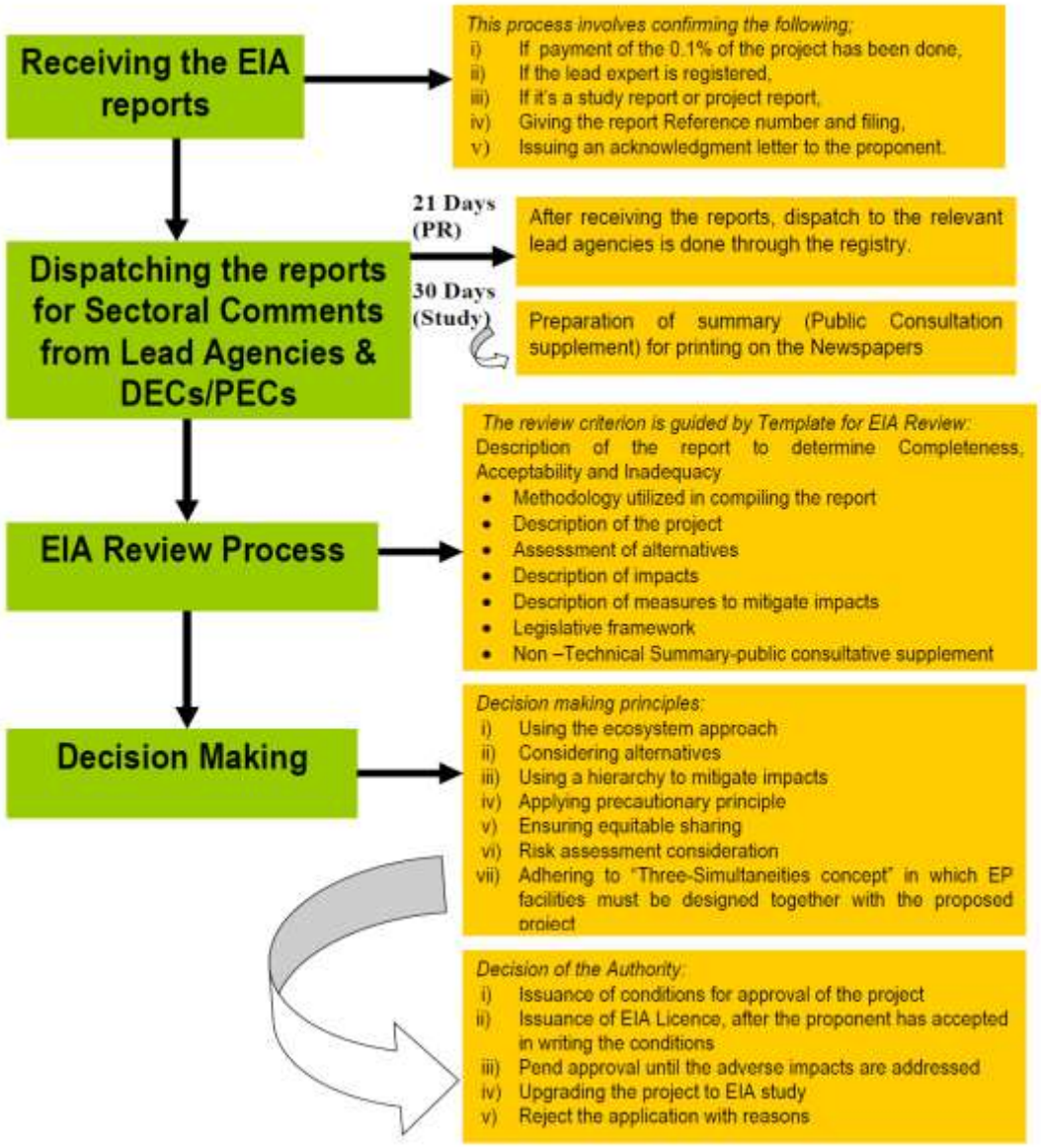

Figure 1: EIA Process in Kenya

8. PUBLIC DISCLOSURE AND STAKEHOLDER ENGAGEMENT

8.1. ESMF Disclosure

The Adaptation Fund disclosure policies require that ESMF reports for projects are made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESMF documents is also a requirement of the Kenya environmental procedures. MEF in collaboration with the line agencies and NEMA will make available copies of the ESMF and ESIAs on the respective websites and offices of the ministries. Public notice in the media should be used to serve as information source to the public. However, the ESIAs will have to be

advertised in the local newspaper, website of MEF. The notification should provide:

8.2. Public Consultation

The implementation of the project under the DRESS_EA will require that public consultation and stakeholder engagement is carried out as a means of gathering information on public concerns, issues, perception, fears and suggestions on proposed investment. Public consultation will be conducted in line with the requirements of Climate Change Act 2016 section 5 which calls for public consultations which shall be undertaken in a manner that ensures the public contribution makes an impact on the threshold of decision making and the project being implemented. This will also be conducted in line with the requirements of Environmental Management and Coordination Act (EMCA) which calls for utilisation of all forms of consultation and stakeholder engagement and the AF's requirements for public consultation. The consultations will be conducted through among others;

- Key Informant Interviews
- Direct Interviews with Project Affected Persons
- Workshops and Meetings
- Public Hearings (Barazas)
- Advertisements' in the print and electronic media
- Focus Group Discussions and
- Internet

Take photos of the meeting sessions as part of the evidence and present them under this section

9. GRIEVANCE REDRESS MECHANISM

According to the World Bank, a Grievance Redress Mechanism (GRM) states the concerns should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project.

The Project is required to establish a GRM to address any complaints that may arise during project implementation. Given the nature of the Project and the stakeholders, most of whom use online and social media to communicate and engage with their audiences, the Ministry of Environment and Forestry is recommended to set up an online grievance redressal system to be displayed on their website – www.environment.go.ke and www.kcckp.go.ke where individuals with the capacity to access the sites will utilize the platform. The system will enable submission of grievances by the aggrieved stakeholders.

Another GRM that will be utilized will be setting up on desks at the identified project sites preferably at the County offices in charge of environment and shall capitalize on the climate change units that have been setup and hence broaden their scope. These desks shall be operationalized and equipped with ICT infrastructure to support the receiving and transmission of the complaints to the GRM panel.

The GRM will be managed by a dedicated communication specialist from MEF who will forward grievances received to a GRM panel made up of representatives from MEF, GWPEA and OSS to scrutinize and take action for speedy and favorable redress of these grievances. Tracking grievances will also be facilitated on the portal through the system generated unique registration number. This grievance administration system will enable effective monitoring and submission of online monthly status report regarding the number of grievances received, disposed of and the ones pending.

9.1. Establishment of Grievance Redress Committee

Each project will have a Grievance Redress Committee (GRC) established for the purpose of handling grievances related to environmental and social concerns. The GRCs will be ad hoc institutions established primarily for the project and will have no legal mandate. The GRC will be established under the guidance of GWPEA (KWP)/ MEF and comprise of (where relevant):

- Project Affected Persons representative
- Environmental and Social Specialists from the PCU
- NEMA County/Sub County representative
- Representatives from relevant line ministries
- Contractor /Engineers / Relevant expertise
- Women and Youth Representatives
- Representation of active NGOs or CBOs in project area
- Private sector representative

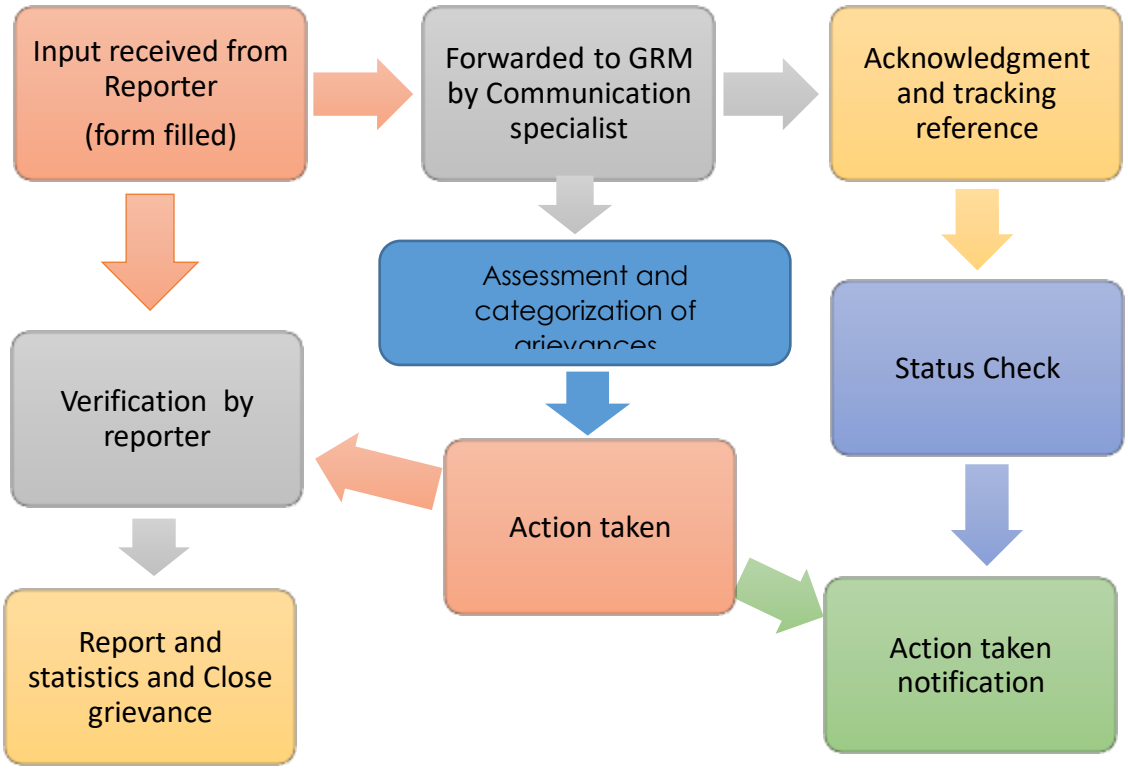

Figure 2: The grievance Redress Mechanism Process

If the GRC is unable to address the grievances, they may be forwards to the following for higher intervention:

9.1.1. National Environment Complaints Committee

The Public Complaints Committee on Environment is an organ established by the EMCA whose role is to address complaints by the public on projects and investments that the public oppose due to environmental and social impacts. In an event that the public is dissatisfied with the proposed projects the NECC will serve as the first stop for getting redress and if this fails then the National Environmental Tribunal (NET) another organ set up by EMCA to resolve environmental and social disputes on investments will form the next avenue for redress.

9.1.2. Land and Environment Courts

The Constitution of Kenya (GoK) has further provided for specific courts to deal with land and environment (Land and Environment Courts) that are charged with playing a vital role in reconciling environmental related disputes and these courts will serve as the ultimate stop in the event of disputes or complaints that cannot be resolved through other alternative means.

10. ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

A monitoring programme ensures that the implementation of mitigation and enhancement measures contribute to the achievement of the desired management objectives and outcomes. The monitoring process, the selection, development and evaluation of indicators should be based on their relevance and feasibility after development of the site and Project specific EIAs and ESMPs**.** The key issues that have to be monitored among others are:

1) the status of the biological conditions;
2) status of the physical works;
3) the technical and environmental and social requirements non-compliance;
4) proposed corrective and remedial action plans and agreed timelines,
5) the effectiveness of environmental and social measures adopted.

11. ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP)

The management of Environment and social impacts during project implementation shall be guided by an Environment and social management plan as outlined below;

Aspect	Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Monitoring Indicators	Monitoring schedule	Responsibility for monitoring	Timing and frequency	Budget
Construction of trench and mound at different sites.	➢ Physical obstruction of migration routes / pathways.	➢ Consultations to be held with local communities once final site locations have been identified to ensure that the migration routes are avoided during implementation of activities.		Comprehensive ESIA Report	TBD		Pre-Start	TBD
Vegetation Clearance for water harvesting and storage sites construction	➢ Loss of fauna, ➢ bio diversity, ➢ loss of soil/sediment stabilisation increasing soil erosion, ➢ Loss of livelihood.	➢ Selected sites should factor in and where possible avoid encroachment of grazing lands. ➢ Pre-survey the proposed construction site areas to avoid sensitive habitats that have high diversity of indigenous plants. ➢ Minimise vegetation clearance to As Low as Reasonably Practical (ALARP) and limit the clearance to construction areas. ➢ Avoid cutting large trees with a		Comprehensive ESIA Report	TBD		Pre start Daily during construction.	TBD

		diameter >20cm.						
Drilling of water boreholes	➢ Increased water supply	➢ The water boreholes drilled will be handed over to the community as part of the drought management project. This will increase the amount of water in circulation.		Community grievances reports Comprehensive ESIA Report	TBD		Pre-Start	TBD
Noise from drilling of water boreholes and dam construction.	➢ Disturbance to local populations, fauna and livestock.	➢ Ear muffs/plugs and other protective devices should be used in noise-prone areas and as specified in the Occupational Safety and Health Act. ➢ Apply a noise mitigation policy for all operations in accordance with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations.		Community grievances Comprehensive ESIA Report	TBD		Daily during operations	TBD
Site security and workers safety	➢ Petty crimes from local population ➢ Health and safety issues if local population able to access site.	➢ (Which company) Employ a company to oversee security arrangements on site		Workers and community grievances Security reports	TBD		Daily Security reports Grievances recorded throughout project.	TBD
Population influx	➢ Inappropriate relationships between the project workers and local	➢ (The company) shall provide a work ethics code of conduct for all project workers and		➢ Training records. Workers and Community				

	communities and pastoralists which may result in possible increase in crime rate and other social decadence, erosion of culture, religious and social values.	contractors which. ➢ (The company) shall train all staff and contractors in its use.		Grievance reports				
	➢ Influx of foreign national project personnel to a local community may transfer communicable disease, including HIV. ➢ Influx of local population / refugees to project area seeking jobs / compensation leading to social unrest.	➢ (The company) shall provide a work ethics code of conduct for all project workers and contractors which (The company) shall train all staff and contractors in its use.	➢ Training records. ➢ Workers and Community Grievance reports	➢ Training records. Workers and Community Grievance reports			➢ Grievances to be recorded throughout project.	
Local recruitment	➢ Recruitment of local population during the project bringing economic benefit to the area.	➢ (The company) shall come up with and implement a local procurement strategy and local hiring policy that shall be consulted on and communicated to the community leaders and local council. ➢ Implement a Social Engagement Plan - SEP	➢ Consultation report/minutes ➢ Community Grievance reports.	➢ Consultation report/minutes Community Grievance reports.			➢ Grievances to be recorded throughout project.	
Increased traffic	➢ Injury or death to local population or livestock.	➢ (The company) shall set up and implement a traffic	➢	➢ Community Grievance reports			Grievances to be recorded	

		management plan to include route restriction, and enforced speed restrictions. ➢ (The company) to agree on compensation value for livestock in compensation plans to be prepared in consultation with County Governments ahead of project start.		Project incident reports.			throughout project.	
➢ **Earth moving**	➢ Air pollution (exhaust and dust emissions), Potential soil erosion, ➢ Siltation to downstream ➢ water, ➢ Noise and vibrations from earth moving, ➢ Oil spills from contractors machinery Improper disposal of spoil earth materials	➢ Construction areas to be watered down at different intervals to curb the dust ➢ Limit construction to during daytime, ➢ Sprinkle water on the excavated sections to abate dust emissions, ➢ Practice soil control measures(terracing) ➢ Spoil dumping only in approved locations		➢ Community Grievance reports ➢ Project incident reports ➢ Noise monitoring records			➢ Grievances to be recorded throughout project. ➢ Daily during operations	

➢ **Health and Sanitation** ➢ **Waste Management**	➢ Provision of breeding grounds for vectors to thrive e.g. mosquitoes ➢ Risks from water borne diseases, ➢ Water pollution from surrounding land-use activities e.g. Irrigation, ➢ Risk from introduction of impurity to the water reservoir ➢ Potential contamination of stored water through introduction of impurities, wastewater and solid waste.	➢ Ensuring security at the reservoirs especially at the dams' area at all time. ➢ Conduct regular water quality monitoring and maintenance of the water supply system ➢ Influence the surrounding land-use activities, ➢ Creation of awareness on water Resource management and conservation, ➢ The water treatment works should be provided with waste collection yard with a removal schedule		➢ Workers and community grievances ➢ Security reports ➢ Water quality monitoring reports			➢ Grievances to be recorded throughout project. ➢ Daily during operations	
➢ **Socio-economic**	➢ Increased crop yields from change in land-use practices ➢ Availability of clean and safe water for the communities ➢ Creation of employment to locals, ➢ Vandalism of water pipelines infrastructure, ⎫ Wastage of water and leakages at consumer points,	➢ Training on climate smart agricultural practice ➢ Creation of awareness on water Resource management and conservation, (with the help of the communities) ➢ Creation and Implementation of a Social Engagement Plan – SEP ➢ Provide appropriate safe access points		➢ Training records. ➢ Workers and community grievances ➢ Security reports Water quality monitoring reports			➢ Daily during operations	

		of water for the communities						
	➢ Poor sanitation in the surrounding homesteads	➢ Integrate a comprehensive Land Use Management Plan, Pest Control Management Plan and a Water Use Plan						
➢ **Better agricultural practices e.g. Crop rotation, intercropping, livestock reduction**	➢ Resistance from the community	➢ Further training on agricultural training and benefits.		➢ Training records. ➢ Workers and community grievances			➢ Grievances to be recorded throughout project.	

12. CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING FOR ESMF IMPLEMENTATION

12.1. Institutional Capacity for ESMF Implementation

The principal institution that will provide overall coordination including administration of the DRESS-EA is the Ministry of Environment and Forestry- Climate Change Directorate in order to ensure environmentally sound design and management of proposed project investments. However, other institutions will be directly or indirectly involved and they include among others: -

- Kenya Meteorological Department
- National Environment Management Authority
- Ministry of Finance for disbursement of funds
- Kenya Water Partnership

12.2. Ministry of Environment and Forestry (MEF)

MEF is the principal implementing institution for this project and a senior official in the Ministry will be the overall Project Coordinator who will work with the National Consultant. MEF will also be responsible for day to-day implementation (project management, financial management, procurement, disbursement, monitoring, including environmental and social aspects of the project etc.) with advice from the National Consultant for all components.

12.3. Other Relevant Government line ministries and agencies

The technical capacity and capability of the institutions that will be implementing the ESMF for the DRESS-EA will require bolstering in order to ensure effective implementation of the Environmental and Social Management Framework (ESMF). At present, several key partners in the DRESS-EA do not have to a great extent in-house capacity and specialist in environment and social safeguards.

A capacity needs assessment of the implementing partner institutions on social and environmental evaluation, screening, mitigation, adaptation and monitoring will be necessary as part of the capacity strengthening project. This ESMF proposes capacity building by way of awareness creation and sensitization, actual training through workshops and seminars as well as short courses as described below for different stakeholder and implementing partners within the DRESS-EA Project.

12.4. Identification of Capacity Needs

The first step in pursuing capacity building will be to identify the capacity needs of the various stakeholders. Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also involves organizational development, the elaboration of relevant management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community). The capacity building requirements will mostly be in the form of training workshops and seminars.

12.5. Technical Capacity Enhancement

Awareness creation, training and sensitization will be required for personnel of the following institutions.

- National Environment Management Authority
- Environmental and Social officers from implementing partner ministries and agencies
- Local Engineering Contractors who will be contracted or sub contracted to undertake the construction works
- Local Governments Authorities
- County Environment Officers

Training will focus on:

- Stakeholder engagement, consultation and partnerships;
- ESIA law, relevant environmental policies;
- Development of adaptation and mitigation measures and Environmental Management Plans;
- Thorough review of Country ESIA procedures, Environmental Management Policies &
  Guidelines and WB safeguards as well as their implementation and enforcement;
- The group will also be trained on use and application of ESMF tools (Screening checklists, ESIA), their review, implementation and enforcement;
- Participants will be trained on environmental reporting, monitoring and follow-up of ESMF;
- Community Consultation/Participatory Planning
- Significant emphasis will be placed on understanding ESIA procedures, Environmental

- Management policies & guidelines, WB safeguards, implementation and enforcement
- Reporting, monitoring and follow-up of ESMF

Training Aspect	Target Group
EIA law, relevant Environment policies and guidelines	Government agency representatives including county level officials, NGOs, CBOs
Relevant social laws and policies	Government agency representatives including county level officials, Local Government, Private Sector, NGOs, CBOs and community members.

Table 5: Training directly linked to implementation ESMP

	PCU and Central Govt. Agencies	County Government	Private Sector	NGO & CBO	Community
Role of ESMF in DRESS-EA	Awareness	Sensitization	Sensitization	Sensitization	Sensitization
Identification of Indicators and data collection		Training Sensitization	Training Sensitization	Training Sensitization	Training Sensitization
Identification of environmental and social Impacts		Training	Training	Training	Training
Determination of negative and positive impact of project investments	Training	Training	Training	Training	Awareness
Development of adaptation and mitigation measures and Environmental Management Plan including Institutional Responsibility Framework and Budget.		Training	Training	Training	Training
EIA procedures, Environmental Management policies & guidelines, implementation and enforcement	Training	Sensitization	Sensitization	Sensitization	Sensitization
Use and application of ESMP tools (Screening checklists, ESIA, EA)	Training	Training	Training	Training	Training
Review of ESMP tools, implementation and enforcement	Training	Training	Sensitization	Training	Sensitization
Reporting, monitoring and follow up of ESMP	Sensitization	Training	Training	Training	Sensitization
Training of Consultants on Public Consultation Process	Training	Training	Training	Training	Sensitization

13. INSTITUTIONAL ARRANGEMENT AND IMPLEMENTATION RESPONSIBILITIES

The capacity building activities outlined above are to support the enhancement and implementation of the project's environmental and social management plan. The Implementing Authorities will oversee the implementation of all mitigation measures, especially those integrated in the program design. The County sub county local Government administrations will also make all necessary arrangements at all levels in the identification of sites and their acquisition. At this stage, a broader view of Environmental and Social Management Plan (ESMP) for the proposed program has been developed, but ESMP for each intervention will be formulated during the detail design for each sub-project. Main institutions and officers that will be involved in the implementation of proposed ESMP, include the Ministry of Environment and Forestry represented by the Climate Change Directorates, Project team, County Government. Contractor, Resident Engineer, Environment, Agriculture, Veterinary and Water officers.

13.1. Main Institutions and Officers that will be involved in the Implementation of the ESMF

Institution	Mandate
Ministry of Environment and Forestry	The Ministry, through its Climate Change Directorate will monitor all activities. Capacity building will include full time specialists in social and environmental assessments review and monitoring and evaluation. They are also responsible to earmark budget and properly implement mitigation measures proposed by the general ESMP, ESIA studies and other relevant documents.
National Environment Management Authority (NEMA)	Oversee, coordinate and supervise environmental management. NEMA's overall goal is to promote sound environmental management and prudent use of natural resources in Uganda.
Ministry of labour	The objectives of the MOL are to minimize Occupational Accidents, Diseases and Injuries. promote good Health of the Worker at the Workplace promote good Working Conditions, promote construction of Safe and Healthy workplaces, promote awareness of Occupational Safety and Health among Workers, Employers and the General Public through Training. The ministry, through its Directorate of Occupational Safety and Health Services will be responsible for registering the workplace and monitoring of conditions under which employees on the project are subjected.
County Government Administration Structures	County officers are stakeholders in the Project and had input into the EIA and ESMP process and will be involved in implementation of the project as well as subsequent monitoring. They will also take part in grievance mechanisms and sensitization of communities especially HIV/AIDS aspect.
County Governments represented by CEC Agriculture, CDOs and Veterinary Officers	The Ministry of Environment and Forestry/ CCD in collaboration with the respective County Governments will be primarily responsible for program planning, management and overall coordination within the County and Sub-county. The assigned environmental and social personnel will also be responsible in conducting environmental and social screening, monitoring and following up of the implementation of the proposed mitigation measures.

County Environment Officer (CEOs)	CEOs are expected to review and approve ESIA documents, and oversee the Environment and social aspects of the Project. They will carry out spot checks on programs to confirm that environmental and social screening and environmental management plans are properly done. They will also advise the implementers including contractors in regard to impacts beyond the generic issues, determining if the mitigation measures are acceptable or program redesign is required.
Water Resources Users Authority (WRUA)	WRUA management committees will act on behalf of the community in planning and managing of natural resources management activities and water resources management activities within the catchment. Each Community Water and Sanitation Committee will be responsible for facilitating participatory planning and ensuring that implementation of mitigation measures are carried out.
Beneficiary communities	Being the primary beneficiaries of the project, the community will be made to participate fully in all aspects of the program including project identification, preparation, implementation, operation and maintenance.

The following table shows the proposed share of responsibilities between the different organizations involved in the implementation of the DRESS-EA implementation of the environmental management process.

Implementing Agencies	• Contract consultants for ESIAs study on ToRs prepared for each program and reviewed by the relevant institutions. • Designate focal staffs that will take responsibility for environmental screening and generally for environmental management and get trained accordingly- this staff will ultimately conduct Environmental and Social Screening and supervise the implementation of mitigation measures proposed by ESS, ESIAs, ESM and by the Guidelines for Construction Contractors • Designate technical supervisor of works, who, in the absence of the environmental focal staff mentioned above, will supervise the implementation of mitigation measures • Take responsibility for and supervise the implementation of environmental mitigation measures at construction and operation phases • Take responsibility for and supervise the implementation of monitoring measures • Provide an annual environmental monitoring report to the review of the Ministry of Environment and Forestry
Construction contractors	• Implement the ESMP
Construction supervision consultants	• Take responsibility for and supervise the implementation of the ESMP
ESIA Consultants	• Develop ESIAs where required
CEO's	• Participate in the provisions of training for regional, District and community experts • Participate in the finalization of the screening forms based on this ESMF • Supervise the development of ESIAs by consultants where required, review Terms of Reference, draft ESIAs and participate in public consultations

	• Supervise the monitoring of environmental mitigations implemented by construction contractors • Supervise the implementation of this ESMF in the project
Ministry of Environment and Forestry	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs • Facilitate and provide training for other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and monitoring processes
GWPEA (KWP)	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs • Facilitate and provide training for and other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and monitoring processes
OSS	• Review the draft ESMF • Review ESIAs • Monitor the overall implementation of ESMF, including the review of annual environmental reports provided by the MWE

14. REPORTING

The ESMP will be implemented by the DRESS-EA executing agency, Ministry of Environment and Forestry, Climate Change Directorate. The MEF-CCD will collaborate with the safeguard's specialist within the PCU, The National Consultant, GWPEA and OSS to ensure effective execution. A summary of the stages and institutional responsibilities for the screening, preparation, assessment, approval and implementation of the DRESS-EA project activities is outlines below in the table.

Sno.	Stage	Institutional responsibility	Implementation responsibility
1.	Screening of Environmental and Social Infrastructure Project to assist in project formulation using checklist	MEF-CCD/ GWPEA (KWP)	Environmental Officer (EO) /Safeguard specialists at MEF-CCD and PCU
	Statutory Environmental Registration of DRESS-EA Project	MEF-CCD	Environmental Officer executing agency and PCU
2.	Determination of appropriate environmental assessment level/ category	NEMA	
2.1.	Selection Validation	OSS	
3.	Implementation of environmental assessment	MEF-CCD	Environmental Officer executing agency and PCU
3.1.	Preparation of Terms of Reference	GWPEA	
3.2.	Validation of ESIA/ESMP TOR	NEMA/ OSS	PCU Safeguard Specialist
3.3.	Realization of the EIA, Public Consultation Integration of environmental and social	MEF-CCD, GWPEA	Environmental Officer/ Procurement Officer/ PMU Safeguard Specialist

	management plan issues in the tendering and project implementation		
4.	Review and Approval	NEMA/ OSS/ MEF	
4.1.	Simple ESIA/ESMP Approval (Category B and C)	MEF/ GWPEA (KWP)	Environmental Officer/ National Consultant/ Project manager
5.	Public Consultation and disclosure	MEF-CCD/ KWP (KWP)	Environment Officer/ PCU Safeguard specialist
6.	Surveillance and monitoring	MEF -CCD/NEMA/ GWPEA (KWP)	Environmental Officer/National Consultant/ PCU Safeguard Specialist
7.	Development of monitoring indicators	GWPEA/ MEF-CCD	Regional Consultant/ National Consultant/ Environmental Officer /PCU Safeguard Specialist
8.			

15. ESTIMATED ESMF IMPLEMENTATION COSTS

The ESMP for each sub-project will outline the appropriate budget required to implement measures for mitigation and monitoring. It will also indicate the costs of extra training and capacity building required. Costs should be calculated based on estimates provided by Contractors or implementing agencies for any mitigation measures required during implementation of agreed upon activities including civil works. This should include the costs of mitigation measures as well as monitoring.

16. CONCLUSION

This ESMF has been developed through a widely consultative process and basing on experiences and lessons learnt from similar projects. It will be helpful in addressing environmental and social issues that apply to or might be triggered by the planned project activities of the DRESS-EA Project. Adverse Impacts of the project will include, Increased incidences of diseases, Increased accidents and occupational hazards, Disturbance in socio-economic activities, Increased soil erosion, Increased siltation of the aquatic habitats, Disturbance of floral and faunal communities, Increased noise levels, Gaseous emissions among others.

Sub-Project-specific Environmental and Social Management Plans (ESMPs) shall be developed in a manner that complies with the project ESMF, Adaptation Finds Environment and Social Policy and NEMA guidelines for assessing and managing environmental and social risks to address the above projected adverse impacts but also to enhance the positive benefits of this project.

17. REFERENCES

Climate Change Act 2016
County Integrated Development plans for Samburu and Kitui 2018
Government of Kenya Antiquities and Monuments Act, Cap
Government of Kenya Environmental Management and Coordination Act 1999
Government of Kenya Forest Act
Government of Kenya Land Control Act
Government of Kenya Local Government Act
Government of Kenya National Policy on Environment and Development Sessional Paper No. 6 of 1999
Government of Kenya Occupational Health and Safety Act
Government of Kenya Physical Planning Act
Government of Kenya The Employment Act
Government of Kenya The Lakes and Rivers Act Chapter 409 Laws of
Government of Kenya The Land Acquisition Act
Government of Kenya The Trust Land Act
Government of Kenya Vision 2030
Government of Kenya Water Act 2002
Kenya Environment Policy
Kenya National Bureau of Statistics, Economic Survey 2018
National Adaptation Plan
National Climate Change Action Plan 2018 Draft
National Climate Change Response Strategy 2010
Sector Plan for Drought Risk Management and Ending Drought Emergencies 2013
Strategic Measures Employed by the National Drought Management Authority for Drought mitigation in Kenya 2018

18. ANNEXES

18.1. Annex 1: GRM Reporting template

TEMPLATE RECEIPT/SUMMARY OF COMPLAINT		
Instructions: Fill where applicable		
Received on (date):		
Tracking Number		
Received by:	**Email**	
	Note	
	Verbally	
Received and processed by (full name):		
Signature		
Summary of Complaint		
Complainant's full name		
Complainant's ID No		
Complainant's address/ location		
Complainant's address		
Complainant's email		

18.2. Annex 2: Attendance list for consultative stakeholder workshop

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

OSS

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Sub county Location/~~Position~~/village ~~organization~~	Gender	Telephone	~~Email~~ SIGNATURE
21	George M. Nzou	Nzunguni village Central/C-East	M	0722 689 618	[illegible]
22	[illegible] Mutua	[illegible] village	M	0722 7[illegible]	[illegible]
23	Eric Kiatu Mutua	Kitui central Mutonguni	M	0710324872	[illegible]
24	[illegible]	[illegible]	M	[illegible]	[illegible]
25	Florence [illegible]	[illegible]	F	[illegible]	[illegible]
26	[illegible]	[illegible]	F	[illegible]	[illegible]
27	Margaret [illegible]	Mutanga Kitui Central	F	0713[illegible]	[illegible]
28	[illegible]	[illegible]	F	[illegible]	[illegible]
	Francis Mwanzia	Miguni	M	[illegible]	[illegible]
29	[illegible]	[illegible]	F	[illegible]	[illegible]
30	[illegible]	[illegible]	M	0725305317	[illegible]
31	[illegible]	[illegible]	M	[illegible]	[illegible]
32	[illegible]	[illegible]	M	[illegible]	[illegible]
33	[illegible]	[illegible]	F	0723251529	[illegible]
34	[illegible]	[illegible]	M	0790833131	[illegible]
35	[illegible]	[illegible]	F	[illegible]	[illegible]

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KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Sub-county Location/~~Position~~/ organization / village	Gender	Telephone	~~Email~~ Signature
11	Kioko Mutinda	[illegible]	M	0717023[illegible]	[illegible]
12	Elizabeth M. David	Kyonza Kitui Rural	F	0725687193	[illegible]
13	Julius M. Mbusi	Kitui West	M	0715811852	[illegible]
14	Dorothy Seyyid	Mutonguni Kwavonza/Kitui Rural	F	0727[illegible]	[illegible]
15	Jethro Kitili	Kwavonza/Kitui Rural	M	0700902239	[illegible]
16	Lilian Mwamburi	Kwa vonza/Kitui Rural	F	[illegible]	[illegible]
17	Alex Muthoka	KFP-Chairman	M	0721466207	[illegible]
18	Reuben Mutua	K/Vonza Kitui Rural	M	0717156018	[illegible]
19	Fredrick Mutele	Mulutu Kitui Central	M	0721690649	[illegible]
20	Rolex Mulwa	Kwa vonza Rural	M	0715837945	[illegible]

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

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KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Subcounty – Location/~~Position~~/ organization County	Gender	Telephone	~~Email~~ / SIGN
1	JANUARIUS MWAKA	[illegible] / Kitui East	M	0721826364	[signature]
2	[illegible]	[illegible] / Kitui Central	M	0728[illegible]	[signature]
3	REGINA JOHN	Ikanga Mutomo	F	0721960205	[signature]
4	[illegible]	[illegible] Kitui Rural	M	0721315303	[signature]
5	Esther Kanini	Mutomo South	F	0700560069	[signature]
6	ROSE M. KAVI	Kitui West	F	0704[illegible]	[signature]
7	[illegible]	[illegible] Kitui Rural	F	0717[illegible]	[signature]
8	[illegible]	[illegible] Ward Kitui Rural	M	0723[illegible]	[signature]
9	Felix Syomana	Kauwi Kitui West	M	0714206670	[signature]
10	WAMBUA KAKANZA	Kitui Rural [illegible]	M	0726450124	[signature]

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

No.	Name	Location/~~Position~~/ village ~~organization~~ Sub county	Gender	Telephone	~~Email~~ SIGNATURE
36	[illegible]	Lower Yatta	F	0719[illegible]	[signature]
37	[illegible] Musyoki	Lower Yatta	F	0727133080	[signature]
38	[illegible]	Lower Yatta	F	0715[illegible]	[signature]
39	[illegible]	Kyamisa	M	0712651360	[signature]
40	[illegible]	[illegible]	F	0721[illegible]	[signature]
41	[illegible]	Ikanga - Kitui South	F	0726835050	[signature]
42	[illegible]	[illegible]	M	07[illegible]	[signature]
43	[illegible]	Kitui [illegible]	M	0722524365	[signature]
44	GEORGE SANGA	KWP	M	0725945961	[signature]
45	[illegible]	[illegible]	M	0776[illegible]	[signature]
46	Steve Muhangi	MEF	M	[illegible]	[signature]
48	PETER [illegible]	[illegible]	M	07[illegible]413	[signature]
49	Lawrence J.B. [illegible]	GWPEA/OSS Consultant	M	+256772576985	[signature]
50	JAIRUS KITHEKA	Mutomo	M	0707538297	[signature]

PROJECT: STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

GUIDELINES FOR DEVELOPING AN ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

COUNTRY: DJIBOUTI

MARCH 2019

Table des matières

1. Introduction

The IGAD member states face severe water constraints and prolonged droughts. Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm of rainfall annually (IGAD 2013)[1]. It is predicted that the frequency and intensity of droughts would increase because of climate change, especially in semi-arid areas. In fact, climate change has exacerbated drought occurrences due to high anomalies in precipitation. From 2015 to-date, high rainfall anomalies have been recorded. Moreover, the region faces uncontrolled activities such as deforestation and poor agricultural practices that led to reduced water retention capacities, surface runoffs, and soil cover losses. Such activities not only impact negatively on water resources, environment and other ecosystems that serve as community livelihood sources but also increase their vulnerability to droughts. Significantly reduced precipitation levels lead to pollution, food insecurity, civil strife over water, food and pastures, the drying-up of rivers, streams and aquifers as well as loss of plant available water in the soils on which smallholder farmers and pastoralists derive their livelihoods.

The dominant livelihoods in the region are agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems. Among smallholder farmers and pastoralists within the IGAD region, are women, children, youth and elderly that are most vulnerable groups. The causes for vulnerability to droughts is attributed to climate change that has led to significantly reduced precipitation in the region, resulting in low adaptive capacity by communities especially the smallholder farmers and pastoralists. It also integrates inadequate innovative adaptation actions to droughts, poor early warning systems and insufficient knowledge and skills in drought management. Climate change contributes to higher temperatures in the region thereby aggravating the impacts of drought. Higher temperatures result in greater evaporation, reduction in soil moisture, leading to drier conditions and failed rains. Crops and pastures suffer due to less water with eminent failed harvests and reduction of feed for livestock.

Drought and its consequences namely, degradation of environmental and natural resources, continues unabated largely due to climate changes, increased human population, inadequate institutional capacities, civil strife and high poverty levels in the region (IFRC, 2011)[2]. Water pollution, food insecurity, civil conflict over water, food, and pastures, drying up of rivers, streams and aquifers and the general land degradation (vegetation and soil degradation) are major impacts of droughts resulting from climate change. Due to the significant destructive climate change led effects of droughts on the region's economy, ecosystems and community livelihoods, smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been the most affected due to their limited coping mechanisms coupled with limited knowledge, skills and early warning information as well as the associated facilities to enable them to adapt to droughts.

[1] IGAD, 2013. IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) Strategy.
[2] IFRC (2011). Drought in the Horn of Africa: Preventing the next disaster. International Federation of the Red Cross and Red Crescent Societies, Geneva, Switzerland.

According from the National Adaptation Programme of Action (NAPA) of 2006 and Vulnerability, Risk Reduction, and Adaptation to Climate Change, Djibouti of World Bank document in 2011, the Climate change is expected to limit the productivity of agriculture in Djibouti, making the population more food insecure. Severe droughts in the past years (for example the one in 2008), followed by extreme floods, affected thousands of people. The Department of Agriculture estimated a loss between 4% and 5% of arable land. The increase in temperature and shifting rainfall patterns due to climate change are expected to lead to a decrease in yields of several crops, including vegetables and fruit.

2. Purpose of the ESMF

Since the specific project sites are yet to be determined based on consultations with stakeholders; the project will require development of an Environmental and Social Management Framework (ESMF) to ensure that its activities and sub-projects comply with National Environmental policies and laws including the National Agenda 2035, the Strategy for accelerated growth and job promotion 2019, The National environmental Programme 2019 and Country Programme Paper.

The ESMF is also to ensure compliance of the project with the Environmental and Social Policy of the adaptation Fund and its environmental and social principles. The policy requires that all projects be screened for their environmental and social impacts, that those impacts be identified, and that the proposed project be categorized according to its potential environmental and social impacts. All projects supported by the Fund have to be designed and implemented to meet its environmental and social principles, although it is recognized that depending on the nature and scale of a project all of the principles may not be relevant to every project.

From the initial analysis this project has been categorized as Category B according to the Adaptation Fund's categorization. It's a project with potential adverse impacts that are less adverse, fewer in number, smaller in scale, less widespread, reversible or easily mitigated.

This Environmental and Social Management Framework (ESMF) shall help to identify the environmental and social management and mitigation actions and provide guidance for the preparation of specific EIAs and ESMPs before physical project implementation in regard to activities and sub-projects that require them under the law.

3. Objectives of the ESMF

It's a policy and legal requirement for project implementers to ensure that all the negative environmental and social impacts of a project on the environment and communities are adequately mitigated while the positive ones are enhanced. The objective of the Environmental and Social Management Framework (ESMF) is, among others to provide an environmental and social screening process for the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project. It also provides guidance to the project implementation Staff, communities, and others stakeholders participating in the project regarding the sound

environmental and social management of sub- projects/Activities. In general this ESMF is prepared with the following objectives:

I. Screen for potential environmental and social impacts of the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project, components and sub- projects
II. Identify possible impacts and propose appropriate mitigation measures
III. Monitor implementation of the proposed mitigation and Enhancement measures

4. Project Description and Components

4.1. Overall Objective

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

The project is intended to strengthen the drought resilience of smallholder farmers and pastoralists by:

- Developing and promoting regional investments in drought early warning systems (EWS) and improving the existing ones
- Strengthening and improving the capacity of key stakeholders in drought risk management at regional, national and local levels
- Facilitating smallholder farmers and pastoralists inputs to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhancing knowledge management and information sharing on drought resilience at the considered levels

4.2. Project Components

The Project has four components. Component 1: Development and enhancement of a regional Drought Early Warning System, Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects, Component 3: Drought and Climate Change adaptation actions and Component 4: Knowledge management and awareness creation.

Component 1: Development and enhancement of a regional Drought Early Warning System

Key activities under this component will include:

- Conducting baseline studies and assessments to understand the current status of the existing EWS for different types of hazards
- Updating options of traditional EWS with modern EW technologies
- development of an EWS prototype to be used at the regional and national levels,

- equipping /upgrading selected weather stations
- Construction/renovation and equipping of EW information centers
- Supporting/equipping project beneficiaries to access EW information (e.g. devices including, brochure, SMS, Radio etc.)
- Development/Review EW information sharing frameworks
- Implementation action plan to operationalize the frameworks
- Inter-ministerial and sectorial meetings for data sharing
- National, regional and local EW information sharing Forums
- Incorporation of EW information into planning and budgeting processes of targeted countries
- Regular stakeholder EW information feedback platforms for farmers and pastoralists
- Quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders
- Conducting KAP surveys on EW information as well as developing periodic feedback user-friendly tools on accessing, utilizing
- Reporting EW information to mandated institutions

Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects

Key activities under this Component shall include;

- Development/updating of existing Disaster/Drought management plans (DMPs) at national and sub-national levels integrating CC aspects and adaptation actions into DMPs
- popularization and dissemination of the reviewed DMPs for use by the farmers and pastoralists
- Integration of DMPs into the national and sub-national development plans formulation of bye-laws and ordinances at sub-national and lower political units.
- Capacity needs assessment to identify gaps and hindrances to effective drought management,
- development of capacity building plans and capacity building materials exchange visits and learning tours for cross-learning in areas with successful drought management innovations
- Training staff in managing EW information centers and extension staff and artisans in drought adaptation interventions
- community training workshops for farmers and pastoralists in drought risk management and adaptation measures and
- establishment of learning centers by farmers and pastoral groups for innovative Climate Smart agriculture interventions
- review/development of MoUs, protocols and stock route agreements for Drought Management and reducing conflict between farmers and pastoralists
- establishment of regional and national drought management multi-sectoral/stakeholder platforms to coordinate partner efforts and
- mobilization of resources for Drought Management jointly by regional and national partners

Component 3: Drought and Climate Change adaptation actions

The activities under this component shall include:

- assessment of surface water utilization potential and availability
- development of water Management Plans in project sites,
- construction of appropriate, innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation).
- construction of mini-irrigation and water delivery systems (e.g. gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),
- Protection of water wells and springs and promotion of soil and water conservation measures (e.g. terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening).
- Assessment on groundwater utilization potential and availability
- Development of groundwater Management Plans in project sites, Review/develop regulatory framework and guidelines on groundwater sources
- Restoration of degraded water catchments
- Promotion of **fast** growing and drought resistant crop and agrosilvopastoral systems (dryland agroforestry),
- Provision of inputs for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)
- Promotion of climate-smart agricultural practices
- Developing of rangeland management plans,
- Reduction of livestock stocking,
- Integrated pest and disease management,
- Introduction of drought-tolerant livestock breeds as well as those with low feed requirements.
- Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells and formation and/or facilitation of existing livestock associations/groups/cooperatives at the community level.
- Introduction and promotion of Index-based weather insurance in partnership with insurance companies,
- Drought risk assessments, generation,
- Analysis and sharing of market information and creating linkages between farmer and pastoralists associations at regional, national and sub-national levels to enable sharing of market information

- Pottery**,** Beekeeping, Energy saving stoves, Briquettes making, and interlocking bricks, growing of sisal and Aloe spp such *Aloe ferox* that grow in dryland and produce quick returns,
- Production of ropes and art crafts, making and marketing of aloe gel and provision of grants for undertaking innovative IGAs or drought adaptation actions Provision of inputs for value addition crop and livestock products.

Component 4: Knowledge management and awareness creation

The activities under this component are:

- Documenting lessons and best practices from project interventions
- Generating and packaging information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. policy briefs, brochures) adapted to the various stakeholders
- Sharing knowledge and information through the use of existing and popular platforms e.g. electronic and print media, telecom that is easily accessible to the stakeholders.

- Information generation on (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms,
- engagement of policymakers in the dissemination of drought management information and best practices and
- sharing and dissemination of information by drought management working groups

5. Policy, Legal and Institutional Frameworks

The implementation of the strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project in regard to environmenment and social issues shall be guided by the Country specific policy, legal and Institutional frameworks and other international acceptable policies standards and guidelines.

5.1. Policy Framework, institutional and legal

A l'instar de beaucoup de pays, la République de Djibouti s'est résolument tournée vers le développement durable. Il faut rappeler qu'historiquement ayant pris part, à travers son Comité National pour l'Environnement à la Conférence de Nations Unies sur l'Environnement et le Développement (CNUED) de 1992, Djibouti a pris conscience de l'importance de la protection de l'environnement et du développement durable dans son contexte de pays à conditions climatiques extrêmement difficiles et de pauvreté de sa population qui veut se donner les chances de prospérité et de bien-être. Les recommandations contenues dans le premier rapport du Comité National pour l'Environnement ont été repris par le second Plan quinquennal d'orientation des actions et des projets de développement économique et social (1991-1995) qui est le prolongement de la Loi d'orientation économique et sociale (1990-2003) dont les idées forces

sont entre autres la lutte contre la pauvreté et la protection de l'environnement considérées comme priorités nationales. C'est en réalité en 1996, suite la conjoncture économique difficile au sortir des conflits armés internes évoqués en introduction du présent rapport que le pays s'engage résolument dans un processus de planification environnementale avec le séminaire sur les Orientations Nationales en matière d'Environnement et la création de la Direction de l'Environnement2 suivie de l'adoption d'un projet de Programme Capacité 21 visant le renforcement des capacités nationales de gestion de l'environnement et la promotion d'une approche communautaire et participative pour la préparation et la mise en œuvre du Plan d'action Nationale pour l'Environnement (PANE). Après ce rappel historique, il faut dire que la politique nationale de protection de l'environnement à Djibouti doit prendre en compte la dimension environnementale dans les projets et programmes. En effet, l'analyse de la problématique environnementale a montré que l'augmentation de la population en inadéquation avec les ressources, principalement dans la capitale, la persistance des conditions climatiques défavorables, les systèmes d'exploitation inadaptés (ressources maritimes, élevage ave le surpâturage, agriculture,… et activités humaines) ont concomitamment entraîné une forte dégradation des ressources naturelles et de l'environnement. L'ensemble de ces facteurs est à l'origine d'une détérioration constante du cadre de vie que l'on soit en milieu urbain ou rural. Le but visé par la Politique de la Protection de l'Environnement de Djibouti et les stratégies élaborées jusqu'à ce jour, est : (i) de garantir un environnement sain et un développement durable par la prise en compte de la dimension 2 Entre temps, l'environnement avait été rattaché à la primature.

Cadre institutionnel du secteur de l'environnement

La loi n° 82/AN/00/4ème L du 17 mai 2000 portant création et organisation du Ministère de l'Habitat, de l'Urbanisme, de l'Environnement et de l'Aménagement du Territoire est le texte juridique de création du MHUEAT. Ce département ministériel est responsable au niveau du Gouvernement entre autres des questions d'environnement. Le décret N°2000-0251/PR/MHUEAT du 20 septembre 2000 fixe ses attributions et son organisation. L'article 4 du titre I du décret stipule "au titre de la politique de l'environnement, il (le MHUEAT) veille à la qualité de l'environnement, à la protection des espaces naturels et à la prévention, la réduction ou la suppression des pollutions et des nuisances de toutes sortes. Il exerce notamment, seul ou avec le concours des autres ministères concernés, les attributions suivantes :

- Il est responsable de la protection des paysages, des sites naturels, de la faune et de la flore terrestres et marines. Il s'assure de la préservation du littoral et des terroirs et s'associe à la gestion et la police de la chasse et de la pêche ;
- Il coordonne et assure le suivi de toutes les actions menées en faveur de l'environnement ;
- Il veille à la protection des espèces animales et s'associe à la gestion et la police de la chasse et de la pêche ;

- Il concourt au contrôle d'exploitation des carrières ainsi qu'à la protection, la police et la gestion des eaux (y compris dans le domaine maritime) et au maintien des ressources halieutiques ;
- Il exerce les attributions relatives à la préservation de la qualité de l'air et à la lutte contre l'effet de serre. Il participe à la coordination des actions de prévention des risques majeurs d'origines technologique ou naturelle ;
- Il définit les orientations de la politique sectorielle et propose la réglementation et les mesures propres à améliorer la qualité de la vie ;
- Il s'associe à l'identification, la mise en œuvre des stratégies d'utilisation des ressources naturelles ou énergétiques et au développement des énergies renouvelables ;
- Il participe à la définition et à la conduite des politiques d'équipement urbain ou industriel, de transports et de grandes infrastructures…"

Le cadre juridique national : Loi n° 51/AN/09/6ème L Portant Code de l'Environnement

Cette loi fait partie des tous les derniers textes adoptés en matière d'environnement à Djibouti. L'article 148 stipule que : Le Code de l'Environnement abroge et remplace la loi n°106/AN/4ème L portant Loi-cadre sur l'Environnement du 29 octobre 2000. Sont également abrogées la Loi n°76-599 du 7/07/76 relative à la prévention et à la répression de la pollution marine par les opérations d'immersion effectuées par les navires et les aéronefs et à la lutte contre la pollution ainsi que la Loi n°76-600 du 07/07/76 relative à la prévention et à la répression de la pollution par les opérations d'incinération. La loi n° 51/AN/09/6ème L Portant Code de l'Environnement affirme dans ses dispositions générales que « L'environnement de Djibouti est un patrimoine national, partie intégrante du patrimoine mondial. Sa préservation constitue de ce fait un intérêt primordial à l'échelle locale, nationale, régionale et internationale pour garantir les besoins des générations actuelles et futures. » De plus, elle dit que « Tout citoyen a droit à un environnement sain dans les conditions définies par la présente loi. Ce droit est assorti d'une obligation de préservation et de protection de l'environnement. ». Le chapitre II traite des objectifs et principes fondamentaux de gestion de l'environnement. Ainsi, son article 2 fixe les objectifs de la politique nationale de protection et de gestion de l'environnement sur la base des principes fondamentaux destinés à gérer et protéger l'environnement contre toutes formes de dégradation ou détérioration des ressources de l'environnement en vue d'assurer un développement durable.

La gestion et la protection de l'environnement pour le développement durable sont fondées sur les principes fondamentaux suivants :

- Principe de participation : la préservation de l'environnement constitue un intérêt suprême de la nation engageant la responsabilité collective de tous les citoyens et nécessitant la participation de tous à l'élaboration de la politique environnementale
- Principe d'intégration : la protection et la bonne gestion de l'environnement sont parties intégrantes de la politique nationale de développement économique, social et culturel

- Principe de planification : l'instauration d'un équilibre nécessaire entre les exigences du développement national et celles de la protection de l'environnement lors de l'élaboration des plans sectoriels de développement et l'intégration du concept du développement durable lors de l'élaboration et de l'exécution de ces plans ; et la prise en considération de la protection de l'environnement et de l'équilibre écologique lors de l'élaboration et de l'exécution des plans d'aménagement du territoire
- Principe pollueur-payeur : la mise en application effective des principes de l'usager payeur et du pollueur payeur en ce qui concerne la réalisation et la gestion des projets économiques et sociaux et la prestation de services. Tout préjudice consécutif à une atteinte à l'environnement engage la responsabilité directe ou indirecte de son auteur qui doit en assurer la réparation.
- Principe d'étude d'impact : toute utilisation des ressources de l'environnement peut donner lieu à une étude d'impact
- Principe de précaution : pour protéger l'environnement, des mesures de précaution doivent être largement appliquées par les Etats selon leurs capacités. En cas de risque de dommages graves ou irréversibles, l'absence de certitude scientifique absolue ne doit pas servir de prétexte pour remettre à plus tard l'adoption de mesures effectives visant à prévenir la dégradation de l'environnement
- Principe de coopération : le respect des accords internationaux en matière d'environnement lors de l'élaboration aussi bien des plans et programmes de développement que de la législation environnementale.

Quant à l'article 5, il indique les objectifs de la gestion et de la protection de l'environnement pour le développement durable (prévenir et anticiper toute action pouvant entraîner des impacts négatifs importants par la mise en œuvre de mécanismes spécifiques d'évaluation environnementale et de planification, protéger l'environnement contre toutes formes de pollution et de dégradation qu'elle qu'en soit l'origine, améliorer et maintenir le cadre de vie des populations dans un état satisfaisant, lutter contre les pollutions, nuisances et dégradation des ressources de l'environnement, source de pauvreté...etc.). Le chapitre III est consacré aux des instruments de gestion de l'environnement pour un développement durable qui sont entre autres : la création d'une Commission Nationale pour le Développement Durable (CNDD), la création d'un Fonds National pour l'Environnement. Le titre II traître de la protection des ressources de l'environnement et son chapitre i e la protection et de la préservation des ressources en eau qui intéresse le projet d'appui à la mobilisation des ressources en eau au plus point. Les ressources en eau constituent aux termes aux dispositions de la présente loi un bien public. Elles sont composées des eaux continentales et marines dont la protection est soumise, entre autres, et La protection des eaux incombent à l'Etat et aux collectivités locales. Selon l'article 17, Les eaux sont soumises à des normes de protection et d'utilisation qui sont établies par voie réglementaire. Et l'article 19 de renchérir « Tout rejet liquide supérieur aux normes et tout dépôt pouvant provoquer ou accroître la pollution des eaux sont interdits ». Le chapitre II aborde la protection et de la préservation des ressources en sol et sous-sol : Le sol et le sous-sol sont un patrimoine

commun dont l'utilisation est soumise aux principes généraux de gestion des ressources de l'environnement contenus dans la loi. Toute émission et/ou rejet de substances toxiques ou dangereuses dans le sol ou le sous-sol sont interdits. La liste de ces substances est fixée par voie réglementaire. En somme tous les compartiments de l'environnement (atmosphère, air, végétation, milieux aquatiques et marins, établissements humains...) ont l'objet de textes de protection et de préservation. Les situations critiques ont l'objet d'attentions particulières assorties de plans d'intervention d'urgence. Enfin, le titre IV aborde les sanctions administratives et pénales.

Décret N°2001-0011/PR/MHUEAT portant définition de la procédure d'étude d'impact environnemental

Le Décret N°2001-0011/PR/MHUEAT portant définition de la procédure d'étude d'impact environnemental constitue la consistance des textes de gestion de l'environnement concernant les grands travaux. Ce décret vise essentiellement :

- la prise en compte des préoccupations environnementales à toutes les phases de réalisation d'un projet, depuis sa conception jusqu'à la post fermeture, en passant par son exploitation ;
- à inventorier tous les vecteurs de changement dans la zone du projet ;
- à identifier tous les impacts négatifs et/ou positifs et proposer des mesures d'atténuation conséquentes et durables.

L'article 3 du titre II stipule " Toutes activités susceptibles d'induire des impacts négatifs sur l'environnement doivent faire l'objet d'une étude d'impact préalable. Les activités publiques sont également visées par le présent décret. L'étude d'impact doit être intégrée dans les études de faisabilité".

Les activités pour lesquelles l'étude d'impact est obligatoire sont annexées au décret.

Le décret insiste donc sur l'obligation de l'étude d'impact sur l'environnement et le respect de la procédure pour tous les projets, qu'ils soient publics ou privés, consistant en des travaux, des aménagements, agricole, minier, artisanal, commercial ou de transport dont la réalisation est susceptible de porter atteinte à l'environnement.

Le titre III a trait au contenu de l'étude d'impact et le décret décline les éléments suivants y relatifs : l'étude d'impact est réalisée à la diligence du promoteur qui peut sous son contrôle commettre des cabinets ou personnes physiques et morales spécialisées.

Les frais de réalisation de l'étude sont à sa charge ;

- le contenu doit refléter l'incidence prévisible du projet sur l'environnement qui doit suivre un canevas minimum décrit dans le décret. S'agissant de la procédure d'évaluation objet du titre IV du décret, elle est déclinée par la procédure ci-après :
- l'envergure et la profondeur de l'étude pourraient être définies de commun accord, avec le Ministère chargé de l'environnement, à la demande du promoteur ;

- l'étude est rédigée en français et en arabe ;
- elle est déposée auprès du Ministère chargé de l'Environnement par le promoteur ou le maître d'ouvrage en 5 exemplaires avec un résumé ne dépassant pas 20 pages ;
- le Ministère chargé de l'Environnement procède à l'évaluation du rapport d'étude d'impact (évaluation technique) qui associe les Ministères concernés par le projet ; d'autres personnes ressources peuvent être associées au processus d'évaluation et pour les projets d'envergure nationale, un avis du CNE est requis ;
- le REIE est sanctionné par une décision du Ministère chargé de l'Environnement, en cas de décision négative, le promoteur pourra demander un deuxième examen dans un délai n'excédant pas six (6) mois ;
- l'évaluation comprend deux phases : l'évaluation technique et évaluation par le public ;
- l'évaluation par le public se fait par le biais d'une enquête publique soit par consultation de document ;
- le délai d'évaluation, évaluation par le public y compris ne doit pas excéder six (6) mois, passé ce délai, l'autorisation de l'administration est réputée acquise sans toutefois que le promoteur ne se soustraie à toutes les réglementations environnementales et bonnes pratiques professionnelles ;
- l'évaluation est subordonnée au paiement d'une redevance fonction de l'investissement et de la catégorie de l'activité, laquelle est versée au Fonds National pour l'Environnement (FNE).

Les titres V et VI du décret sont consacrés à l'audience publique en matière d'étude d'impact environnementale et au suivi.

Enfin, les titres VII et VIII traitent des sanctions et des dispositions transitoires.

5.2. Other international institutions policies, Guidelines, operational safeguards and Standards relevant to the project.

5.2.1. Environmental and Social Policy for the adaptation Fund (Revised March 2016)

The policy is intended to ensure that in furthering the Fund's mission of addressing the adverse impacts of and risks posed by climate change, projects and programmes supported by the Fund do not result in unnecessary environmental and social harms. It is intended to help the fund to identify and manage the environmental and social risks of their activities, by assessing potential environmental and social harms and then by identifying and implementing steps to avoid, minimize, or mitigate those harms.

Adaptation Funds Environmental and Social Principles

All projects and programmes supported by the Fund shall be designed and implemented to meet the following environmental and social principles, although it is recognized that depending on

the nature and scale of a project or programme all of the principles may not be relevant to every project or programme

Environmental and Social Principles

tem	Principle	Scope	Triggered or not triggered
1	Compliance with the Law	Projects and programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	Triggered
2	Access and Equity	Projects and programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights neither they exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups	Triggered
3	Marginalized and Vulnerable Groups	Projects and programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	Triggered
4	Human Rights	Projects and programmes supported by the Fund shall respect and where applicable promote international human rights.	Triggered
5	Gender Equality and Women's Empowerment	Projects and programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund gender policy (b) receive comparable social and economic benefits; (c) receive comparable social and economic benefits; and (d) do not suffer disproportionate adverse effects during the development process.	Triggered
6	Core Labor Rights	Projects/programmes supported by the Fund shall meet the core labor standards as identified by the International Labor Organization	Triggered
7	Indigenous Peoples	The Fund shall not support projects and programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	Triggered
8	Involuntary Resettlement	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids or	Not Triggered

		minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation	
9	Protection of Natural Habitats	The Fund shall not support projects and programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities.	Triggered
10	Conservation of Biological Diversity	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species.	Triggered
11	Climate Change	Projects and programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	Triggered
12	Pollution Prevention and Resource Efficiency	Projects and programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants	Triggered
13	Public Health	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health.	Triggered
14	Physical and Cultural Heritage	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects and programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	Triggered
15	Lands and Soil Conservation	Projects and programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	Triggered

5.2.2. Environmental and Social Policy of Sahara and Sahel Observatory (OSS) of 2016

The Policy lays down principles and procedures to assess the environmental, social and gender impacts during the preparation and implementation of projects supported by OSS in the following circumstances**:**

a. Direct access under the GCF
b. Role as regional implementing entity for the Adaptation Fund

The policy also applies to projects receiving funding from

- the World Bank Group,
- the African Development Bank Group,
- the Global Environment Facility,
- the Green Climate Fund and
- the Adaptation Fund.

The project shall be designed and implemented to meet OSS Environmental and Social Performance Standards (PSs). However only the relevant ones shall be considered. These Performance Standards are in line with the international best practices for assessment of environmental and social risks e.g. those of the International Finance Corporation (IFC), Adaptation Fund, etc.

Environmental and Social Performance Standards (PSs)

Item	Performance Standard (PSs).	Scope	Triggered or Not Triggered
1	PS1:Assessment and management of environmental and social risks and impacts	PS1 outlines the need of OSS to establish and maintain an organizational structure that defines roles, responsibilities, and authority to implement the ESMS. This means designating personnel with E&S responsibilities and ensuring that resources are available for the effective implementation of the ESMS across OSS PS1 also requires that OSS identify the E&S risks and impacts associated with the project activities This means conducting an environmental and social due diligence (ESDD) at the project level to identify the risks and impacts associated with environmental, social, labour, occupational health and safety, and security of the activities considered for financing. As an outcome of the ESDD process, OSS can identify necessary mitigation or corrective measures for executing partners	Triggered
2	PS2: Labour and working conditions	a. Fair treatment, non-discrimination, equal opportunity; b. Good worker–management relationship; c. Comply with national employment and labour laws; d. Protect workers, in particular those in vulnerable categories; e. Promote occupational safety and health; f. Avoid use of forced labour or child labour	Triggered

3	PS3: Resource efficiency and pollution prevention	a. Avoid, minimize or reduce project-related pollution (Air, Water, Land, Noise, etc); b. More sustainable use of resources, including land, energy and water; c. Reduced project-related greenhouse gas emissions.	Triggered
4	PS4: Community health, safety and security	a. To anticipate and avoid adverse impacts on the health and safety of the affected community; b. To safeguard personnel and property in accordance with relevant human rights principles.	Triggered
5	PS5: Land acquisition and involuntary resettlement	a. Avoid/minimize adverse social and economic impacts from land acquisition or restrictions on land use: ➢ Avoid/minimize displacement; ➢ Provide alternative project designs; ➢ Avoid forced eviction. b. Improve or restore livelihoods and standards of living; c Improve living conditions among displaced persons by providing: ➢ Adequate housing; ➢ (ii) Security of tenure.	Triggered
6	PS6:Biodiversity Conservation and sustainable management of living natural resources	(a) Protection and conservation of biodiversity; (b) Maintenance of benefits from ecosystem services; (c) Promotion of sustainable management of living natural resources; (d) Integration of conservation needs and development priorities.	
7	PS7:Indigenous peoples	(a) Ensure full respect for indigenous peoples • human rights, dignity, aspirations; • livelihoods; • culture, knowledge, practices; (b) Avoid/minimize adverse impacts; (c) Sustainable and culturally appropriate development benefits and opportunities; (d) Free, prior and informed consent in certain circumstances.	Triggered
8	PS8:Cultural heritage	a. Protection and preservation of cultural heritage including avoiding the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. b. Promotion of equitable sharing of cultural heritage benefits.	Triggered
9	PS9: Gender Equity and Women's Empowerment	Both women and men: a. Participate fully and equitably; b. Receive comparable social and economic benefits; and c. (c) Do not suffer disproportionate adverse effects	Triggered
10	PS10: Access and Equity and protection of Human Rights	a. (a)Provide fair and equitable access in an inclusive manner b. (b)Does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. c. (c) Does not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups including	Triggered

		children, women and girls, the elderly, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. d. (d) Respect and where applicable promote human rights.	

In addition PSs emphasizes Environmental and Social Risk Assessment for all projects using the attached checklist (see Annex 1)

6. ENVIRONMENTAL AND SOCIAL BASELINE INFORMATION AT THE NATIONAL AND PROJECT AREA LEVELS

6.1. Physical Environnent

6.1.1. Location

Le paysage de la région de Dikhil se subdivise essentiellement en deux zones, l'une à l'Ouest (la plus grande) et l'autre à l'Est. A l'Ouest, on distingue une succession de grandes dépressions topographiques : Plaines de Gobaad (Ouest de Dikhil), Hanlé (Ouest de Yoboki), Gaggadé-Derela et de plateaux basaltiques (Dakka-Amaïlé, Yagger, Babbalou-Gabadou, Datalé, Gamaré).

L'altitude des plaines varient de 150 à 450 m du Nord vers le Sud.

Les massifs ont une altitude moyenne de 500 à 600 m et certains points culminent entre 900 et 1300 m (Dirablou, Yagger, Hemed). L'ensemble a une orientation Sud-Est vers le Nord-Ouest. Les plateaux correspondent aux affleurements des massifs de basaltes stratoïdes avec des intrusions de rhyolites (Babbalou...). L'épaisseur de cette série dépasse par endroits les 1 000 m. Cette série est marquée par une fracturation intense en phase avec la tectonique de la région. Elle recouvre les basaltes du Dalha, plus anciens et qui affleurent dans la partie Est du District.

A l'Est de la circonscription territoriale de Dikhil se localisent trois plaines qui, du chef-lieu de district au Golfe de Tadjourah, apparaissent par ordre décroissant de superficie : Grand Barra et Petit Barra et la Plaine de Qayd.

Cette série de dépressions géographiques, circonscrites généralement dans des reliefs basaltiques de faibles altitudes et dénivellations, se termine vers le Golfe de Tadjourah par une série montagneuse : Marian, Odob et Koron.

Ces grandes dépressions correspondent à des dépôts et formations sédimentaires continus depuis la période du Mio-Pliocène. Ce sont des séquences variées d'alluvions, de conglomérats, d'argile et de sédiments lacustres.

Ces dépressions étaient, en fait des lacs d'eau douce entre - 10 000 ans et - 6 000 ans, durant les phases climatiques humides. Les parties basses de ces plaines sont comblées de limons transportés par les effets combinés de l'érosion aréolaire ou latérale (qui s'effectue sur les

versants des modelés basaltiques) et de l'érosion linéaire ou verticale (qui s'effectue le long des talwegs des oueds endoréiques) pendant les phases climatiques humides[3].

En matière de ressources naturelles, il n'y a pas à notre connaissance de cartes sur l'hydrologie et la géologie nationale disponibles dans le District de Dikhil.

Une ressource souterraine existe dans le sud-ouest de la République de Djibouti, à environ 180 km de la capitale. Il s'agit d'un aquifère régional dépassant les frontières Djiboutiennes vers l'Éthiopie et réalimenté par des apports extérieurs. Un certain nombre d'indicateurs permettent aujourd'hui d'espérer, à partir de cet aquifère, la mobilisation d'une ressource en eau potentielle. Cependant, ni le volume d'eau exploitable, ni sa qualité en tant qu'eau de boisson ne peuvent, pour l'instant, être précisés. L'eau de cet aquifère pourrait, éventuellement, être utilisée, sous réserve de sa qualité et de sa quantité (renouvelable) et surtout de son coût de revient, en comparaison, notamment, de l'option de dessalement de l'eau de mer à Djibouti. Ce scénario vise à réduire la pression d'exploitation sur la nappe de Djibouti et satisfaire les besoins en eau de la capitale.

Les récents rapports d'étude de la Coopération Hydrogéologique Allemande, concernant les forages réalisés dans la Plaine de Hanlé, mettent en évidence une teneur en fluor largement excessive sur 3 des 5 forages testés. Toutefois, la profondeur de ces forages était insuffisante pour étudier correctement les potentialités de la nappe. Des forages à 300 à 400 mètres doivent être réalisés. Des reconnaissances géophysiques ont montré qu'il existe des aquifères à cette profondeur, mais l'on ne sait rien de leur caractéristiques chimiques et hydrauliques.

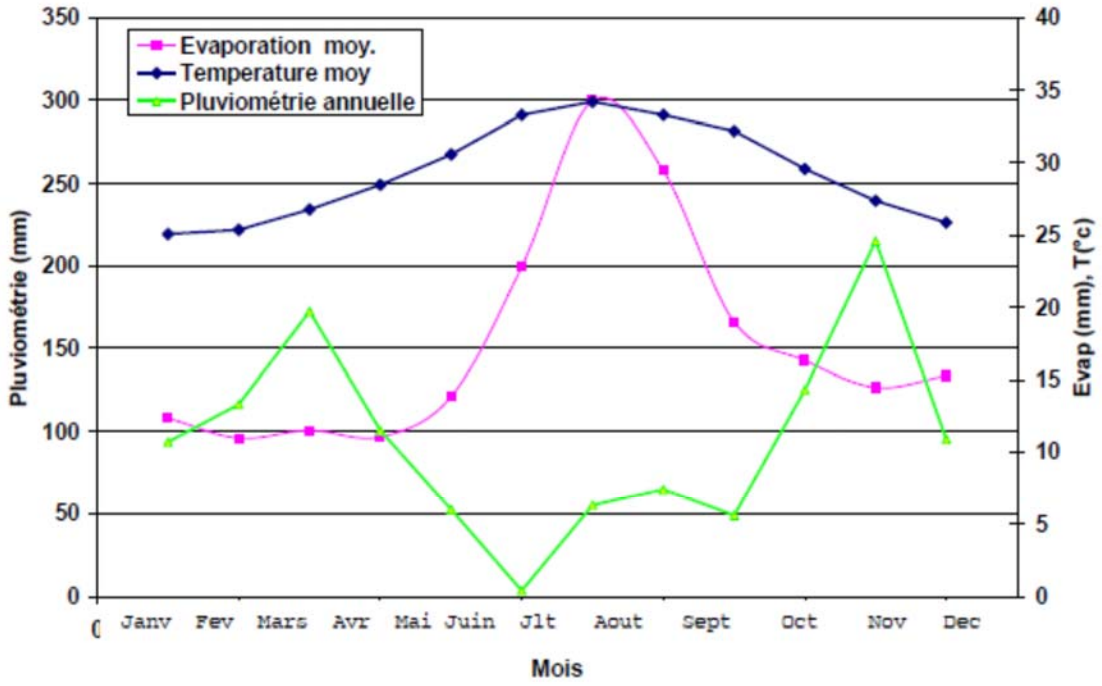
6.1.2. Climate, Rainfall and Temperature

Dans le pays, la moyenne annuelle des précipitations à l'échelle du pays est de l'ordre de 150 mm (voir carte en annexe). Le maximum des précipitations annuelles est observé dans les régions montagneuses à l'ouest de Tadjourah (massif du Goda).

Les précipitations diminuent brutalement en direction du nord-est vers la côte à Obock-Khor Angar-Doumeira avec 50 à 100 mm par an. Dans les parties au nord du pays, les précipitations annuelles sont de 100 à 150 mm (Dorra-Balho), alors que dans les régions de l'ouest (plaine de Hanlé, plaine de Gobaad) les précipitations dépassent 150 mm. Au sud du pays, dans la plaine littorale, les précipitations annuelles se situent entre 130 et 200 mm, et diminuent en direction de Dikhil.

Les données climatiques présentent deux régimes distincts : le versant maritime avec un climat aride à semi-aride du type méditerranéen et le versant continental qui lui est tropical et chaud. La pluviométrie varie de 50 mm (Obock) à 300-400 mm sur les hauteurs. La donnée altitudinale est ici majeure et détermine des étages de végétation caractéristiques. Notons que la violence des pluies est également une donnée fondamentale qu'il y a lieu de considérer de près. Quant aux températures, elles sont élevées avec des vents d'ouest et de nord-ouest qui accentuent le caractère aride du pays.

[3] Source : Programme de Réhabilitation



Source : Direction de l'Eau

6.1.3. Geology and Soils

Malgré l'indisponibilité de connaissance scientifiques fiables sur l'aptitude des sols dans la région de Dikhil et à lumière des connaissances empiriques qui nous ont été apporté par nos déplacements sur le terrain, le territoire couvert par la région de Dikhil est dominé par des formations géologiques basaltiques. Les conséquences visibles sont l'existence des matériaux rocailleux et des reliefs escarpés à proximité des chaînes de montagnes et celle de compositions plus sableuses et limoneuses dans les plaines et vallées, avec des pentes douces. L'aptitude et la réceptivité des sols aux **activités agricoles** sont concentrées dans les plaines d'épandage (Goobaad, Hanlé) et les vallées alluviales (Chekheïti) qui représentent des superficies importantes. Ces activités sont conditionnées par le facteur hydrologique qui est, toutefois très défavorable dans le District de Dikhil. Actuellement, par ailleurs, les zones fertiles font l'objet de l'invasion de la plante épineuse et envahissante, le *prosopis*.

L'élevage et son développement sont conditionnés aussi par la disponibilité de l'eau et de plantes fourragères. Celui est, continuellement, victime de la limitation et l'insuffisance de ces ressources déterminantes pour son développement

6.1.4. Hydrology and Drainage

Le réseau hydrographique est formé uniquement par des cours d'eau à écoulement temporaire appelés « oueds ». Les oueds drainent vingt-six bassins versants majeurs, eux-mêmes composés de nombreux sous bassins. Aucune donnée précise n'existe sur ces bassins versants (coefficient d'infiltration, débit de l'oued, caractéristiques de la crue). Ce réseau de cours d'eau intermittent draine les plateaux sud de Djibouti. Les secteurs montagneux, de part et d'autre du golfe de

Tadjourah, se déversent dans la mer. Le reste du réseau national alimente les dépressions qui présentent un potentiel pastoral, voir agro-pastoral par endroit. Le pays est toutefois marqué par la rareté des terres agricoles irrigables : la superficie nationale irriguée ne dépasse pas le millier d'hectares. La couverture pédologique est souvent squelettique (lithosols…), ceci explique le ruissellement qui est tout de même tempéré par l'état de rugosité du sol, fortement recouvert de cailloux limitant ainsi partiellement l'érosion.

Considérant le nombre de forages en activités et expérimentaux réalisés dans le District de Dikhil, il y a des fortes potentialités hydrauliques. Le Schéma Directeur de l'Eau de Djibouti prévoit, à titre d'exemple, comme alternative possible, l'alimentation de la capitale Djiboutienne à partir de la Plaine de Hanlé. Le District dispose, par ailleurs, de quelques rares sources d'eau pérennes. L'hydrologie est repartie entre celle de surface (écoulement fluviatile) et celle du sous-sol (aquifères).

L'eau de surface est caractérisée par l'écoulement occasionnel de cours d'eau des oueds en période de pluies. Ces oueds sont alimentés, outre les précipitations, par les eaux de ruissellement hypodermique ou subsuperficiel, correspondant au mouvement de descende des eaux à travers le sol des versants en voie de ressuyage. Ces oueds sont à écoulement dit épisodique (spasmodique), qui ne dure qu'un court laps de temps. Ils sont caractérisés par un écoulement torrentiel et érosif sur le sol avec encaissement topographique dans relief de plateaux et de montagnes. Dans les reliefs de plaines et plateaux, les oueds ont des tracés divaguant et endoréiques.

Les plaines constituent le lieu de recyclage des eaux de ruissellement et d'écoulement de surface avec pour conséquences l'accumulation de couches latéritiques meubles, propices pour le développement des activités agricoles. Cette action d'accumulation de l'eau permet, également, une meilleure réalimentation des aquifères (nappes phréatiques) sous-jacents. Les terres arables sont de dimensions importantes malgré les faibles exploitations réalisées par les populations rurales. En effet le développement des pratiques agricoles est limité par le cumul des plusieurs paramètres pratiques d'ordre hydrologiques, techniques et pédologiques que nous venons de citer.

Les ressources hydrologiques

Considérant le nombre de forages en activités et expérimentaux réalisés dans le District de Dikhil, il y a des fortes potentialités hydrauliques. Le Schéma Directeur de l'Eau de Djibouti prévoit, à titre d'exemple, comme alternative possible, l'alimentation de la capitale Djiboutienne à partir de la Plaine de Hanlé. Le District dispose, par ailleurs, de quelques rares sources d'eau pérennes. L'hydrologie est repartie entre celle de surface (écoulement fluviatile) et celle du sous-sol (aquifères).

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6.2. Biological Environment

6.2.1. Flora and Fauna

Selon le document de stratégie national de la diversité biologique, dans l'état actuel de nos connaissances, la biodiversité (terrestre et marine) de Djibouti compte 826 espèces de plantes et 1417 espèces animales dont 493 espèces d'invertébrés, 455espèces de poissons, 40 espèces de reptiles, 3 espèces d'amphibiens, 360 espèces d'oiseaux et 66 espèces de mammifères.

La faune terrestre aviaire à Djibouti présente de beaux spécimens. Vautours et aigles de mer, hérons, ibis et pélicans, flamants roses, outardes communes, autruches devenues rares, antilopes, gazelles. Si le Koudou est en voie de disparition, et si l'oryx se fait rare, les arcouboudo (oréotragues) qui semblent marcher sur la pointe des pieds, les dig-digs, antilopes naines, sont encore très répandus.

Au titre des autres espèces de la faune terrestre, on trouve carnassiers et fauves, le fennec, le chacal, le chat sauvage, la hyène, le guépard, la panthère. Et il faut encore citer le phacochère, les singes divers, les varans (lézards géants), les écureuils de sables etc...

La chasse est interdite sur tout le territoire djiboutien. Pour ce qui est de la zone Nord, la pêche des tortues est interdite. Toutes les conventions sur la biodiversité et les espèces menacées sont ratifiées par la République de Djibouti.

6.3. Socio- Economic Environment

6.3.1. Local Economy

Les contraintes physiques et climatiques ont pour conséquence la réduction des espaces cultivables et de l'activité agricole. D'où l'insuffisance de la pratique culturale dans les deux régions du projet où elle se pratiquerait dans les oueds et occuperait très peu d'actifs en dehors des petits jardins potagers de cases.

L'élevage est l'activité majeure de la zone du projet mais toutefois, il connaissant les mêmes contraintes que l'agriculture.

A Obock, la pêche marine est une activité constante même si les prises sont de plus en plus insuffisantes pour répondre aux besoins croissants de la population.

Les revenus dans les zones du projet proviennent par ordre de priorité de : (i) l'élevage, (ii) du commerce, (iii) des petits activités du secteur informel et dans une moindre mesure du jardinage et/ou de production fruitière (notamment la mangue).

On note que l'essentiel des revenus vont dans les dépenses de nourriture, de médicaments, les cérémonies sociales (mariages, baptêmes, décès…), les frais de scolarité, pour ce qui concerne l'ensemble des hommes, et environ 18% des femmes. Quant à la plupart de celles-ci, elles utilisent la quasi-totalité de leurs revenus pour leurs propres besoins (habillements, savons, cérémonies) si elles ne donnent pas parfois un appui au chef de ménage.

6.3.2. Health situation

En ce qui concerne les maladies non hydriques transmissibles de la zone du projet, les pathologies les plus fréquemment rencontrées sont les maladies diarrhéiques (dont on observe tout comme le paludisme le pic au mois d'août), les toux chroniques, les conjonctivites et les écoulements urétraux.

6.3.3. Population Characteristics (Demography)

La région de Dikhil occupe environ 30 % du territoire national avec une superficie totale d'environ 6.800 kilomètres carrés. La population de la région est estimée à environ 88.948 habitants, soit 10.87 % de la population totale de Djibouti ou 25,9 % de la population nationale totale vivant à l'extérieur de la ville de Djibouti. La nouvelle zone est à cheval sur les districts d'Obock et de Tadjourah mais ne concerne qu'une bande d'environ 80 000 hectares. On considère environ 8000 habitants dans cette zone hors agglomération de Tadjourah.

6.3.4. Water and Sanitation

6.3.4. Land use

A Dikhil, l'accès au foncier est compliqué et son occupation opaque. La question foncière doit être donc réglée puisqu'elle joue un rôle prépondérant qui contribue non seulement à la réalisation du développement urbain, mais aussi parfois à l'émergence de situations conflictuelles en l'absence d'une politique de sécurité d'occupation et d'accès. Il devient impérieux de considérer la régularisation foncière comme un préalable à l'acte d'urbaniser et de construire.

A Ali Sabieh, l'accès au foncier est compliqué et son occupation opaque. Deux objectifs sont à réaliser : régulariser les occupations juridiquement problématiques si elles n'entravent pas la cohérence urbaine et redoubler les efforts dans la manière dont les terres à urbaniser et

périurbaines sont gérées, y compris un meilleur accès aux parcelles aménagées sur la base d'un système d'enregistrement des droits et des actes fonciers.

6.3.5. Cultural heritage and Archaeology

La société Afar. L'organisation sociopolitique de la société Afar (Sud et Nord du pays) est hiérarchisée. Les chefferies -ou sultanats- unités territoriales et politiques, sont coiffées par un chef suprême -ou sultan- nommé à vie. Celui-ci est secondé par un vizir, son héritier présomptif. Protecteur du territoire dont il dispose et des hommes qu'il gouverne, le sultan décide de la guerre et de la paix. Si le sultan dispose en principe du territoire se trouvant sous son influence et dont il se considère le propriétaire, il en concède la jouissance (et parfois même la propriété), moyennant rétribution, en accordant aux différents lignages de la tribu des terrains de parcours, qui sont aussi pour eux des lieux de rassemblement, d'attache et de séjour. Sur ces territoires, qu'ils gèrent collectivement et qui constituent un patrimoine commun incessible, les groupes bénéficiaires exercent en temps normal des droits exclusifs d'exploitation des ressources pastorales et des points d'eau. L'organisation pastorale, modulée en fonction de l'état des ressources, se soucie avant tout de la survie du bétail. En période normale (de non sécheresse), l'utilisation des parcours est strictement réglementée, afin de les gérer durablement. En temps de crise, afin de sauvegarder les troupeaux, l'espace est ouvert partout sans restriction, mais le cheptel des voisins n'est admis dans les concessions qu'en vertu d'accords de réciprocité qui peuvent s'ouvrir aux autres fimami[4].

La société Issa. Qualifiée habituellement de démocratie pastorale, la société Issa (sud du pays) se présente comme une confédération de tribus faiblement hiérarchisées. Deux instances principales sont investies de pouvoirs de régulation sociale: le Gandé et le Guddi. Le premier constitue une assemblée de 44 membres représentants l'ensemble des tribus et des clans de la confédération. Le second est une sorte de cour à compétence globale. Les tribus de la confédération Issa sont liées par le Xeer, sorte de contrat social qui tient lieu de constitution. L'unité de base -ou Reer- matérialisé par le campement, correspond à la famille nucléaire ou élargie, voir parfois le clan. En principe chez les Issas, la terre et ses ressources sont appropriés collectivement. Les pâturages et l'eau sont considérés comme des biens communs ; l'utilisation respective semble obéir à la règle du premier venu.

[4] Pluriel de Fima, organisation en partie lignagère (de père en fils) mais aussi intégrant des éléments externes (parrainage sous l'œil et la mémoire du Malak) et basée sur la classe d'âge. La Fima reste une organisation solidaire endogène, destinée à rendre la vie en société plus facile. Un territoire pastoral bien défini correspond à chaque Fima et permet des réciprocités (inter campements) d'usage pastoral et donc une certaine solidarité en cas de déficit fourrager et hydrique. C'est le dernier recours pastoral avant de partir en transhumance dans les espaces intercommunautaires plus lointains. Ces investigations mériteraient d'être approfondies sur des cas concrets, soit par des prises de paroles immédiates, soit par des histoires de vies collectées chez les autorités coutumières ou bien auprès des éclaireurs (personne partant en avant garde pour reconnaître et « négocier » les parcours). Elles connaissent très bien les domaines pastoraux et les différentes règles d'usage en vigueur.
Nous pensons pertinent d'utiliser ici le concept d'espace social que possède chaque Fima et qui pourrait se résumer comme l'ensemble des liens sociaux permettant concrètement l'usage des parcours. Cette définition s'inspire de celle donnée par Armand Frémont (Frémont, 1998) à propos de l'espace social en général : l'ensemble des relations sociales spatialisées.

7. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

This section summarizes the main environmental and social impacts/risks during project implementation

7.1. Positive impacts

Impacts positifs notables du projet sur les populations bénéficiaires et leur environnement

Les bénéficiaires directs de ce programme sont essentiellement des familles d'éleveurs et de pêcheurs situées dans les zones d'intervention. La différenciation sociale entre les éleveurs mais aussi entre les pécheurs étant assez faible, l'ensemble de la population-cible constitue une population pauvre.

Impacts positifs du projet	**Recommandations et ajustements à apporter au montage du projet**
Une augmentation temporaire des opportunités locale de travail	Pendant les travaux, l'UGP devra inciter les entreprises adjudicataires à accorder la priorité de recrutement de la main d'œuvre local (en tant qu'ouvriers, manœuvres, gardiens, chauffeurs…), notamment des femmes pour les travaux connexes, en évitant de leur affecter des tâches dangereuses ou nécessitant un effort considérable. Ce type d'emploi est temporaire, mais il a des retombées économiques certaines sur le niveau de vie des ménages et sur l'économie locale.
Un accès plus facile et plus continu à l'eau	La construction de citernes ainsi que de retenues permettra de garantir de l'eau à des époques ou dans des lieux où elle fait défaut, évitant ainsi des déplacements parfois quotidiens sur des distances importantes pour aller chercher de l'eau notamment pour les femmes. Un accès plus facile à l'eau permettrait de fixer les populations, contraintes d'abandonner leur terroir d'origine en raison des problèmes d'accès à l'eau
Une eau de meilleure qualité	La séparation de l'eau pour les animaux de celle destinée à la consommation humaine, que ce soit grâce à des citernes ou par la construction de mares à usage spécifique, devrait améliorer la qualité sanitaire de l'eau et diminuer les maladies associées.
Une amélioration de la productivité de l'élevage	L'amélioration de la gestion des zones de parcours aura un impact positif sur la productivité de l'élevage, qui se traduira par une amélioration des conditions économiques et alimentaires des populations.
Lutte contre la	La prédominance du climat aride a fait de Djibouti un pays à faible couvert végétal dont les terres sont très vulnérables aux impacts des

Impacts positifs du projet	Recommandations et ajustements à apporter au montage du projet
désertification	conditions climatiques extrêmes et aux activités anthropiques. C'est à ce titre que les sècheresses ainsi que les inondations ont un effet néfaste sur le sol et son couvert végétal naturel. De même que l'activité humaine s'est traduite par une désertification de plus en plus prononcée et un déboisement quasi généralisé. Les points d'eau créés sécuriseront la faune dans cette zone particulièrement aride.
Un meilleur contrôle des communautés sur les aménagements qui les concernent	L'approche participative et les stratégies de renforcement des capacités devraient permettre aux communautés, d'établir des relations citoyennes avec les administrations régionales et centrales.
Un renforcement des capacités d'organisation des communautés	L'approche du programme visant à promouvoir le dialogue et la négociation au sein des communautés permettra un renforcement de ses capacités d'organisation. Le travail avec les organisations existantes visera également à leur renforcement.
Une plus grande capacité locale à gérer et entretenir les aménagements	Les activités du programme visant au renforcement technique des populations locales permettront une appropriation des aménagements par les populations au niveau technique et de gestion.
Limitation des conflits intercommunautaires	Les forums de négociation mis en place au niveau régional (comités locaux de pilotage) permettront de négocier les aménagements avant leur réalisation et de prendre en compte les intérêts et règles sociales des différents groupes.
De meilleures conditions de vie pour les femmes rurales	L'UGP impliquera les femmes dans le processus de prise de décision et valorisera leurs rôles dans la gestion de ressources naturelles. L'inclusion des femmes dans les mécanismes de décision communautaire doit permettre une meilleure prise en considération de leur situation spécifique. De plus, les activités prévues au niveau de l'eau de consommation humaine doivent produire un allègement de leur charge de travail (diminution des distances parcourues).
Accompagnement au développement d'activités génératrices de revenus supplémentaires pour les femmes.	Les femmes dans la communauté confectionnent actuellement des nattes avec les fibres des feuilles de palmiers-doum et les commercialisent individuellement.. Elles ont mentionné qu'elles seraient intéressées à être formées dans d'autres champs d'activités tels que la maçonnerie comme alternatives pour générer des revenus supplémentaires. Elles pourraient produire des pavés pour la construction de maisons ou de voiries.
Consolidation de l'organisation sociale traditionnelle	Le projet consolidera les systèmes traditionnels de gouvernance environnementale et sociale et embrassera la notion de dialogue avec les communautés. Il s'agira également d'inciter les communautés à intégrer dans les règles de gestion des ressources naturelles traditionnelles des bonnes pratiques conformes à leurs coutumes à

Impacts positifs du projet	Recommandations et ajustements à apporter au montage du projet
	travers la gestion.

Impacts positifs du projet sur les capacités du MAPE-RH à mettre en œuvre ses missions

Le DRESS-EA sera mis en œuvre au niveau central par l'unité de gestion des projets qui sera mise en place au sein de la direction de l'hydraulique rural. Cela permettra la mise en synergie des activités et la capitalisation des expériences des ressources humaines engagées sur ces projets.

Le programme aura un impact substantiel sur les capacités du MAEPE-RH à intervenir efficacement sur le développement rural grâce principalement au renforcement de ses ressources humaines.

7.2. Negative/Adverse impacts

Ce chapitre décrit dans le tableau suivant, pour les principaux risques identifiés avec des impacts mineurs, les mesures d'atténuation des impacts à prendre dans le cadre du montage du projet.

Il détaille plus spécifiquement plusieurs les mesures à mettre en œuvre pour atténuer certains impacts moyens potentiels relatifs :

- Au fonctionnement hydrologique des bassins versants
- A la disponibilité des ressources en eau
- Au suivi de la qualité des eaux souterraines
- Au suivi et à l'amélioration de la qualité de l'eau dans les ouvrages
- Au suivi de la qualité de l'eau dans les citernes, destinée à la consommation humaine
- Aux risques de rupture des ouvrages hydrauliques
- Aux risques de surpâturage et de dégradation du couvert végétal
- A l'utilisation et à l'accès à la terre

Risques identifies	Impacts potentiels	Recommandations et ajustements à apporter au montage du projet
Sécurité pendant les travaux	La sécurité des biens et des personnes (travaillant sur le site ou vivant a cote du site) est toujours un enjeu pendant les phases de chantier.	L'UGP devra s'assurer que les entreprises adjudicataire des travaux dotent la main d'œuvre d'équipements de sécurité adéquats et veille à ce qu'elle les utilise effectivement. De même pour assurer la sécurité des personnes, l'entreprise devra mettre en place la signalisation adéquate sur tous les chantiers.
Sécurité lors	A l'heure actuelle, sur les citernes	Pour des raisons de sécurité, un système

Risques identifies	Impacts potentiels	Recommandations et ajustements à apporter au montage du projet
de la collecte de l'eau dans les citernes	financées par d'autres donateurs, les communautés tirent l'eau en utilisant un seau et une corde sans aucune aide supplémentaire.	de poulies devrait être installé dans les citernes qui seront construits par le projet. Des mesures de sécurité supplémentaires pourront être incluses dans la conception des citernes comme l'ajout d'une série d'escaliers maçonné à l'intérieur de chaque citerne (en lieu et place de l'échelle en bois) comme moyen alternatif d'accès.
Pollution des eaux de surface	Il existe un risque de pollution des eaux de surface dans les infrastructures construites par le projet.	La protection des eaux de surface contre la pollution se fera par l'interdiction de tout déversement ou rejet d'eaux usées, de boue, d'hydrocarbures, de polluants dans les dépressions, dans les oueds, fossés ou à même le sol. Par ailleurs en cas de contamination des kits sanitaires doivent être disponibles près des ouvrages hydrauliques réalisés dans le cadre du DRESS-EA. Le DRESS-EA pourrait fournir les kits sanitaires ou en faciliter le transport et les actions de sensibilisation.
Dégradation de la qualité de l'eau liée à la proximité des citernes a usage humain et animal	La proximité des citernes a usage humain et animal se justifie à la fois par un remplissage simultané au moment des crues et par la commodité d'approvisionnement pour les éleveurs. Un traitement adéquat, après chaque remplissage, ira dans le sens de la prévention sanitaire à rechercher.	Dans la mesure où les conditions locales le permettent, les points d'eau à usage humain seront séparés de ceux à usage animal, de façon à garantir à la fois une bonne qualité sanitaire de l'eau et une gestion facilitée. Le libre accès pour les animaux pour l'abreuvement du bétail (qui se situe souvent la matinée) et les animaux sauvages (le reste du temps lorsque le calme revient) est possible dans la mesure où une réserve adjacente à l'ouvrage (type citerne enterrée) est consacrée à l'usage humain. Il est également utile de prévoir a proximité des citernes une installation spécifique permettant l'abreuvement du bétail.
Suivi de la qualité de l'eau dans	Il est important de prendre en compte l'inexistence des ces types d'ouvrage dans les Zones du projet.	Il est fondamental que le MAEPE-RH assure une coordination adéquate avec les autres agences, en particulier le Ministère

Risques identifies	Impacts potentiels	Recommandations et ajustements à apporter au montage du projet
les citernes	La construction des citernes enterrées, ouvrages nouveaux, risque d'avoir un impact négatif sur la santé si une campagne de sensibilisation et de la promotion d'hygiène n'est pas réalisée avant est après la construction. La formation des comités de gestion des points par la Direction de l'eau du Ministère de l'Agriculture est un atout qui faciliterait l'entretien, la gestion et le suivi de la qualité de l'eau de la citerne.	de la Sante, l'UNICEF et l'OMS en termes du suivi de la qualité de l'eau et la provision de kits nécessaires tels que les filtres et les désinfectants. Une formation sur les traitements de l'eau pour les communautés devrait se faire sur tout le long du projet. De ce fait une formation initiale doit être prévue pour le traitement des eaux de surface. Pour cela il sera possible de prendre en compte l'enquête de base que l'UGP est entrain de réaliser.
Impact sanitaire de la présence de points d'eau	La présence des plans d'eau pendant une grande partie de l'année est propice au développement d'un grand nombre d'insectes vecteurs de maladies.	Une surveillance régulière de la qualité de l'eau doit être assurée conjointement par le MAEPE-RH et le ministère de la Santé. De mesures de sensibilisation et de prévention contre les maladies doivent être menées auprès de populations locales concernées. La sensibilisation pourra être effectuée par le service de gestion des points du MAEPE-RH en étroitement collaboration avec le comité de pilotage local (CPL). L'UGP devra contribuer au renforcement des capacités du CPL et a l'appui aux activités de sensibilisation contre les maladies d'origine hydrique (notamment contre la prolifération des insectes vecteurs des maladies).
Maintenance des installations	Le bon fonctionnement des ouvrages construit dans le cadre du projet est conditionné par une maintenance efficace tant préventive que curative.	Dans le cas des forages et de leurs équipements, le budget du DRESS-EA devra prendre en compte le coût de la maintenance des installations et des équipements pour la durée du projet. Le projet devra aussi assurer la formation du CPL et des comités de gestion des points d'eau pour assurer la maintenance des ouvrages et des équipements au terme du projet. Le projet identifiera les besoins en maintenance et en formation en collaboration avec les bénéficiaires à

Risques identifies	Impacts potentiels	Recommandations et ajustements à apporter au montage du projet
		savoir le MAEPE-RH, les autorités régionales, le CPL ainsi que les populations locales concernées.
Impact de l'irrigation	Sur les sites possédant un périmètre irrigué, les quantités d'eau prélevées pour la mise en eau des périmètres puis régulièrement pour l'irrigation de leurs parcelles ne devraient pas réduire les débits utilisables à d'autres fins, grâce au dimensionnement adéquat des ouvrages d'alimentation. Une grande partie de ces eaux ne sera par contre pas restituée au réseau des eaux superficielles à cause des pertes par infiltration et par évapotranspiration.	Les eaux de drainage et les eaux d'irrigation excédentaires seront donc déversées dans les points bas naturels en dehors des périmètres où elles disparaîtront par infiltration et surtout par évaporation. Le dimensionnement des périmètres irrigués nécessitera une étude spécifique de la capacité de régénération des sources d'alimentation en eau.
Pollution de la nappe phréatique par l'utilisation d'engrais chimiques	D'une manière générale, l'utilisation d'engrais chimiques est insignifiante voire nulle à l'état actuel.	La pratique agricole autour des ouvrages n'utilisera pas d'engrais chimiques ainsi que de pesticides. De la sorte les eaux contenues dans l'ouvrage ainsi que les eaux de nappes phréatiques seront protégées de toute pollution.
Erosion des sols	La plupart des jardins cultivés se trouvent situés le long des rives des Oueds et sur des terrasses alluvionnaires et ce parce que ces zones contiennent des sols de bonne qualité (limons récents) et donne accès aux nappes aquifères de meilleure qualité. Les parcelles cultivées installés sur ces terrasses sont donc soumis à l'érosion par sapement des berges, aux inondations en cas de fortes crues et au ravinement par le ruissellement. Certaines parcelles installées en plein lit de l'Oued risquent d'être inondés pratiquement chaque année. Il en résulte des pertes en terres et parfois en récolte.	Le ruissellement le long les cours d'eau s'effectue en l'absence d'ouvrages de dissipation d'énergie. Le PAN a identifié pour l'ensemble du pays des actions concrètes adaptées à son contexte éco géographique. De façon générale, les actions visent la lutte contre l'érosion, le reboisement, la maîtrise de l'eau ainsi que activités génératrices de revenus et aménagement sylvo-pastoral. Pour lutte contre l'érosion, le projet devra prévoir la mise en place de mesures spécifiques (perré sec, gabions, cordons pierreux).

8. PROPOSED ESIA MANAGEMENT CYCLE FOR THE PROJECT

Briefly describe how the ESIA process shall be handled in your country for the entire project and sub-projects in accordance with your Country's laws and regulations as well as AF and OSS Environmental and social policies.

En termes d'implication environnementales du fait des interventions du projet, le DRESS-EA est classé dans la catégorie environnementale B selon la Politique Opérationnelle du fond d'adaptation étant donné que la mise en œuvre du projet devrait générer d'importants effets positifs sur l'environnement et des impacts négatifs mineurs. A ce titre, il a été important de réaliser, par un consultant indépendant, une évaluation des impacts environnementaux et sociaux (EIES) incluant un plan cadre de gestion environnemental et social (PGES) et un processus de screening pour les sous-projets individuels, selon des termes de référence approuvés par l'OSS

a. What are the Specific laws that guide the EIA process in your country?

Afin d'éviter et/ou de minimiser la dégradation du potentiel faunique et floristique et du milieu socioéconomique, les activités prévues dans le cadre du projet doivent intégrer la prise en compte des textes réglementaires ci-dessous, comme outils préventifs de gestion de l'environnement et des risques environnementaux. Il s'agit notamment :

- de la Loi n°45/AN/04/5ème L portant création des Aires Protégées Terrestres et Marines ;
- de la Loi n°187/AN/02/4ème L portant Code des Pêches ;
- de la Loi n°174/AN/02/4ème L portant Décentralisation et Statut des Régions ;
- de la Loi n°139/AN/06/5ème L portant modification de la Loi n°174/AN/02/4ème L du 07 juillet 2002 portant décentralisation et statut des régions ;
- de la Loi n°172/AN/91/2ème L règlement de l'expropriation pour cause d'utilité publique ;
- de la Loi n° 177/AN/91/2ème L portant organisation de la propriété foncière ;
- de la Loi n°66/AN/94/3e L portant Code Minier ;
- de la Loi n° 48/AN/99/4ème L portant Orientation de la Politique de Santé ;
- de la Loi n°243/AN/82 réglementant la coupe de bois en République de Djibouti ;
- des lois relatives au régime foncier : domaine public de l'État n°171/AN/91, Domaine privé de l'État n° 173/AN/91 et les autres lois citées ci-dessus;

- de la Loi n°140/AN/06/5ème L portant politique nationale de gestion des risques et des catastrophes ;

- de la Loi n°133/AN/05/5ème L portant Code du Travail ;

- de la Loi n°65/AN/89/2ème L portant interdiction d'importer sur le territoire national des déchets ou résidus industriels toxiques, radioactifs ou polluants ;

- du Décret n°2008-0078/PR/MS portant adoption du plan national de développement sanitaire de Djibouti 2008-2012 ;

- du Décret n°2008-0182/PR/MS portant institution des normes et directives en matière de Conseil Dépistage Volontaire du VIH/SIDA en République de Djibouti ;

- du Décret n°2000-0031/PR/MAEM pris en application de la loi n°93/AN/95/3ème L du 04 avril 1996 portant Code de l'Eau, relatif à la Lutte contre la Pollution des Eaux ;

- du Décret n°2007-0043/PR/MHUEAT portant création d'un Comité National du Mécanisme pour un Développement Propre ;

- du Décret n°2004-0065/PR/MHUEAT Portant protection de la biodiversité ;

- du Décret n°2000-0033/PR/MAEM pris en application de la Loi n°93/AN/95/3ème L du 04 avril 1996 portant Code de l'Eau, relatif aux périmètres de protection des captages de l'eau destinée à la consommation humaine ;

- du Décret n° 2000-0032/PR/MAEM pris en application de la Loi n°93/AN/95/3ème L du 04 avril 1996 portant Code de l'Eau, relatif aux procédures de déclarations, autorisations et concessions ;

- du Décret n°2007-0099/PR/MID portant transfert et répartition de compétences entre l'État et les Collectivités Territoriales ;

- du Décret n°2006-0192/PR/MID portant mise en place d'un cadre institutionnel de Gestion des risques et des catastrophes.

b. What steps are undertaken to determine which projects require an EIA

Etapes du processus d'analyse environnementale et sociale des projets

Cette analyse est particulièrement importante au début de la planification d'un sous-projet étant donné que les meilleures opportunités (par exemple l'emplacement, la disposition du site, le calendrier) pour éviter ou minimiser les impacts négatifs sont les plus importants lorsque les plans des sous-projets sont en phase de conception.

Le processus proposé pour l'analyse des sous-projets proposés dans le cadre du Projet comporte les étapes suivantes (intégrées dans le cycle régulier de développement des sous-projets de l'idée initiale jusqu'à l'exploitation).

Etape	Description	Responsable
1- Identification des sous-projets	Les communautés identifient de manière participative les interventions potentielles (à partir d'une liste de projet éligibles) avec l'aide des autorités compétentes et des animateurs de l'UGP. Le choix définitif des investissements à supporter par le DRESS-EA est celui priorisé par les communautés bénéficiaires et retenu dans les SAAHP préparés par les Comités de Pilotage Locaux avec l'appui des coordinateurs régionaux de l'UGP, des autorités compétentes au niveau local, régional et national.	Comité de Pilotage Local
2- Développement de propositions de sous-projets et remplissage de la fiche d'évaluation environnementale et sociale	Les coordinateurs régionaux de l'UGP (qualifiés et formés) assistent les collectivités dans la revue des impacts environnementaux et sociaux des sous-projets. Ils remplissent la fiche d'évaluation des demandes de sous-projet, suggèrent des bonnes pratiques, des actions de prévention ou des mesures d'atténuation des impacts. Lorsque des mesures d'atténuation d'impact s'avèrent nécessaires pour un sous-projet, un Plan de Gestion Environnementale (PGE) est établi (intégré dans la fiche). Pour de nombreux sous-projets à petite échelle, il se limite à quelques mesures simples. Ces mesures devront être incorporées dans la conception des sous-projets. Pour certains projets plus complexes un examen approfondi des questions l'environnementales est nécessaire (ex. réalisation d'études hydrologique ou d'études d'impact environnementales). La fiche renseignée et signée par un représentant de la communauté et des autorités locales est jointe à la demande de projet transmise pour revue à l'UGP à Djibouti.	Coordinateur régional de l'UGP en rapport avec les communautés et autorités locales
3- Obtention si nécessaire de l'accord d'usage d'une parcelle	Dans le cas ou le sous-projet nécessite l'utilisation ou la mise en repos d'une parcelle de terrain, le CPL devra s'assurer d'obtenir l'accord officiel des ayants droit de la parcelle, des autorités coutumières et administratives. Cet accord écrit doit être joint à la demande de financement et archivé dans les locaux de l'UGP à Djibouti.	Comité de Pilotage Local
4- Revue de la fiche d'évaluation environnementale et sociale au niveau central	La fiche d'évaluation est revue par le responsable de l'UGP en charge des questions environnementales et sociales. Il veillera à ce que impacts des activités proposées aient été correctement évalués et que les éventuelles mesures d'atténuation proposées soient suffisantes et correctement intégrées au sous-projet. Il déterminera si le sous-projet peut être recommandé pour approbation ou si une évaluation plus approfondie est	UGP a Djibouti

Etape	Description	Responsable
	nécessaire. Lorsque les critères d'évaluation déclenchent un examen plus approfondi une assistance pourra être demandée à la direction concernée du MAEPE-RH pour s'assurer que les procédures appropriées sont suivies. Le Projet mettra à disposition des ressources pour cela. L'UGP devra s'assurer de l'archivage des fiches évaluatives dans les bureaux régionaux du MAEPE-RH ou à Djibouti ville.	
5- Approbation du sous-projet par les autorités compétentes	Une fois revue par l'UGP, la fiche est jointe à la demande de validation du sous-projet transmise au Comité de Pilotage Régionale (CPR) pour approbation.	Comité de Pilotage Régional (CPR) avec l'appui de la sous-direction développement rural du MAEPE-RH.
6- Exécution des sous-projets.	Il relève de la responsabilité de l'UGP de suivre l'exécution de toutes les activités DRESS-EA et de s'assurer que les considérations environnementales et sociales sont prises en compte. L'UGP doit s'assurer que les pratiques appropriées et mesures d'atténuation préconisées sont bien intégrées dans la conception du sous-projet (ex. dans les cahier des charges et contrats avec les entreprises) et mises en œuvre lors de sa phase de réalisation et d'exploitation (ex. par les Comites de Gestion de l'Eau).	UGP
7- Rapport de suivi	L'UGP doit documenter et rapporter à l'OSS sur la mise en œuvre du processus d'analyse environnementale des sous-projets. Elle doit également vérifier périodiquement la conformité des sous-projets réalisés aux exigences environnementales et incorporer les résultats dans des rapports réguliers sur l'avancement du projet remis à l'OSS. L'UGP s'assurera également de la qualité et de la maintenance des ouvrages construits ou réhabilites (retenues, citernes…).	UGP

c. Briefly describe the different stages of the EIA process in your country to complete the EIA cycle

Le processus d'élaboration de l'étude est ;

- le contenu doit refléter l'incidence prévisible du projet sur l'environnement qui doit suivre un canevas minimum décrit dans le décret. S'agissant de la procédure d'évaluation objet du titre IV du décret, elle est déclinée par la procédure ci-après :

- l'envergure et la profondeur de l'étude pourraient être définies de commun accord, avec le Ministère chargé de l'environnement, à la demande du promoteur ;

- l'étude est rédigée en français et en arabe ;

- elle est déposée auprès du Ministère chargé de l'Environnement par le promoteur ou le maître d'ouvrage en 5 exemplaires avec un résumé ne dépassant pas 20 pages ;

- le Ministère chargé de l'Environnement procède à l'évaluation du rapport d'étude d'impact (évaluation technique) qui associe les Ministères concernés par le projet ; d'autres personnes ressources peuvent être associées au processus d'évaluation et pour les projets d'envergure nationale, un avis du CNE est requis ;

- le REIE est sanctionné par une décision du Ministère chargé de l'Environnement, en cas de décision négative, le promoteur pourra demander un deuxième examen dans un délai n'excédant pas six (6) mois ;

- l'évaluation comprend deux phases : l'évaluation technique et évaluation par le public ;

- l'évaluation par le public se fait par le biais d'une enquête publique soit par consultation de document ;

- le délai d'évaluation, évaluation par le public y compris ne doit pas excéder six (6) mois, passé ce délai, l'autorisation de l'administration est réputée acquise sans toutefois que le promoteur ne se soustraie à toutes les réglementations environnementales et bonnes pratiques professionnelles ;

- l'évaluation est subordonnée au paiement d'une redevance fonction de l'investissement et de la catégorie de l'activité, laquelle est versée au Fonds National pour l'Environnement (FNE).

9. PUBLIC DISCLOSURE AND STAKEHOLDER ENGAGEMENT

Stakeholder consultation and engagement is a key requirement in the process of addressing key environmental and social issues of projects including the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project. The key steps within the overall stakeholder consultation and engagement process may include;

- *Identifying and notifying stakeholders*
- *Holding meetings (formal and informal);*

- *Making a record of responses to comments and concerns of the stakeholders*
- *Making provision for stakeholders to review and comment on all reports;*

Comments Register

Niveau	**Structures**	**Rôle**
Communautaire	Comités de Gestion de l'Eau pour la gestion des ouvrages hydrauliques.	Responsable de la maintenance préventive quotidienne des structures.
Local	Comité de Pilotage Local (CPL).	Représentent les communautés.
Régional	Comité de Pilotage Régional (CPR). Composés de plusieurs membres du comité local de pilotage, les éleveurs, les représentants des femmes, des représentants des jeunes, élus régionaux. Ils se réunissent chaque année.	Préparent les SAAHP Schéma Annuel d'Aménagement Hydraulique et Pastoral .
National	Comité Directeur National (CPN). il est composé de représentants de plusieurs ministères, de représentants des bailleurs, de membre des Conseils Régionaux, des représentants du MAPE-RH, et d'un représentant de l'université de Djibouti.	Présidé par le secrétaire général du MAEPE-RH, il se réuni une fois par an. Il valide le rapport d'activité et les arbitrages budgétaires.

10. ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

A monitoring programme ensures that the implementation of mitigation and enhancement measures contribute to the achievement of the desired management objectives and outcomes. The monitoring process, the selection, development and evaluation of indicators should be based on their relevance and feasibility after development of the site and Project specific EIAs and ESMPs. The key issues that have to be monitored among others are: (i) the status of the biological conditions; (ii) status of the physical works; (iii) the technical and environmental and social requirements non-compliance; (iii) proposed corrective and remedial action plans and agreed timelines, (v) the effectiveness of environmental and social measures adopted.

Environment and social Management Plan (ESMP)

The management of Environment and social impacts during project implementation shall be guided by an Environment and social management plan as outlined below;

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
Tous les chantiers de construction du DRESS-EA	Sécurité des biens et des personnes travaillant sur le site ou vivant a cote du site	Doter la main d'œuvre d'équipements de sécurité adéquats. Mettre en place la signalisation adéquate.	Entreprise / Direction en charge des travaux	UGP-Djibouti	Inclusion dans les DAO Contrôle périodique des chantiers	Dans budget du chantier : 1200 US$/ chantier
Construction et exploitation des citernes enterrées	Non remplissage du fait d'une mauvaise conception	Réaliser les études techniques (climatologie, topographie, hydrologie, pédologie) préalables.	MAEPE-RH	UGP - Djibouti	Réalisation des études	Intégré au coût d'une citerne ; Budget Aménagement des ouvrages Hydrauliques, UGP DRESS-EA 1600 US$/ citerne
	Sécurité des personnes qui collectent l'eau et entretiennent les citernes (notamment risque de chute d'homme ou de bétail)	Prévoir les équipements de protection adéquats (ex. grillage de protection). Prévoir un système de poulies ou pompe à main pour la collecte de l'eau. Prévoir une série d'escaliers maçonnés à l'intérieur de chaque citerne a la place de	Entreprise / Direction en charge des travaux	Coordinateur régional UGP	Inclusion dans les DAO Supervision du chantier	Dans budget du chantier 700 US$/ citerne

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
		l'échelle.				
	Qualité de l'eau dans les citernes	Ne pas collecter les premières eaux de ruissellement qui sont souvent très chargées (pour les citernes qui collectent de l'eau d'une surface bétonnée) ou prévoir un décanteur pour les citernes qui collectent l'eau d'un bassin avec végétation naturelle. Assurer le suivi de la qualité de l'eau par des analyses chimique (conductivité, pH et température) et bactériologique (kits fournis actuellement par l'UNICEF). En cas d'analyse plus approfondie, envoyer les échantillons au CERD, au laboratoire d'analyse de la direction de l'Elevage ou de la Direction d'épidémiologie Prévoir des campagnes de sensibilisation des communautés et de la promotion d'hygiène avant et après la construction. Former les communautés pour que l'eau des citernes ne soit pas consommée par la population sans traitement adéquat (après ébullition ou traitement). Fournir les kits sanitaires aux familles (filtres et désinfectants) pour le traitement adéquat des citernes après chaque remplissage et de l'eau consommée (fournis par l'UNICEF). Former les comités de gestion des points d'eau au traitement de l'eau, sur les pratiques de surveillance de l'état des citernes et d'entretien quotidien et du nettoyage complet tous les 2-3 ans. Former les communautés et les assister pour organiser la gestion de la citerne en termes	Communautés elles-mêmes Direction de l'eau (service suivi de la qualité de l'eau) Agents de Santé Communautaires (ASC) du Ministère de la Santé UNICEF OMS	MAEPE-RH et le Ministère de la Santé (en collaboration avec l'UNICEF) et depuis 2010,le laboratoire d'analyse du MAEPE-RH(Direction élevage)	Analyses chimique et bactériologique Fréquence ? Au moins deux fois par an et à la requête des organisations des usagers	Cout : 150 US$/ citerne et par an, Financement Unicef

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
		d'usage, de quota par famille et de maintenance (menus réparation).				
Construction ou réhabilitation d'installation de collecte et de retenue des eaux de surface	Fonctionnement hydrologique des bassins versants (risque de diminuer la recharge des nappes à l'aval car ces nappes sont approvisionnées par l'eau de surface)	Réaliser des études d'Avant Projet Sommaire pour une liste de sites potentiels établie avec les cadres du MAEPE-RH. Si ces études sont probantes, des études d'Avant Projet Détaillé incluant une dimension topographique doivent être réalisées pour déterminer l'emplacement adéquat de la retenue. Assurer le suivi du fonctionnement hydrologique des bassins versants où seront situés les ouvrages, et le suivi de l'impact des ouvrages aussi bien sur l'accès des populations et cheptel à l'eau que sur la qualité des parcours. Ceci devrait au minimum se traduire par un suivi des pluies en amont de la retenue, un suivi du niveau de l'eau dans la retenue et un suivi du niveau des nappes autour de la retenue (s'il y en a) et surtout à l'aval.	MAEPE-RH	Coordinateur régional UGP	Supervision du chantier et collecte des données mensuelle	Cout : entre 8 000 US$ et 30 000 US$
	Protection des ouvrages contre le risque de sédimentation	Renforcer la protection de l'ouvrage par la réalisation de travaux de CES en amont de l'ouvrage (dune de protection). Protéger les butes en terre de la retenue par l'empierrement en moellons basaltiques qui se trouvent en abondance dans les deux zones du projet.	Entreprise / Direction en charge des travaux	Coordinateur régional UGP	Inclusion dans les DAO Contrôle périodique des chantiers	Dans budget du chantier 14 000 US$/ retenue
	Pollution des eaux de surface	Séparer les infrastructures à usage humain et animal et prévoir a proximité des citernes une installation spécifique permettant l'abreuvement du bétail Interdire (contrôler et réprimander) tout déversement ou rejet d'eaux usées, de boue, d'hydrocarbures, de polluants	MAEPE-RH	–Comite de gestion de l'eau	Au moment de la conception	Dans budget du chantier 300 US$/ ouvrage

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
	Augmentation des risques de maladies dues a l'eau ou a la prolifération d'insectes près des points d'eau.	Sensibiliser les communautés contre les maladies d'origine hydrique et dues à la prolifération des insectes Assurer un suivi de la santé des populations Améliorer l'accès aux kits sanitaires et aux moustiquaires	Service de gestion des points d'eau (MAPE-RH) avec le comité de pilotage local (CPL).	Coordinateur régional UGP	Actions de sensibilisation	100 US$ /ouvrage et par an
Définition des SAAHP	Surpâturage et dégradation du couvert végétal en périphérie des points d'eau dû a (i) une surcharge animale sur les parcours localisés à proximité des points d'eau ; (ii) un déficit fourrager.	Dimensionner, repartir, planifier et négocier avec les communautés les actions d'aménagement documentées dans les SAAHP sur la base d'une analyse de la spatialisation des déplacements et campements de la population, de l'effectif de la population et du cheptel, de la qualité des parcours actuellement exploités ou potentiellement exploitables, et des besoins saisonniers en eau. Promouvoir la gestion intégrée de la ressource en eau et des parcours afin de limiter la dégradation de ces derniers en concertations/négociations avec les parties prenantes (notamment éleveurs et Etat). Les communautés doivent être au centre du mécanisme de prise de décisions concernant les aménagements à réaliser grâce à la démarche participative.	Coordinateur régional UGP	UGP – Djibouti	Au moment de l'élaboration des SAAHP	N/A
Réalisation ou réhabilitation de puits ou de forages	Disponibilité des ressources en eau	Réaliser pour chaque sous-projet une étude hydraulique pour s'assurer que les capacités des puits / forages ne dépasseront pas les capacités de recharge admissibles par les nappes. S'il y a plusieurs puits/forages, il faut s'assurer de suivre les quantités d'eau extraites de toute la nappe (pas seulement du puits/forage en question) qui ne doivent pas dépasser la recharge de la nappe.	Direction des grands travaux du MAPE-RH	UGP	Obtention de l'avis de la Banque mondiale	Cout de l'étude hydrogéologique pour identifier la disponibilité des

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
		□ S'assurer que le niveau de la nappe ne passe pas sous le niveau du puits (cela dépend de la profondeur du puits et des caractéristiques de la nappe). □ Définir avec les utilisateurs des règles de gestion en cas de baisse importante de niveau de l'eau.				ressources en eau : 30 à 70.000 US$ par point d'eau
	□ Risque d'ensablement, de destruction ou de pollution en cas de crue	□ Implanter les puits en dehors du lit principal de l'oued ou des zones à fort écoulement. □ Couvrir les puits pour une protection contre la crue.	MAEPE-RH	Coordination	Supervision du chantier et collecte des données, Mensuelle	Dans le budget du projet 400 US$/ puit
	□ Qualité des eaux souterraines	□ Prévoir des analyses physico chimiques régulières des eaux prélevées dans les puits et les forages. Ces analyses concerneront les éléments majeurs et les éléments traces. Une analyse des isotopes pourraient être un atout pour la compréhension de la recharge des aquifères. En cas de besoin d'analyse plus approfondie, envoyer les échantillons au CERD. □ Fournir des kits sanitaires de traitement d'eau aux communautés en cas de pollution.	DRESS-EA en collaboration avec le MAPE-RH et le Ministère de la Santé			150 US$/ ouvrage/ an
	□ Arrêt de fonctionnement du a la dégradation des équipements d'exhaure	□ Former les Comites de Gestion de l'Eau pour utiliser convenablement et assurer la maintenance préventive des ouvrages et des équipements. □ Prévoir dans le budget du DRESS-EA le coût de la maintenance des installations et des équipements (notamment les panneaux solaires). Ces coûts de maintenances restent à la charge de l'Etat car les populations locales n'ont ni les moyens ni les compétences pour	MAPE-RH	UGP		Budget National 1000 US$/ forage

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
		assurer la pérennité et le fonctionnement de ces équipements.				
Irrigation	Surexploitation des sources d'approvisionnement qui risque de réduire les débits utilisables à d'autres fins	Réaliser une étude de la capacité de régénération des sources d'alimentation en eau pour le dimensionnement des périmètres irrigués. Suivre le niveau des nappes et les quantités d'eau pompées	MAPE-RH	UGP	Rapport trimestriel	Budget étude hydro géologique
	Pollution de la nappe phréatique par l'utilisation d'engrais chimiques	La pratique agricole autour des ouvrages n'utilisera pas d'engrais chimiques ainsi que de pesticides.	Coordinateurs régionaux	UGP	Rapport trimestriel	Budget de Gestion et fonctionnement UGP
Travaux de Conservation des Eaux et des Sols	Erosion des sols	Prévoir la mise en place de mesures spécifiques pour lutter contre l'érosion (perré sec, gabions, cordons pierreux) Seules des espèces indigènes (plantes et arbres) résistantes aux conditions naturelles locales doivent être plantées.	Coordination régionale	UGP	Rapport trimestriel	Budget de Gestion et fonctionnement GP
Utilisation, et mobilisation des terres	Risque d'expropriation ou acquisition involontaire de terres (public ou privé, temporairement ou définitivement) Risque de réduire ou interdire, du fait du projet, l'accès de certaines populations à des ressources dont elles dépendent (pâturages, eau, arbres fruitiers, cultures, lieux de pêche, forêt, services publics)	Organiser des réunions d'information et de consultation en présence des autorités administratives et coutumières et des comites de pilotage locaux représentant les communautés et indiquer que tout sous projet nécessitant une expropriation et/ou un déplacement involontaire de personnes et/ ou limitant l'accès à des ressources ou source de revenus ne sera pas financé. Le cas des mises en repos de pâturages doit être décidé en commun avec l'information et la consultation de toutes les communautés concernées Documenter les parcelles utilisées et les modalités d'utilisation des terres dans le cadre	Coordination régionale	UGP	Rapport trimestriel	Budget de Gestion et fonctionnement UGP

Activités concernées	Risques et impacts environnementaux et sociaux négatifs potentiels	Mesures d'atténuation préconisées	Responsable exécution des mesures	Responsable du contrôle de l'exécution	Type et fréquence du contrôle	Coût et source de financement
	auxquelles elles ont eu un accès régulier. Ceci de manière temporaire ou permanente. - Risque de provoquer la réinstallation involontaire de personnes ou de familles	de la préparation d'un SAAHP, discuté avec les communautés et les autorités administratives et qui tiendra lieu d'accord officiel entre les autorités coutumières et administratives de l'attribution de parcelles pour la mise en œuvre du projet.				
Renforcement de l'usine de dessalement de Khor Angar	- Problème de décharge des résidus de la station (déchet liquide à haute salinité) - Problème de cout d'exploitation et de maintenance	- Procéder à un examen du système d'approvisionnement en eau située dans Khor Angar. Si l'examen conclut qu'il est possible et bénéfique pour que le projet soit financé, alors l'emprunteur sera tenu de préparer une étude d'impact environnementale distincte, un plan de gestion et de surveillance des impacts.	MAPE-RH/UGP DRESS-EA	MAPE-RH/UGP		Budget du projet

11. IMPLEMENTATION ARRANGEMENTS AND INSTITUTIONAL RESPONSIBILITIES

Institutional Responsibility for the Implementation of ESMF and Implémentation arrangements

Le projet sera exécuté par l'Unité de Gestion de Projet (UGP)[5] crée par décision du Ministre de l'Agriculture, de l'Eau, de la Pêche, et de l'Elevage, chargé des Ressources Halieutiques (MAEPE-RH) et qui sera sous la direction de l'hydraulique rurale.

- **Le MAEPE-RH sera l'Agent principal du projet** et aura pour mission de veiller à ce que les interventions du projet s'inscrivent dans le cadre de son objectif et des orientations retenues pour sa mise en œuvre. Au sein du MAEPE-RH, un **Comité de Coordination Technique (CCT)** a pour objectif d'assurer une bonne intégration et synergie entre les plans de travail et budgets des différents intervenants dans les sites du programme.
- **L'Unité de Gestion de Projet (UGP)** est sous la tutelle du MAEPE-RH, elle est considérée comme une unité autonome chargée de la planification, l'exécution et le suivi des activités du projet. Elle est habilitée pour gérer tous les travaux afin d'assurer la cohérence des programmes sur financements externes ou nationaux. Du personnel est détaché par le MAEPE-RH à l'UGP, la majorité est affectée à temps partiel à l'exception de trois responsables (à savoir le Coordinateur, le Responsable suivi évaluation et le Responsable Forestier) qui sont affectés exclusivement et à plein temps à l'UGP.
- **Un Comité de Pilotage National (CPN)**[6] a pour mission la supervision de l'UGP, l'orientation des activités des programmes, le suivi à posteriori des réalisations, la facilitation des relations des programmes avec d'autres institutions publiques et privées et la mobilisation de fonds supplémentaires pour le financement de la stratégie de mobilisation des eaux de surface du Gouvernement.
- Au niveau régional, la mise en œuvre du projet sera assurée par des **Coordinateurs Régionaux (CR)** basés à Ali-sabieh et à Dikhil. Les coordinateurs régionaux seront membres du Comité de Pilotage Régional (un CPR par région) où siègent les représentants de la préfecture, du conseil régional, de la société civile, de la sous-direction régionale du MAEPE-RH et des autres Ministères techniques (santé, transport etc..). Le CPR créé à l'initiative des collectivités régionales a pour mission la

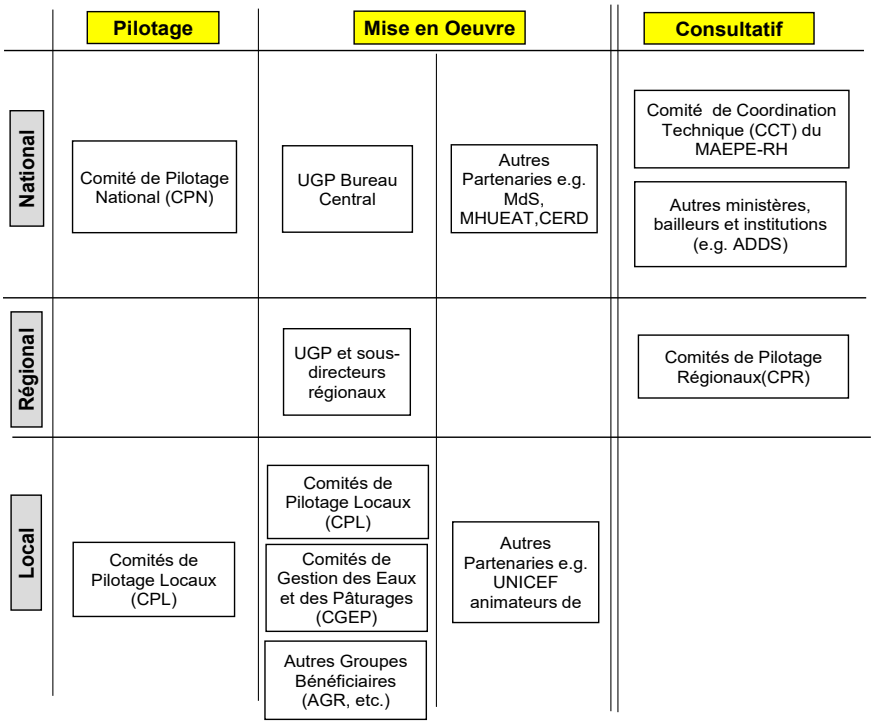
[5] L'UGP est composé d'un coordinateur de programme, un responsable suivi-évaluation, un responsable hydraulique, un responsable forestier/agriculture, un responsable administratif et financier, un responsable passation des marchés, deux coordinateurs régionaux (Dikhil et Ali sabieh), deux secrétaires, quatre chauffeurs.

[6] Le CPN est présidé par le Ministre ou son Secrétaire General et est composé du représentant du Ministère des Finances, du représentant du Ministère de l'Energie et de l'eau, du représentant du Ministère de l'Environnement, du représentant du Secrétariat de l'Eau élargie, du représentant du CERD, du représentant des Préfets de Régions, du représentant des Conseils Régionaux, des représentants des Communautés Bénéficiaires(CPL), des représentants des Bailleurs de Fonds, du Coordinateur de l'UGP.

coordination et la définition des priorités dans l'affectation des ressources au niveau local.

- Au niveau communautaire, en concertation avec le coordinateur de l'UGP, le représentant du service d'appui à la gestion décentralisée des points d'eau, les coordinateurs régionaux et, les sous directeurs du MAPE-RH renforcés des animateurs ruraux appuieront les communautés bénéficiaires par le biais des **Comités de Pilotage Locaux (CPL)** qu'elles auront désignés dans l'élaboration des SAAHP. Les CPL seront créés dans les zones agricoles d'intervention (parcours). Le CPL est représentatif d'un groupe de villages et hameaux qui partagent un espace commun de la terre. Chaque comité de pilotage local sera constitué d'environ 12 membres, représentants des différents villages et communautés, avec des femmes membres d'au moins 2 par comité.
- Le CPL représente la communauté de la zone d'intervention vis-à-vis de l'UGP. Les responsabilités du CPL comprennent (i) la définition des interventions prioritaires en consultation avec leurs communautés, (ii) la négociation des régimes de planification avec le personnel du projet et les autorités locales, (iii) la mobilisation de la participation communautaire, l'identification et la création des comités de gestions des points d'eau et des pâturages (CGEP), (iv) le suivi des activités et leur impact sur les communautés, (v) la réception des travaux et le suivi de l'entretien et de la maintenance de divers investissements.
- Le CGEP représente la communauté de base au niveau du terroir et est en charge de la mise en œuvre des travaux de construction, de la gestion, de la maintenance et du suivi des ouvrages hydrauliques et des terres.

Le cadre institutionnel :



Capacity Building and Institutional Strengthening for ESMF Implementation

*Who will be responsible for addressing capacity gaps for the implementation of this ESMP***?**

Groupe cible	**Contenu**	**Responsable de la formation**	**Durée et fréquence**	**Cout**
MAPE-RH	Atelier de formation sur le DRESS-EA	Consultant national	2 jours, démarrage du DRESS-EA	10 000 usd
	Pour 5 techniciens du MAPE-RH : une formation sur la conception et la réalisation des ouvrages hydrauliques incluant la limitation des impacts sociaux et environnementaux	Consultant national et UGP	7 jours, au démarrage des activités	54 000 usd
	Pour 5 techniciens du MAPE-RH : Formation sur la collecte et l'analyse des données de terrain	UGP	3 jours, au démarrage des activités	
UGP centrale	Atelier de sensibilisation et d'information sur le DRESS-EA	consultant national	2 jours, au démarrage des activités	18 000 usd
	Formation sur les procédures	Consultant	5 jours, au	Cout

Groupe cible	Contenu	Responsable de la formation	Durée et fréquence	Cout
	de gestion de l'OSS	national	démarrage des activités	inclus dans l'Atelier de démarrage
	Une formation sur la gestion du projet (Comptable)	Consultant national	15 jours, au démarrage des activités	
Autorité régionale Nord	Atelier de formation sur le DRESS-EA, incluant les politiques de sauvegarde	MAPE-RH / UGP	3 jours (dont 1 pour le secteur de la pêche), au démarrage des activités	Le même consultant national qui va dispenser la formation
UGP régional Nord	Atelier de sensibilisation et d'information sur le DRESS-EA	MAPE-RH / UGP	3 jours, au démarrage des activités	
	Formation sur le suivi et l'encadrement sur le terrain lors de la réalisation des ouvrages hydrauliques et aux impacts environnementaux	MAPE-RH / UGP	3 jours, au démarrage d'activités	
	Formation sur la sensibilisation et la mobilisation communautaire	MAPE-RH / UGP	3 jours, au démarrage des activités	
	Atelier de formation consacrée aux activités de la pêche	MAPE-RH / UGP	3 jours à Obock, 3 jours à Tadjourah et 3 jours à Sagallou, au démarrage des activités	
Autorité régionale Sud	Atelier de formation sur le DRESS-EA, incluant les politiques de sauvegarde	MAPE-RH / UGP	2 jours, au démarrage du DRESS-EA	Le même consultant national qui va dispenser la formation

Groupe cible	Contenu	Responsable de la formation	Durée et fréquence	Cout
UGP régional Sud	Atelier de sensibilisation et d'information sur DRESS-EA	MAPE-RH / UGP	3 jours, au démarrage du DRESS-EA	
	Formation sur le suivi et l'encadrement sur le terrain lors de la réalisation des ouvrages hydrauliques et aux impacts environnementaux	MAPE-RH / UGP	3 jours, au démarrage des activités	
	Formation sur la sensibilisation et la mobilisation communautaire	MAPE-RH / UGP	3 jours, au démarrage des activités et trimestriellement	
Comité de Pilotage Local (CPL)	Formation sur la sensibilisation et l'hygiène des points d'eau (hygiène, traitement d'eau, périmètre de protection des points d'eau)	MAPE-RH / UGP	3 jours, au démarrage des activités et trimestriellement	
	Formation sur la gestion et la maintenance des points d'eau	MAPE-RH / UGP	1 jour, 3 jours, au démarrage des activités et trimestriellement	
	Formation à la préparation de proposition de projet (dont analyse environnementale).	MAPE-RH / UGP	1mois	
Femmes	Atelier de formation consacrée à l'artisanat	MFF/Consultante nationale	5 jours, au démarrage des activités	
	Atelier de formation consacré à la micro finance et la gestion des caisses de crédit (atelier organisé au niveau régional)	Consultant international ou/et Agence Djiboutienne de Développement social (ADDS) qui gère actuellement le micro crédit	10 jours	
	Atelier de formation consacré au traitement de l'eau à domicile	MAPE-RH /MFF/ UGP	3 jours, au démarrage des activités, fréquence annuelle	

Groupe cible	Contenu	Responsable de la formation	Durée et fréquence	Cout
	Atelier de formation consacré à l'hygiène et à la santé humaine	MAPE-RH / UGP	3 jours, au démarrage des activités, fréquence annuelle	

REPORTING

L'UGP sera responsable de la génération des informations et leur diffusion. Les éventuels Plans de Gestion Environnementaux, doivent être mis à disposition du public dans un endroit accessible à la population locale

12. ESTIMATED ESMF IMPLEMENTATION COSTS

Develop a detailed budget for the implantation of this ESMF

Poste de cout	Détail	Chiffrage
Budget d'assistance technique (notamment pour la réalisation des études de capacité des nappes en cas de forage...)	Etude hydrogéologique avant la réalisation des forages dans les zones du projet et recrutement du consultant (2 mois) en eau et consultant Pastoraliste (2 mois) soit et consultants nationaux (agronome) et enfin Consultant sauvegarde	**306 000 US$**
Allocation pour la préparation et la validation environnementale des projets et des éventuels plans de gestion environnementaux y compris la vérification d'accord communautaire pour l'usage des parcelles bien déterminées.	Préparation des fiches techniques et leur suivi périodique sur le terrain par l'équipe d'encadrement (Coordination)	Budget de fonctionnement
Activités de renforcement de capacités des institutions (UGP, autorités locales)	UGP (1 ateliers à Djibouti ville et 2 ateliers régionaux au démarrage, 2 formations pour les techniciens du MAEPE-RH, 10 Ateliers formations pour l'UGP) Autorités locales (2 ateliers, 1 par région) Séminaire et voyage d'étude et stage de 2	**332 000 US$**

Poste de cout	Détail	Chiffrage
	mois pour 5 techniciens Formation de cinq vétérinaires	
Programmes de formation des communautés et des différents acteurs impliques	30 réunions avec les CPL sur le diagnostic spécial et social et diagnostiques participatives (15 à Dikhil et 15 à Ali sabieh) 2 ateliers de formations pour les femmes	**12 000 US$**
Budget pour assurer le suivi annuel de la mise en œuvre du plan de gestion environnemental	Recrutement consultant sauvegarde environnementale et sociale	**18 000 US$** **(4 500 US$ x 4mois)**

AN ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

FOR

THE STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

Sudan

March, 2019

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AF	Adaptation Fund
CRC-WHS	Conflict Resolution Committee
DIU	Dams Implementation Unit (MWRIE – Sudan)
DRESS-EA	Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
HCENR	Higher Council for Environment and Natural Resources
GWPEA	Global Water Partnership Eastern Africa
OSS	SAHARA AND SAHEL OBSERVATORY
IWRM	Integrated Water Resources Management
MENRPD	Ministry of Environment, Natural Resources and Physical Development
MWRIE	Ministry of Water Resources, Irrigation and Electricity.
SMA	Sudan Meteorological Authority
WNS	White Nile State
WRTO	Water Resources Technical Organ

1.0 Background

The proposed Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region project is to be implemented in four countries including Uganda, Djibouti, Sudan and Kenya.

In Sudan the project shall be implemented in the White Nile state. The White Nile State (WHS), as one of the Sudan's most vulnerable regions, is severely impacted by the climate change induced droughts and floods. Most notably, increasing temperatures, decreasing trends of annual rainfall as well as increasing variability, are causing gradual shift of ecological zones from north to south. This situation has adversely impacted water availability, agricultural and livestock potential, as almost, 70% of the total land area (40 km^2) earn a living based traditional rain fed agriculture and livestock (animal resources: sheep, goats and cattle - are estimated as more than 8 million head).

Among the eight localities of WNS, six of them are most vulnerable to droughts and other impacts of climate change; Namely: Algabalain, El Salam, Tendelti, Kosti, Al Dwaim & Um Rimmta (see figure 1 below). These impacts have already manifested in declining crop productivity, loss of grazing resources and rangeland valuable species, land degradation, increased frequency of crops, livestock and population diseases, deterioration of better livelihoods conditions, and youth migration in search for jobs and education.

While climate change impacts are severe across the state, the localities on the western bank of the White Nile river are particularly vulnerable due to several factors. These include: low general awareness of climate change; lack of knowledge about water harvesting; lack of access to improved seeds and other agriculture inputs; presence of overgrazing and severe deforestation; high poverty level and lack of alternative livelihood systems; lack of technology and know-how for better agricultural practices; high frequency of rangeland fires best the rocketing crisis and conflict among farmers and pastoralists within the state and across border with South Sudan.

Therefore, human interventions and adaptation measures, are essential to improve agricultural practices (dissemination of improved seeds, vegetable production, introduction of diary processing skills … etc.), water resources development (introduction of water harvesting systems, harmonizing indigence knowledge with technology, awareness in integrate water use … etc.), deforestation and encourage agroforestry practices (allocate of 10% of agricultural land for forest plantation, establishment of shelterbelts, social forestry, enforcement of natural resources legislations … etc.), grazing management (rehabilitation of rangelands and grazing enclosures … etc.) and

promote other activities such as fish farming, provision of energy conservation and renewable energy technologies and biogas for domestic energy, lightening and production of fertilizers.

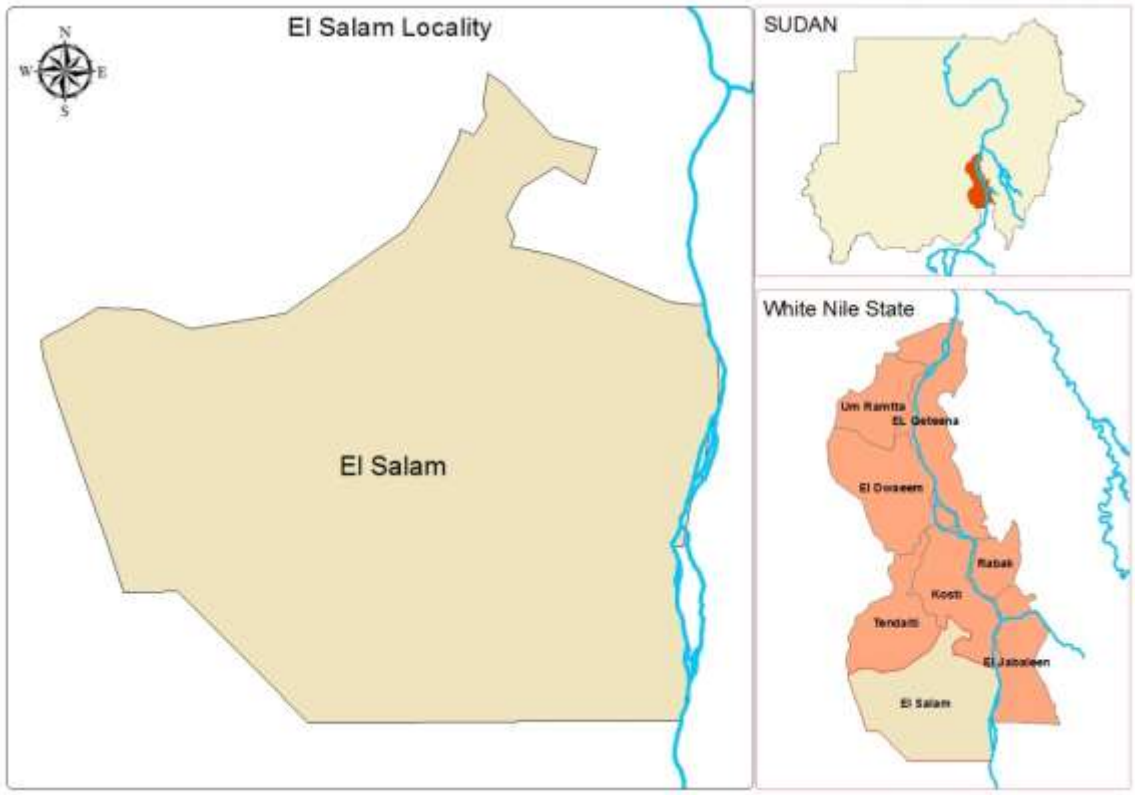


Figure 1: Location map – El Salam Locality – White Nile State – Sudan.

It is against this background that the Ministry of Water Resources, Irrigation and Electricity in Sudan together with sister ministries in Djibouti, Kenya and Uganda with Technical assistance from Global water partnership as an executing entity and Sahara Sahel Observatory (OSS) as an Implementing Entity have come up with the **"Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region"** Project proposal for submission to the adaptation fund to address some of these challenges. The project shall promote implementation of adaptation strategies for reducing climate change effects on agriculture to build climate resilient farming communities in the affected parts including drought-prone areas of Uganda**.**

1.2 Project Description and Components

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

The Project has four components.

1. Development and enhancement of a regional Drought Early Warning System,
2. Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects
3. Drought and Climate Change adaptation actions and
4. Knowledge management and awareness creation.

1.3 Key Component Activities

In order to realise the overall goal a number of activities will be implemented under each component as outlined below;

Component 1: Development and enhancement of a regional Drought Early Warning System

The key Activities under this component include:

1. Baseline studies and assessments on the current status of the existing EWS for different types of hazards
2. Equipping and upgrading weather stations including observation and monitoring infrastructure
3. Updating options of traditional EWS with modern EW technologies,
4. Development of an EWS prototype to be used at the regional and national levels,
5. Equipping /upgrading of selected weather stations,
6. Construction/renovation and equipping of EW information centers
7. Supporting/equipping project beneficiaries to access EW information (e.g. Devices including, brochure, SMS, Radio etc.)
8. Development/Review EW information sharing frameworks and an implementation action plan to operationalize the frameworks,
9. Inter-ministerial and sectoral meetings for data sharing
10. National, regional and local EW information sharing Forums
11. Incorporation of EW information into planning and budgeting processes of targeted countries
12. *R*egular stakeholder EW information feedback platforms for farmers and pastoralists,
13. Quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders,
14. Conducting KAP surveys on EW information
15. Developing periodic feedback user-friendly tools on accessing, utilizing and reporting EW information to mandated institutions

Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects

The key Activities under this component include:

1. Development/updating of existing Drought management plans (DMPs)at national and sub-national levels
2. Integrating CC aspects and adaptation actions,
3. Popularization and dissemination of the reviewed DMPs for use by the farmers and pastoralists,
4. Integration of DMPs into the national and sub-national development plans and formulation of bye-laws and ordinances at sub-national and lower political units.
5. Capacity needs assessment to identify gaps and hindrances to effective drought management,
6. Development of capacity building plans and capacity building materials, exchange visits and learning tours for cross-learning in areas with successful drought management innovations
7. Training staff in managing EW information centers and extension staff and artisans in drought adaptation interventions
8. Community training workshops for farmers and pastoralists in drought risk management and adaptation measures
9. Establishment of learning centers by farmers and pastoral groups for innovative Climate Smart agriculture interventions
10. Review/development of MoUs, protocols and stock route agreements establishment of regional and national drought management multi-sectoral/stakeholder platforms
11. Mobilization of resources for Drought Management jointly by regional and national partners

Component 3: Drought and Climate Change adaptation actions

The key Activities under this component include:

1. Assessment of surface water utilization potential and availability
2. Development water Management Plans in project sites,
3. Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
4. Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole

irrigation, and solar powered irrigation systems),protection of water wells and springs)

5. Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
6. Assessment on groundwater utilization potential and availability
7. Development of groundwater Management Plans in project sites, Review/develop regulatory framework and guidelines on groundwater sources
8. Restoration of degraded water catchments
9. Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dryland agroforestry),
10. Provision of inputs for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)
11. Promotion of climate-smart agricultural practices
12. Developing of rangeland management plans
13. Reduction livestock stocking, integrated pest and disease management, and introduction of drought-tolerant livestock breeds as well as those with low feed requirements.
14. Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells
15. Formation and/or facilitation of existing livestock associations/groups/cooperatives at the community level.
16. Introduction and promotion of Index-based weather insurance in partnership with insurance companies
17. Drought risk assessments, generation
18. Analysis and sharing of market information
19. Creating linkages between farmer and pastoralists associations at regional, national and sub-national levels
20. Pottery, Beekeeping,
21. Energy saving stoves and Briquettes
22. Making, and interlocking bricks,
23. Growing of sisal and Aloe spp such *Aloe ferox* that grow in dry land and produce quick returns,
24. Production of ropes and art crafts,
25. Making and marketing of aloe gel
26. Provision of grants for undertaking innovative IGAs or drought adaptation actions Provision of inputs for value addition crop and livestock products.

Component 4: Knowledge management and awareness creation

The key Activities under this component include:

1. Documenting lessons and best practices from project interventions,
2. Generating and packaging information dissemination materials on EW, CC and drought adaptation actions in forms for easy uptake (e.g. Policy briefs, brochures) adapted to the various stakeholders
3. Sharing knowledge and information through the use of existing and popular platforms e.g. Electronic and print media, telecom that is easily accessible to the stakeholders.
4. Information generation an (e.g. GHACOF for EW and IDDRISI for drought management platform and national platforms)
5. Engagement of policymakers in the dissemination of drought management information and best practices
6. Sharing and dissemination of information by drought management working groups

1.4 Description of the Project sites

The project will be implemented in different sites within each of four selected countries of the IGAD region. Basically, these are areas that are considered to be most vulnerable and prone to drought based on the following criteria:

- In terms of the environmental conditions, the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (focusing on vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).
- Communities inhabiting such sites are also food insecure characterized by recurrent famine and a shortage of food. There is high dependence on the rain-fed agriculture especially high dependence of farmers and pastoralists on crop and livestock farming.
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender. Low-income levels of the population/high poverty levels in such sites therein are known and reported.
- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income.

In Sudan, the project will be implemented in El Salam Locality at The White Nile State. From the east the locality is bounded by the White Nile river, while in the south with the border between the republic of South Sudan. Both sides are areas

of conflict among the pastoralists, farmers, refugees, returnees. This conflict is main because of the water and pasture availability and distribution.

2.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

In Sudan it's a policy and legal requirement for project implementers to ensure that all the negative environmental and social impacts of a project on the environment and communities are adequately mitigated while the positive ones are enhanced. It will be used in addressing environmental issues that apply to or might be triggered by the planned project activities.

This ESMF has been prepared to aid various stakeholders to identify and effectively manage potential environmental and social impacts of the proposed "**Strengthening *drought resilience for small holder farmers and pastoralists in the IGAD region Project"*** during implementation, in accordance with international good practice as well as the Adaptation Fund's Environmental and social policy and Government of SUDAN requirements.

Specifically, the main purpose of the ESMF is to

- Establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and the subsequent ESIAs/ESMPs, as applicable; and
- Provide practical information on resources required to implement the ESMF requirements.2.1 Methodology of Preparing the ESMF

The development of this ESMF entailed review of project related documents, review of the relevant policies laws and regulations, consultations with key stakeholders and review of the Final ESMF by NEMA as detailed below.

a) Review of project related documents

Relevant documents on the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project, project concept and other study reports.

b) Review of relevant policies, Laws and regulations

A review of the relevant environmental and social management policies, laws and regulations in Sudan was conducted. Additionally, the Adaptation Fund and OSS environmental and social policies were also referred to ensure that the proposed project investments are in conformity.

c) Consultations with key stakeholders

This ESMP has been developed by the Ministry of Water Resources, Irrigation and Electricity and with guidance from the Ministry of Environment, Natural Resources and Physical Development (MENRPD), and the Higher Council for Environment and Natural Resources (HCENR), and in consultation with key stakeholders. These consultations enabled the collection and analysis of information on possible environmental and social impacts of the project investments, possible enhancement and mitigation measures, and key stakeholders responsible for the implementation of the mitigation measures among others. The key stakeholders consulted included:

- Government institutions and departments including Water Resources Technical Organ (WRTO), The Hydraulics Research Center, Sudan Meteorological Authority (SMA), Dams Implementation Unit (DIU), the State ministry of Production and Natural Economics – White Nile State … etc.
- El Sugya Charity Organization (NGOs),
- Political leaders and Staff of the Conflict Resolution Committee at White Nile State (CRC-WNS).
- Technical staff of El Salam locality.
- Former minister of Federal Ministry of Agriculture and Forests, as a citizen from the locality.
- the target beneficiary communities

d) Consultations and Review of the ESMF by NEMA

This Environmental and Social Management Framework subject to review by WRTO and HCENR and approval as the Framework that will guide detailed assessments that will be carried out for certain specific projects depending on their size, location and type. Further consultation and guidance will be given by to other relevant sectors during the preparation of detailed assessments and project implementation.

(e) Public disclosure

For projects such **DRESS-EA** the NEP as well as Adaptation fund and OSS Environmental and social policies require that the ESMF is prepared and publicly disclosed to all stakeholders. This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project, and for other reviewers to strengthen the frameworks, particularly measures and plans to prevent or mitigate any adverse environmental and social impacts. To this end, this document will be publicly disclosed through the ministry website. Also the stakeholder consultations undertaken during compilation of the ESMF partly served the purpose of disclosing the project to the stakeholders and their views, concerns and input has been considered, and will accordingly inform different design aspects of the project.

3.0 POLICY, LEGAL AND REGULATORY FRAMEWORKS

In Sudan the Nation Water Policy is overarching all different sectors policies. Some of the main legal and regulatory frameworks as well as relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

3.1 Policy Framework

No	Policy	Purpose of the Policy	Relevance to the Project
1	Sudan Water Policy 2007	Overarching all sectors policies. National water resources utilization, protection and management.	All intervention have to comply with the national water policy.

3.2 Legal Framework

No	Laws	Purpose of the Law	Relevance to the Project
1	Environment Act 1901	Including regulations for irrigation, energy, health, industry and insects protection.	
2	Environmental Health Act 2009	To preserve environmental health including provision and preparation of public drainage and	

		drain rain water and sewage water.	
3	Environment and Natural Resources Protection Act 2017	Deforestation prevention … etc.	
4	Water Resources Act 1995	Water allocation and licensing.	
5	Relevant state Acts		

3.3 Institutional Framework

No	Institution	Mandate	Relevance to the Project
1	Ministry of Water Resources, Irrigation and Electricity.	The ministry has comprises many directorates with different mandates; these are: - Nile waters and large dams affairs; - Projects; - Strategic plan and Consultancy; - Irrigation operations; - Dams Implementation Unit; - Sudan Meteorological Authority; - The Hydraulic research center; Mandates: - Monitoring of water resources; - Implementing researches in related topics to water sector; - Approval of water - Management of	- Approval of proposed water projects; - Water licensing; - Implementation of water harvesting projects; - Design and organizing capacity building programs; -

		irrigation water; - … etc.	
2	Ministry of Environment, Natural Resources and Physical Development	- Environment management and protection	
3	High Council for Environment and Natural Resources	Coordination and	Endorsement of proposed interventions …
4	State ministry of production and Economic Resources – White Nile State.	New reform. It comprises irrigation, agriculture, livestock and fisheries.	- Inputs to EWS - Participation in CB, programs. -
5	State ministry of Health and Social Affairs – White Nile State.	Managing heath and social issues.	- Monitoring Standards - Participate in the community oriented intervention … etc.
6	State ministry of Education and Guidance – White Nile State.	New reform. It comprises education, culture, tourism, youth, public media.	- Gender mainstreaming -
7	State Ministry of Finance, Economic and Manpower - White Nile State.		- Facilitate in employment

3.4 Other international institutions policies, Guidelines operational safeguards and Standards relevant to the project.

Environmental Impacts Assessment for FAO filed projects

3.4.1 Environmental and Social Policy of the Adaptation Fund (Approved In November 2013; Revised in March 2016)

The Environmental and Social Policy of the adaptation fund emphasizes the need to ensure that projects/programmes supported by the Fund do not unnecessarily harm the environment, public health or vulnerable communities. All implementing entities are required to have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design, adopt measures to avoid or where avoidance is impossible to minimize or mitigate those risks during implementation, monitor and report on the status of those measures during and at the end of implementation as well as ensure adequate opportunities for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by the Fund.

3.4.1.1 Environmental and Social Principles of the Adaptation Fund

To ensure that all projects/programmes supported by the Fund comply with its environmental and social requirements the fund formulated 15 Environmental and Social Principles and all the projects are designed and implemented to meet these principles. However it is recognized that depending on the nature and scale of a project/programme all of the principles may not be relevant to every project/programme. These and their relevance to the project are discussed below:

Table 1: Summary of Environmental and social principles and how they relate to the Project

tem	Principle	Scope	Triggered or not triggered
1	Compliance with the Law	Projects and programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	√
2	Access and Equity	Projects and programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights neither they exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups	√
3	Marginalized and Vulnerable Groups	Projects and programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	√
4	Human Rights	Projects and programmes supported by the Fund shall respect and where applicable promote international human rights.	√
5	Gender Equality and Women's Empowerment	Projects and programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund gender policy (b) receive comparable social and economic benefits; (c) receive comparable social and economic benefits; and (d) do not	√

		suffer disproportionate adverse effects during the development process.	
6	Core Labor Rights	Projects/programmes supported by the Fund shall meet the core labor standards as identified by the International Labor Organization	√
7	Indigenous Peoples	The Fund shall not support projects and programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	√
8	Involuntary Resettlement	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation	√
9	Protection of Natural Habitats	The Fund shall not support projects and programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities.	√
10	Conservation of Biological Diversity	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species.	√
11	Climate Change	Projects and programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	√
12	Pollution Prevention and Resource Efficiency	Projects and programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants	√
13	Public Health	Projects and programmes supported by the Fund shall be designed and implemented in a	√

		way that avoids potentially significant negative impacts on public health.	
14	Physical and Cultural Heritage	Projects and programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects and programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	√
15	Lands and Soil Conservation	Projects and programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	√

3.5 Environmental and Social Policy of Sahara and Sahel Observatory (OSS) of 2016

As a policy OSS does not support projects/programmes that unnecessarily harm the environment, vulnerable communities or women or contribute to poverty, social inequality or gender discrimination.

To carry out its Policy, OSS ensures that all its supported projects/programmes:

a. Have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design
b. Adopt measures to avoid or where avoidance is impossible to minimize or mitigate or manage those risks during implementation
c. Monitor the status of those measures during and at the end of implementation.
d. Assure that adequate opportunities are provided for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by OSS.

In addition all projects/programmes supported by OSS shall be designed and implemented to meet the following ten Environmental and Social Performance Standards (PSs). It is recognized that depending on the nature and scale of a project/programme all of the PSs may not be relevant to every project/programme. These Performance Standards are also in line with the international best practices for assessment of environmental and social risks e.g. those of the International Finance Corporation (IFC), Adaptation Fund, etc. These include;

- PS1: Assessment and management of environmental and social risks and impacts
- PS2: Labour and working conditions
- PS3: Resource efficiency and pollution prevention
- PS4: Community health, safety and security
- PS5: Land acquisition and involuntary resettlement
- PS6: Biodiversity Conservation and sustainable management of living natural resources
- PS7: Indigenous peoples
- PS8: Cultural heritage
- PS9: Gender Equity and Women's Empowerment
- PS10: Access and Equity and protection of Human Rights

Item	Performance Standard (PSs).	Scope	Triggered or Not Triggered
1	PS1:Assessment and management of environmental and social risks and impacts	PS1 outlines the need of OSS to establish and maintain an organizational structure that defines roles, responsibilities, and authority to implement the ESMS. This means designating personnel with E&S responsibilities and ensuring that resources are available for the effective implementation of the ESMS across OSS PS1 also requires that OSS identify the E&S risks and impacts associated with the project activities This means conducting an environmental and social due diligence (ESDD) at the project level to identify the risks and impacts associated with environmental, social, labour, occupational health and safety, and security of the activities considered for financing. As an outcome of the ESDD process, OSS can identify necessary mitigation or corrective measures for executing partners	√
2	PS2: Labour and working conditions	a. Fair treatment, non-discrimination, equal opportunity; b. Good worker–management relationship; c. Comply with national employment and labour laws; d. Protect workers, in particular those in vulnerable categories; e. Promote occupational safety and health; f. Avoid use of forced labour or child labour	√

3	PS3: Resource efficiency and pollution prevention	a. Avoid, minimize or reduce project-related pollution (Air, Water, Land, Noise, etc); b. More sustainable use of resources, including land, energy and water; c. Reduced project-related greenhouse gas emissions.	√
4	PS4: Community health, safety and security	a. To anticipate and avoid adverse impacts on the health and safety of the affected community; b. To safeguard personnel and property in accordance with relevant human rights principles.	√
5	PS5: Land acquisition and involuntary resettlement	a. Avoid/minimize adverse social and economic impacts from land acquisition or restrictions on land use: ➢ Avoid/minimize displacement; ➢ Provide alternative project designs; ➢ Avoid forced eviction. b. Improve or restore livelihoods and standards of living; c Improve living conditions among displaced persons by providing: ➢ Adequate housing; ➢ (ii) Security of tenure.	√
6	PS6:Biodiversity Conservation and sustainable management of living natural resources	(a) Protection and conservation of biodiversity; (b) Maintenance of benefits from ecosystem services; (c) Promotion of sustainable management of living natural resources; (d) Integration of conservation needs and development priorities.	√
7	PS7:Indigenous peoples	(a) Ensure full respect for indigenous peoples • human rights, dignity, aspirations; • livelihoods; • culture, knowledge, practices; (b) Avoid/minimize adverse impacts; (c) Sustainable and culturally appropriate development benefits and opportunities; (d) Free, prior and informed consent in certain circumstances.	√
8	PS8:Cultural heritage	a. Protection and preservation of cultural heritage including avoiding the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. b. Promotion of equitable sharing of cultural heritage benefits.	√
9	PS9: Gender Equity and Women's	Both women and men: a. Participate fully and equitably;	√

	Empowerment	b. Receive comparable social and economic benefits; and c. (c) Do not suffer disproportionate adverse effects	
10	PS10: Access and Equity and protection of Human Rights	a. (a)Provide fair and equitable access in an inclusive manner b. (b)Does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. c. (c) Does not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups including children, women and girls, the elderly, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. d. (d) Respect and where applicable promote human rights.	√

3.6 Environmental and social baseline information for the Project area

3.6.1 Location

In Sudan, the project will be implemented in EL Salam Locality – The White Nile State, which lies along the western bank of the White Nile river, with the following boundaries (Fig. 1):

East : White Nile River

South : Border with South Sudan (SS)

West : Border with South Kordofan State

North : Mid way between Kosti town and Border with SS (North El Zelate town) with the border of the Republic of South Sudan. The locality covers an area of about 5919 km^2 represents about 11.2% of the WNS area.

The population of the area is around 136,000 in addition to huge number of refugees (120,000) an returnees (68,000).

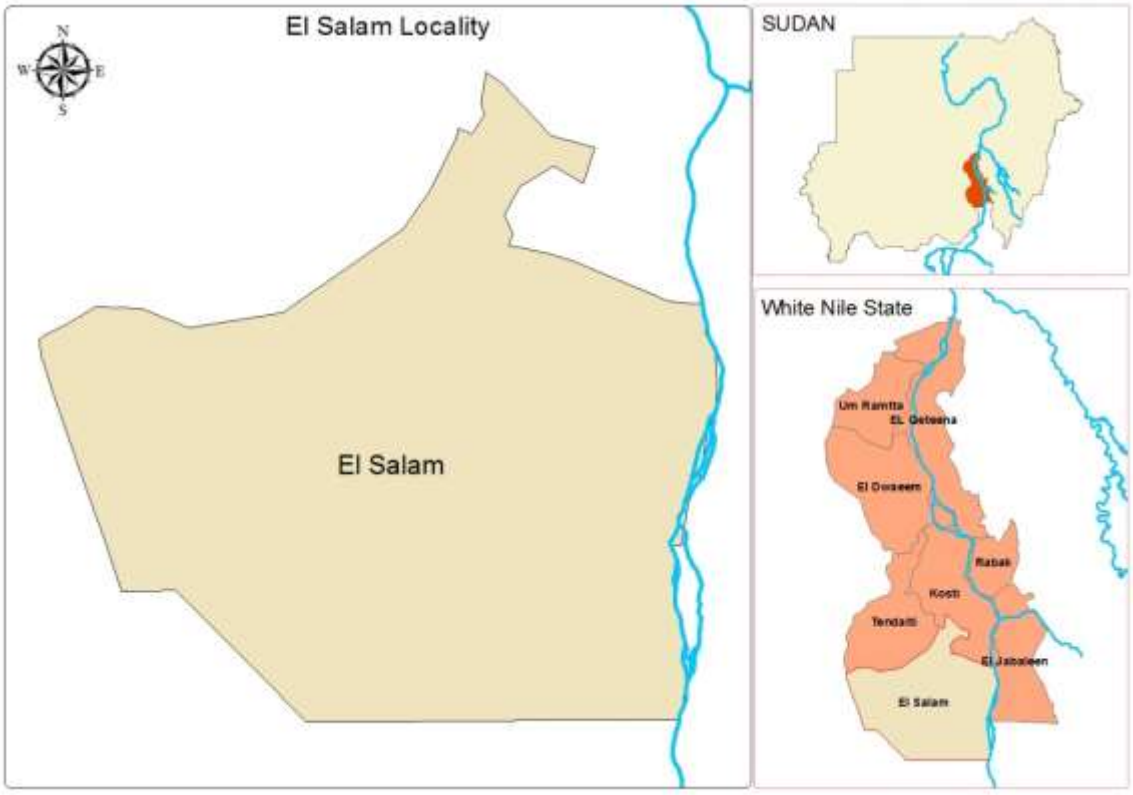


Figure 2: Location map – El Salam Locality – White Nile State – Sudan.

3.6.2 Climate

Despite that the area is in the south of the state, it severely impacted by the climate change induced drought, and it is one of the most vulnerable locations for agriculture, water and health. The total average annual rainfall varies between 300 t0 600 mm/year there is a short rainy season with heavy rainfall events from July to October with typically up to a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events during August. As a summary the following is valid:

Average minimum temperature (1963 – 2004):15.7 (Jan.) – 25.3 (May)

Average maximum temperature (1964 – 2004): 32.5 (Jan.) – 41.5 (Apr/May)
Average annual rainfall (1961 – 2008) : 350 mm

3.6.3 Geology and Soils

The study area is with the basement complex which indices the absence of groundwater. Most of the top soil of the area is clayey one which rich. Some sand dunes are scattered here and there.

Figure 3: Type of Top Soil at Study Area.

3.6.4 Vegetation Cover

The increased frequencies of drought, dust storms and heat waves, have negatively impact water availability and agricultural potential. Such climate trends and risks are exacerbated by a number of non-climate issues such as: decreased vegetation cover due to overgrazing and deforestation, and inefficient water resources management, thus further increasing trends of ecological zone shift and desertification. Referring to the photo of fig. 3 below, captured during the last site visit on 4th. March 2019, it is clear that the successive drought had left a warning sign of desertification.

Figure 4: Typical land Cover at Study Area

3.6.5 Water Resources

The main resources of water is rainfall water which is harvested in small scale dams and artificial pond (haffirs). The White Nile River is another source of water. Irrigated pump schemes along the left bank of the river act as barrier for animals to reach the river and most of the time conflict arise between farmers and pastoralists. During wet years floods from seasonal Khors, particularly Khor Abu Habil which originates from Kordofan mountains, hits the west side of the locality.

It is worth-mentioning that the rainfall water need to be stored for use during dry periods (summer), as filing of the ponds and small earth dams, and recharge of the shallow well completely depend on rainfall water.

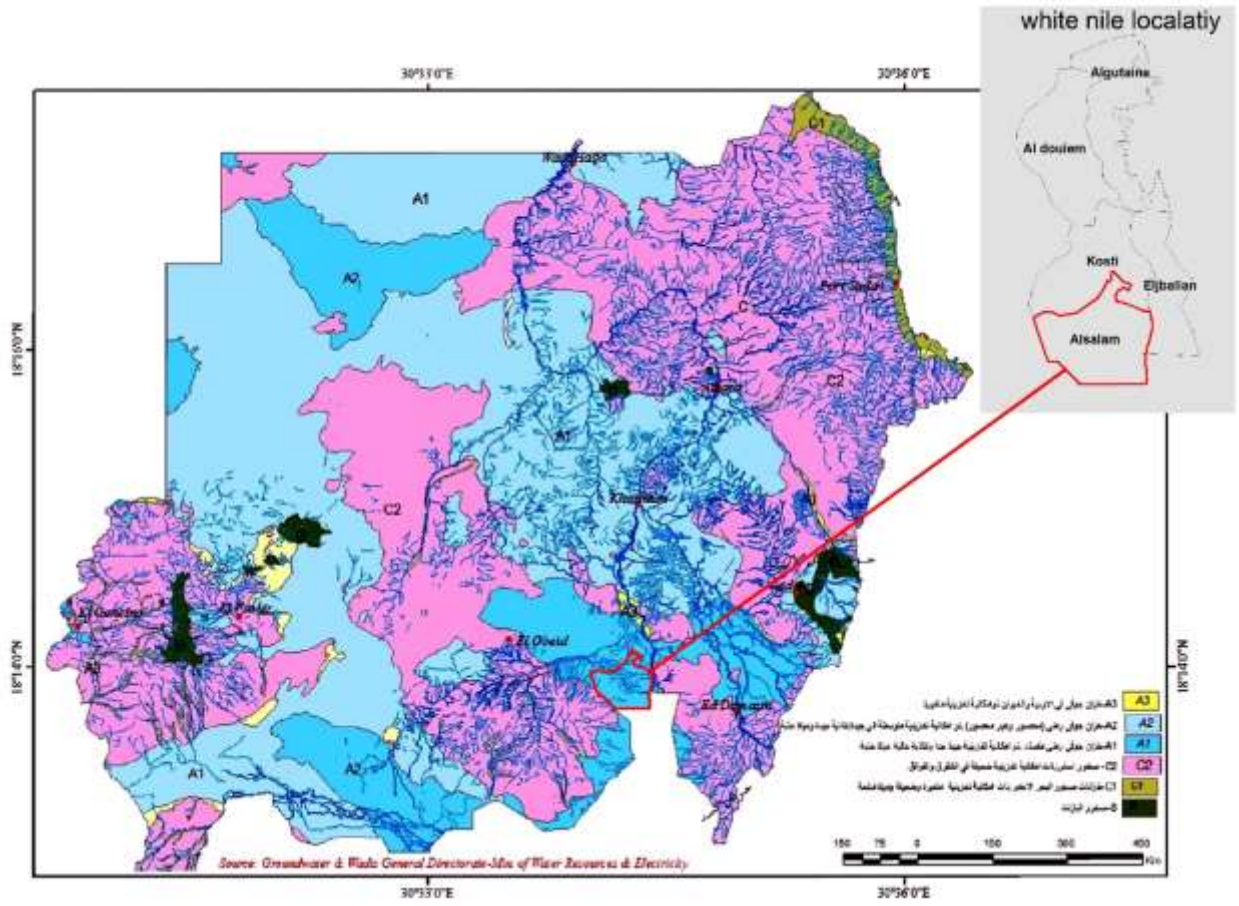


Figure 5: Surface and Groundwater mapping at Study Area.

Regarding the groundwater, the locality lies with East Kordofan Aquifer with relative shallow water.

3.6.6 Settlements

El Salam locality is maintaining long open border with South Sudan as well as historical social/blood relationships as a result of mix-marriages particularly with Shuluk and Nuer tribes, the most dominant in Upper Nile States, these factors have motivated/driven majority of the South Sudanese flee to WNS in seek of safe refuge.

Generally, the settlements in Es Salam locality are scattered with some concentrations around productive agricultural areas, trading centres, and water sources. El Selame, El Ahamd, El Gemea, Awlad Hassan, Mashalga and Uwesab are the perneant pastoralist tribes. Hasaneya and Husonat are cattle breeder tribes, wile El Kababeesh and Bany Garar are camles breeders. Other tribes

such as Taisha, Mesarya, HawassA… etc. are most of the year moving with their animal from place to place as per water and pasture availability.

Within the area, 7 camps to accommodate the refugees and re-turnees are existing. The estimated population of them exceeds 120,000. Needs for food, energy and health protection are in the top of the issues facing these groups.

3.6.7 Livelihood Activities

Livestock rearing is complemented with rain fed crop production of mainly sorghum, millet, Okra and legumes. The area is very rich with livestock. The movement of animals from one place to another place resulted in spread of dangerous and killing diseases. Lack of drugs and vaccinations are important issues need to look at. The area is famous with home-made cheese and milk oil (Samin) as the main milk products. Animal skins are usual exported to large markets (Kosti, Um Dorman …) for production of shoes, bags … etc.

It evident that 80% of the pastoralists move from the locality to South Sudan (SS) and stay there from September to June every year.

3.6.7 Sanitation

Access to improved sanitation facilities is very poor in Es Salam locality. The use of hand washing facilities is lower compared to the national average.

3.6.8 Education

El Salam locality is relatively has low level of education attainment with the highest number of the population without education. Most of the population prefer to go to animal breeding and farming at early age of their life. Within the locality, the percentage of male and female pupils enrolling in the primary schools is 58% and 42%, respectively. Among the teachers, 57% are females and 43% are males.

Education environment in El Salam locality is very fragile and vulnerable. There is a huge gab/shortage in number of teachers compared to the actual needs, which estimate by 324 teachers less. Beside that there is shortage in the other education facilities such as teaching materials (books - 30%), sitting needs (desks and chairs – 46%) … etc.

3.6.9 Health

Health facilities in El Salam locality is very limited. One public hospital exists in Al Naeem town, the capital of the locality. The second is the Police hospital at El Rawat administrative unit and the third one, which serves the refugees and stationed in El Kashafa camp. In additional to that, there are twelve medical centers and 18 medical units scattered within the locality. It is evident that all the above medical facilities are suffering the lack of staff and medicines and drugs, and most of them are just buildings.

Key Stakeholders

Beside the Observatory Sahel & Sahar (OSS) and the Global Water Partnership – East Africa (GWP-ES) as the main implementing entities, the following institutions will be involved, in one way or the other, on the implementation of the proposed project:

- the Ministry of Water Resources, Irrigation & Electricity (hosting institute);
- the Hydraulics Research Center (HRC) – national executing entity;
- High Council for Environment and Natural Resources;
- Ministry of Environment, Natural Resources and Physical Development;
- WNS ministry of:
    - Production and Natural Resources (including Agriculture, irrigation, Forest, livestock & Fisheries);
    - Finance, Economic and Manpower;
    - Public Health;
    - Infrastructure; and
    - Education, culture, tourism, sport, youth& information.
- Commissioners of Es Salam administrative units
- Others include: CBOs and NGOs as well as the beneficiary communities.

4. SUDAN'S ESIA PROCESS, SCREENING, PROJECT CATEGORIZATION AND ASSESSMENT

ESIA regulations and procedures focus on the following points:

4.1 Screening process

The screening process is designed to determine which projects are exempt, require partial assessment (Project Brief) or require a full ESIA process. The nature, type and location of the project are described in the environmental screening form with a preliminary indication of potential socio-economic and biophysical impacts (number of people/ communities affected, sensitive habitats, threatened species, etc). Based on the screening exercise, HCENR and WRTO make a decision on whether an ESIA is required or not. In the event that an ESIA is not required, the proponent is still obliged to describe methods and procedures for proper environmental management, including health and safety management.

4.2 Screening form

A standardized Project Brief is submitted by a developer using a Screening Form. The form requires that the developer submit information on the proposed project/activity and inter-alia, on the following:

a. Developer;
b. Contact address;
c. Location and size of the site/facility;
d. Project design, activities-during & after, inputs required (utilities and raw materials);
e. Products and by-products (finished products and wastes);
f. Methods of waste disposal;
g. Anticipated environmental and social impacts (number of people/communities likely to be affected, sensitive habitats, vulnerable groups and species etc).
h. Proposed mitigation actions responsible institutions, and budget estimates.

The First Schedule of the EIA Regulations, lists the issues that are considered in making environmental and social impact assessment, and these include:

a. Ecological considerations, which encompass biological diversity, sustainable use, and ecosystem maintenance;

b. Social considerations, including employment, social cohesion & disruption, culture, human health, communication and local economy;
c. Landscape impacts; and
d. Land use impacts.

General information is required at this first stage. If in-depth analysis has already been done, results should be indicated on the screening form. If however, only preliminary analysis/surveys have been done, this will in general suffice for the screening form.

Where the developer needs assistance to complete the screening form, a lead sectoral department concerned staff or a consultant can be enlisted for help. Upon completion by the developer, the form is submitted to the lead department or the Authority. If the form has been completed correctly, the lead department forwards the form to the Authority for consideration. The Authority determines the follow- up actions required in consultation with the lead department. If necessary, the Authority, the lead department, and/or a designated sectoral working group may visit the proposed project site to clarify details or complete the information required.

4.3 Authority Project Classification

Based on information obtained from the screening form, a systematic review of the information is completed by the Authority to determine whether an ESIA needs to be conducted or not. Evaluation criteria have been established which provides a general guide for determining whether or not a full ESIA is required. This ensures a fair and consistent review of all proposed projects at this screening stage, based on the information provided by the project proponent. As a result of this screening, the project is classified in the following manner.

4.3.1 Class A Projects

Under this category, full ESIA will be required. In all, projects listed under the Third Schedule of the NEA are required to undergo full ESIA. If the project is not listed under the third Schedule of NEA, the Authority will review the screening form or after additional information has been provided, and if in their professional judgement that the project will cause a significant negative impact on the environment, it will require a full ESIA be made in accordance with the provisions stipulated below. Comprehensive and meaningful stakeholder consultations, including a public hearing (disclosure) are required for Category A projects.

4.3.2 Class B Projects

Projects placed under this category, will require partial ESIA to be conducted before their implementation. Such projects under this category are considered not to have adverse environmental and social impacts compared to Category A. Their impacts are readily mitigated, site specific and reversible. Typically, the Authority requires preparation of a Comprehensive ESMP as part of the Project Brief (Screening Document). In cases where doubts remain as to the significance of potential impacts on the environment, further information is required. In this case, the Authority will give the project proponent, in writing, a clear indication of the information that needs to be provided. The Executive Director reserves the right to determine what additional information is required. After additional information has been provided, the Authority will reassess the proposed project and if the ESMP contained in the Project Brief is deemed adequate, EIA Certificate of approval is issued.

4.3.3 Projects under Class C Types

These basically require no ESIA before their implementation. A project may be categorized as Class C if it is determined that the proposed project will have no significant or adverse impact on the environment. The Executive Director may grant environmental approval to the project without further analysis.

Apart from the ESIA content, the procedures require a public survey and consultations prior to the issuance of any authorization on the basis of the ESIA. The ESIA conducted by the consultants at the request of the proponent is submitted for approval to the NEMA that among other aspects reviews the procedure for the conduct of ESIAs (approval of the TORs, authorization given to consultants and consultancy firms, evidence of stakeholder consultations undertaken, etc.)

4.4 Consultations during the ESIA Process

The Authority, upon receiving a Project Brief (screening checklist/ ESMP) consults the lead sectoral department. It invites public comments on statements of project intent submitted to it especially from those most likely to be affected by a proposed project. It is only subsequent to these two consultations that the Authority is required to invite interested organs of the State to comment on both the statement and the comments to follow. A public enquiry/hearing is the final form of consultation.

4.5 PHASE II –THE EIA STUDY PHASE

In the event that the Authority determines that a full ESIA study be undertaken, the study will be undertaken in accordance with the National Environment Act Cap 153 and EIA Regulations 1998. The following steps are followed:

4.5.1 Scoping

Scoping is an important component in EIA process. It determines the extent and approach of the EIA at an early stage in the planning process. If screening determines that a partial environmental assessment (CLASS B) or a full EIA (CLASS A) is required for a particular project, terms of reference (ToR) need to be developed for these studies. For CLASS A projects, a scoping exercise will be carried out in order to identify issues and prepare the ToR for a full EIA Study. However, for CLASS B projects, ToR can be inferred directly from the information provided in the project brief; therefore, a scoping exercise will not normally be required for the review.

4.5.2 Terms of Reference for an EIA

The main output of the scoping exercise is to prepare the Terms of Reference (ToR). Taking into account findings from project scoping, the developer shall prepare ToR and submit to HCENR and any other relevant Lead Agencies for review and approval before the EIS study is conducted. The reviews ensure that the assessment will be conducted in an agreed-upon and focused manner. Based on the tasks specified in the ToR, the developer shall then source and hire an experienced and multi-disciplinary team of EIA Practitioners and other relevant experts to undertake the different tasks specified in the ToR. HCENR & WRTO shall examine the ToR for the planned development and ascertain whether they address all pertinent issues on the basis of which, the developer shall be given a go-ahead to start on the study. In case the ToR is found to be deficient, HCENR shall point out the deficiencies and request the developer to revise and include them in the ToR.

4.5.3 Conducting Environmental Impact Study

Once the ToR are approved by HCENR in consultation with WRTO and other relevant lead agencies, the next step in the EIA process is to carry out a detailed study of the key impacts according to the scoping report and ToR. The EIA Study is done according the EIA Regulations and standards (FAO EIA Guidelines).

Stakeholder involvement and consultation is an important part of the EIA process. The consultant should identify key stakeholders (key groups and institutions, environmental agencies, NGOs, representatives of the public and others, including those groups potentially affected by the environmental impacts of the programme, project or activities. Stakeholder consultations should be by notifying the public, soliciting their and experts' comments, holding public and community meetings, and asking specific individuals for their input.

4.5.3 Reporting

An EIA study culminates in the preparation of an EIA report. The Environmental Management Plan is part of the information to be included in the EIA report. The EIA Regulations, specifies how environmental information should be presented in an Environmental Impact Statement (EIS). Presentation depends largely on the importance of the various issues in the EIS. Where no significant natural resource issues arise, the EIS may simply refer to them in a general chapter on other environmental effects or information. Where natural resources issues are significant they should be addressed to the extent necessary in the main body of the EIS, although larger EIS may have separate volumes containing detailed information about specific issues.

4.5.4 Environmental Monitoring

The Environmental Impact Assessment Regulations requires that the developer carries out environmental monitoring in order to ensure that recommended mitigation measures are incorporated into the project design and that these measures are effective so that unforeseen impacts may be mitigated.

4.5.5 Environmental Audit

The Environmental Impact Assessment Regulations require that after the first year of operation, the developer must undertake an initial environmental audit. The purpose of the audit is to compare the actual and predicted impacts, and assess the effectiveness of the EIA, as well as its appropriateness, applicability and success.

5.0 PUBLIC CONSULTATIONS

5.1 Approach to the Consultations

In order to ensure that key interests of the public and key stakeholders at different levels are addressed and incorporated into the design and implementation of the DRESS-EA project, stakeholder consultations were carried out as part of the ESMF development process.

The MWRIE-Sudan together with GWPEA have conducted rapid stakeholder consultations at various levels to solicit data and information on the current issues at National and local levels, as well as the Environmental and social issues likely to be associated with the design and implementation of the DRESS-EA project and associated sub-projects.

The key stakeholders consulted included:

- Government institutions and departments including Ministry of Water Resources, Irrigation & Electricity, Sudan Meteorological Authority, High Council for Environment and Natural Resources, Dams Implementation Unit, Water Resources Technical Organ, Federal Ministry of Agriculture & Forests, the Ministry of Finance and Economic, Groundwater & Wadis Directorate, Water Niles & Dams Affairs Directorate … etc.
- Non-Government Organizations e.g. Al Sugya Charity organization … etc
- Representatives of farmers and pastoralists from the five administrative units of El Salam locality,
- CBOs and the target beneficiary communities e.g , Sudanese General Women Union.

5.2 Methodology and Identification of key stakeholders

Stakeholder consultations were interactive in nature and targeted at different levels: MWRIE experienced staff, Al Salam locality, The Hydraulic Research Center, Rangeland department – Ministry of Agriculture. Below is a summary of key issues generated during consultations. Consultations were undertaken through the use of key informant interviews and focus group discussions and community meetings.

5.2.1 Summary of consultation findings

Summary of Consultation findings

Based on the consultation findings, it is clear that the DRESS-EA is supported by stakeholders especially where project investments will have a positive impact on improving social and public welfare and addressing environmental concerns, primarily those related to enhancement of early warning systems and the capacity of stakeholders to manage drought risks due to Climate Change effects, promotion of Drought and Climate Change adaptation actions including water infra-structures, improved crop production and pasture management as well as Knowledge management and awareness creation

Table 2: A summary of the key issues identified during consultations with stakeholders are summarized below:

Main issues	Causes	Impact
Low safe water coverage	• Many water points are subject to contamination, as most of them are open water source, which need protection from both animals and human miss-use. • O & M	• Shortages of safe water supply for domestic use • High incidence of waterborne diseases
Food insecurity	• Dependency on pastoralism and subsistence farming • Traditional low-input farming practices • High incidence of pests and diseases • Barely production surplus for the market • High poverty and low income levels • The region has the lowest education rates in Sudan, only 6% of women and 12% of men are literate • Limited access to basic services	• Overexploitation of natural resources • Encroachment into forests
Shortage of water and Pasture	• Demand for water and pasture is high and further increasing • Shortages are aggravated by the influx of cattle from the Turkana (Kenya) and Topoth (South Sudan) • Existing water points (small hand-dug wells and artificial ponds (haffirs) do not cover livestock demand • Extension of irrigated farms the left bank of the White Nile river leads to loss of grazing lands and acts as a barrier to reach water sources (the river).	• Rise in pressure on and conflicts over resources between different groups of herders, and between farmers and pastoralists, particularly in areas along the left bank of the White Nile river and the border with SS • Limited resources to cope with hazards
Low agricultural	• High variability of precipitation	• Low income

productivity	• Limited investment in soil and water conservation techniques • Limited use of improved crop production techniques • Poor agricultural practices undermine soil fertility and water retention capacity • Poor access to agricultural inputs	• High vulnerability to disasters
Vulnerability to natural disasters (floods and droughts)	• Population growth • Encroachment into floodplains • Shortage of water storage capacity (natural and infrastructure**)**	• Regular crop failure • Reduced water availability • Loss of lives and propriety
Deforestation	• Trees are cut for commercial charcoal production for urban centres, such as Kosti, Sennar … • Uncontrolled bush burning • Access to energy within the region is mostly limited to wood and charcoal, which results in tree cutting	• Soil erosion • Increased frequency of floods and droughts
Environmental Degradation	• Increased human pressure on the land • The power of responsible institutions for natural resources management has eroded over time leading to overexploitation of resources • Insecure land tenure due to communally owned lands discourages farmers from investing in conservation techniques • Encroachment into woodlands, forests and rangelands • Vegetation clearance during construction of harvesting and storage infrastructure • Uncontrolled bush burning • Inadequate popularization of policies and low enforcement of laws and by-laws due to limited capacity of institutions, understaffing of local governments, and limited budget for the environment sector • Low levels of awareness concerning environmental conservation • Limited feeling of ownership amongst water users because of their limited involvement in decision making • Limited facilitation to monitor compliance, which is greatly affected by lack of capacity as the locality does not have resources for effectively monitoring environment and social safeguards for the	

	project. • Lack of funds for compensation of people affected is also a big problem. The district can only talk to affected • Soil erosion, habitat destruction and loss of biodiversity	
Social issues	• Displacement of households • Land conflict as the project might be establish in private lands (social resistance) • Destruction of cultural sites • Accidents which are likely to occur during the construction of the project. • Labour camps during the construction process. This would lead to other associated problems such as social disorders. • Labour flux to construction sites as people look for employment and thus deny other sectors such as agriculture manpower consequently leading to food insecurity	
Concerns regarding natural disasters	• Flooding from the construction of dams • Displacement of households • Conflicts over water resource use among the communities • Effects of drought	
Capacity gaps	• Capacity gaps in undertaking the project activities • Lack of skills and resources to maintain the water infrastructure	

6.0 IMPACT ANALYSIS AND PROPOSED MITIGATION MEASURES

The proposed DRESS-EA subprojects are not likely to result in significant adverse environmental or social impacts if carefully managed as their main objective is to empower local communities to undertake Drought and Climate Change adaptation actions including water harvesting and storage infrastructure, irrigation systems, improved crop production and pasture management, income generating activities as well as Knowledge management and awareness creation.

However, if not carefully designed and implemented, these types of subprojects can lead to negative environmental and social impacts, particularly those which entail investments in infrastructure development and new construction (e.g. Water storage and harvesting infrastructure and irrigation systems). Furthermore, weak or inadequate capacity for designing, managing and

monitoring subprojects can lead to poor design and implementation and exacerbate adverse impacts.

Thus, it is important to identify potential risks early in subproject preparation and design, both in terms of the Project's overall design and of the specific investment activities. Impacts can be divided into negative environmental and social impacts and these depend specifically on the size and nature of the subproject and the environmental and social sensitivities associated with the location of the subproject.

6.1 Positive Environmental and Social Impacts

Below is a summary of likely positive environment and social (direct and indirect) impacts of the Project that will contribute to other benefits of the Project:

1. Provision of timely early warning information to farmers –The rehabilitated or newly constructed weather stations will enable collection, analysis and dissemination of early warning information to farmers to enable them plan their activities properly. This is also valid for pastoralists.

2. Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks as well as deep and shallow wells, will make safe water for communities improving their health as well as reducing or eliminating prevailing agriculturalist/pastoralist conflicts-Mitigation of tension/conflict over water: as scarcity of water is one of the sources of conflict in the beneficiary communities

3. Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems), protection of water wells and springs) will increase the amount of water available for agricultural and livestock production. This will enable the small scale farmers to increases their production, realize more benefits and increase their drought and climate change adaptive capacity.
4. Creation of short-term employment opportunities: use of appropriate labor-intensive during construction of of weather stations and water harvesting, storage and delivery infrastructure will provide direct income to the households;

5. Afforestation programmes will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels;

6. The activities of the program will help to identify and to implement the necessary measures or the protection of biodiversity areas thus conserving the wealth of the species at the local and national level. Also, these investments will contribute to combating desertification; enhancing reforestation, soil restoration and the implementation of national conservation activities

7. Enhance women participation in household and socio-economic activities through sustainable water supply which will create more time for them to engage in other income generating activities
8. Capacity building and training in drought adaptation actions for the community, and resulting enhancement of organizational, financial and technical capacities of communities in the catchment.

6.2 Project negative environmental and social impacts

The implementation of the proposed DRESS-EA Project is anticipated to have a number of negative environmental and social impacts both direct and indirect. These may include but are not limited to the following.

1. Loss of vegetation and disturbance of floral and faunal communities – The program activities are likely to destroy vegetation with subsequent loss of trees, shrubs and grasses from the areas highlighted for infrastructure sub-projects. This is likely to cause loss of habitat and disturbance to faunal communities in the affected sites.

2. Increased soil erosion –Increased vegetation clearance and soil erosion is likely to occur in the vicinity of program sites during the construction of the water harvesting, storage and delivery infrastructure.

3. Increased siltation of the aquatic habitats- Some of the excavated sediments from the sub-project sites and the construction spoils emanating from excess excavated material and construction debris are likely to increase siltation of the nearby aquatic habitats associated with nearby rivers& streams wetlands and other sensitive ecological zones.

4. Increased noise levels- Noise levels are likely to increase in the program area during the construction of the water infrastructure due to the use of heavy machinery in construction activities and operations at the quarries, borrow pits and crushing plants.

5. Increased accidents and occupational hazards- mainly due construction activities for the water harvesting, storage and delivery systems that will involve use of machinery and transportation of materials. This is likely to result in a higher risk of accidents and occupational hazards occurring in the area of operation.

6. Dust pollution– Program activities have the potential to generate high levels of dust in the program area especially where construction is taking place. In addition, activities taking place in the quarries, borrow pits and crushing plant sites have great potential to generate high quantities of dust thus creating a hostile environment and a health hazard to the workers and the affected local community.

7. Ponding- The program activities may lead to creation of stagnant water bodies in quarries, borrow pits and depressions created during the construction works. The resultant stagnant water bodies are likely to be suitable habitats for the breeding of mosquitoes and snails that are disease vectors for malaria and bilharzias respectively.

8. Gaseous emissions- Pollution through gaseous emissions in the program area will emanate from exhaust pipes for vehicles and machinery used in the construction works.

9. Strain on social services -Influx of workers for construction activities may put pressure on social services in the areas though temporarily including hospitals, housing among others

10. Increased incidences of diseases- The influx of workers with specialized skills to work on the infrastructure projects is likely to increase the incidences of diseases in the program area especially sexually transmitted diseases including HIV/AIDS among the program workers and local communities.

11. Use of agro-chemicals may result in soil and water contamination.

12. Potential conflicts over water use especially amongst pastoral and host communities can arise especially where those with large herds tend to dominate the small herd owners;

13. Maintenance of some of the infrastructures such as dams will generate dredge materials whose disposal can pose environmental and public health challenges;

14. Generation of cut to spoil materials whose transportation and disposal will require proper management as well as other solid waste during construction and operation of the planned facilities;

15. Abstraction of substantial quantities of water from the water bodies especially for irrigation can bring about hydrological impacts on the main water bodies.

6.3 Enhancement and Mitigation Measures

In order to avoid or minimize negative impacts associated with activities to be undertaken the Project, mitigation measures must be implemented as well as enhancement measures for positive impacts. These measures must be included as part of each subproject ESMP and will be budgeted for in the Technical Specifications of each subproject. A set of monitoring indicators will be used to verify compliance with local and international standards and to identify corrective actions. The proposed enhancement measures for positive impacts and mitigation measures for negative impacts anticipated from the implementation of the DRESS-EA project are summarized in the project ESMP below:

7.0 ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP)

The management of Environment and social impacts during project implementation of the DRESS-EA Project shall be guided by an Environment and social management plan**(ESMP)** as outlined below;

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
Positive impacts and their enhancement measures						
Provision of timely early warning information to farmers	Ensure the generated information is disseminated widely using all possible channels	HRC/SMA	Al Salam Locality	Better activity planning and timing by farmers and pastoralists-reduced losses	After rehabilitation of weather stations	SMA
Provision of safe drinking water and improved community health	Ensure the most vulnerable areas are given priority in allocation of the Water infrastructure	HRC/DIU	Selected areas within Al Salam Locality	Improved water availability and quality	After construction of the Facilities	WNS Water Corporation, CBO and HRC
Increased amount of water available for agricultural and livestock production and mini-irrigation systems	Ensure the most vulnerable areas are given priority in allocation of the Water infrastructure	HRC	Selected areas within Al Salam Locality	Improved availability of water for production	After construction of the Facilities	WNS Water Corporation, CBO and HRC
Increase in employment opportunities	Give preference for employment opportunities to local communities including women	HRC, Project Managers and Contractors and locality officials	Selected areas within Al Salam Locality	No of Local people employed by the sub-projects		
Increase in Forest	Engage as many	WNS Ministry	Selected	Area planted	After	WNS Ministry of

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
cover will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels	farmers as possible through trainings and provision of free seedlings for planting	of Production & Natural Resources and Project staff	sub-project sites		establishment	Production & Natural Resources and Project staff
Enhancement organizational, financial and technical capacities of communities in the catchment	Capacity building and training in drought adaptation actions, planning and Financial management should cover as many farmers as possible	Project Manager, contractor, locality Technical staff	As Salam Locality	Rate of adoption and the success of project activities	During and after project implementation	Locality technical staff, HRC
Reduction of pollution and contamination levels in the existing, rivers streams and other water bodies	Adopt an integrated catchment management approach	MWRIE, WNS ministry of Public Health	As Salam Locality	Improved water quality in Reduction in water-borne diseases in the proposed project area	During and after project implementation	HCENR, MWRIE
Improved	Training of	WNS Ministry	Selected	No of	During	WNS Ministry of

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
knowledge and skills in crop and livestock production	agricultural institution's personnel on modern agricultural practices Availability of competent agricultural expertise staff will contribute food security and consequently livelihood Engage communities and other beneficiaries on modern agricultural practices to improve productivity	of Production & Natural Resources (WNS-MPNR), Project management staff	institutions and selected project sites	extension staff trained	project implantation	Production & Natural Resources, Project management staff
Improved crop yields	Provision of water in required amount	WNS-MPNR and farmers	Project area	Yields per ha of crop commodities	During and after the project	WNS-MPNR Environmentalist
Increased Livestock productivity	Improve animal health and productivity	WNS-MPNR and pastoralists	Project area	Number of marketable livestock % increase in Milk production	During and after the project	WNS-MPNR Environmentalist
Negative impacts and their mitigation measures						
Loss of habitat and	Discourage any	HRC	In the	Number of	During	HCENR,

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
disturbance to flora and fauna	wanton destruction of vegetation and habitats beyond the designed program works.	Contractors Communities	vicinity and on of project sites where biodiversity has been disturbed or destroyed	key trees left intact. No. of tree nurseries established and seedlings planted in the disturbed areas No of disturbed sites rehabilitated.	construction and operation stages	Resident Engineer, Environmental and Social Experts
Increased soil erosion and siltation	Where applicable install silt traps to reduce sediment load directly entering riverine and lacustrine environments. Carry out terracing and landscaping of the disturbed sites as appropriate Plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found	HRC, Contractors	At disturbed sites where there are cuts and fills especially around quarries borrow pits and exposed slopes.	Number of silt traps installed Number of sites landscaped Levels of turbidity recorded in the receiving waters	During the and after construction phases	HCENR, Resident Engineer, Environmental and Social Experts

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	appropriate.					
Increase in dust levels	Limit levels of dust through good practice such as watering of access routes, construction sites, and other disturbed sites Cover lorries transporting construction materials. Provide workers with appropriate dust protective gear including masks and overalls.	HRC, Contractors	In the vicinity of construction sites, at the quarries and borrow pit sites, crushing plants and other sites where Project works are taking place		During construction stage	HCENR, Resident Engineer, Environmental and Social Experts
Increase in noise levels	Selection of appropriate machinery and regular servicing of machinery and vehicles. Use of protective hearing devices such as ear plugs and ear muffs among workers	HRC, Contractors	In areas where project activities are taking place.	Type of machinery and vehicles purchased for the project Complaints from local residents Noise levels	During the construction and operation stages.	HCENR, Resident Engineer, Environmental and Social Experts

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	when noise levels exceed 80 dBA for 8 hours			recorded Number and type of protective hearing devices dispensed to workers		
Increase in gaseous emissions	Reduce gaseous emissions by selection of appropriate machinery and regular servicing of vehicles. Provide workers with appropriate protective gear including masks to cut down on gaseous emissions inhaled.	HRC, Contractor	at the sites where program works are taking place.	Complaints from workers at project sites and local Levels of nitrogen and sulphur oxides produced Carbon monoxide produced	During construction and operation stages.	HCENR, Resident Engineer, Environmental and Social Experts
Increase in accidents and occupational hazards	Design and implement safety measures and emergency plans to contain accidents risks Provide workers with protective clothing	HRC, Contractors	Selected sub-project sites	Number of complaints from workers and local community Number of traffic accidents	During construction and operation stages of the water infrastructure and weather	HCENR, Resident Engineer, Environmental and Social Experts

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	(nose and mouth masks, ear muffs, overalls, industrial boots and gloves) and helmets as applicable			Number and type of protective clothing and gear provided to workers	stations	
Increased ponding conditions	Make changes at the design stage to address overall surface water drainage system in affected program sites Improve impeded drainage through landscaping and filling in the created depressions.	HRC and Contractors	In all the proposed sub-project sites	Copies of sensitive designs Number of drains and depressions rehabilitated Malaria incidences in the project sites	During construction stage.	HCENR, Resident Engineer, Environmental and Social Experts
Increased incidences of diseases (such as HIV/AIDS, Malaria and Bilharzia)	Raise awareness and support mechanisms to prevent and control spread of HIV/AIDS among the program workers and local communities. Implement disease awareness and	Directorate of Water Resources Management Ministry of Health, NGOs.	In all the proposed project sites	Incidences of STDs among workers and local community Number of cases treated Number of condoms dispensed to workers and	Before the commencement of project activities and throughout the project cycle	DWRM. District Officials National AIDS Council Environmental Expert and Social Experts

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	and management programme for Malaria and Bilharzia			local community Number of meetings held to raise awareness on HIV/AIDS, Malaria and Bilharzia and other water related diseases		
Loss of habitat and disturbance to flora and fauna	Discourage any wanton destruction of vegetation and habitats beyond the designed program works. Restore lost biodiversity on the disturbed area through planting of appropriate grasses, shrubs and trees.		In all the proposed sub-project sites	In the vicinity and on of project sites where biodiversity has been disturbed or destroyed.		
The use of chemicals may cause air, soil, and water pollution	Regular training on handling, storage and disposal of agro-chemicals	WNS-MPH, and Farmers	In all the proposed sub-project sites	Number of Extension staff, farmers and contractual laborers	During and after the project	WNS-MPH and Environmental expert

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
				trained on chemicals handling No. of water and soil samples collected for testing		
Possibilities of land degradation as a result of agricultural activities	Adopt conservation agriculture practices	WNS-MPH, and Farmers	In all the proposed sub-project sites	Number of small-scale farmers adopted CA practices assessed	During and after the project	WNS-MPH and Environmental expert
Over abstraction of water may damage the ecosystem	Irrigation system installed and fully monitored Irrigation schedule controlled	WNS-MPNR and Farmers	In all the proposed sub-project sites	Number of Irrigation system properly maintained Quantity of water used for irrigation	During and after the project	WNS-MPNR Environmental expert, Hydrologist (MWRIE)
Wastes, regardless of the nature, pose health risk to workers.	Workers will be trained on safety management of wastes and first aid measures to take depending on the injury caused by	HRC, Contractor	In all the proposed sub-project sites	Presence of clearly labelled warning signs. Fully equipped first	Continuous during and after construction phase	HCENR, WNS-MPH, Environmental Expert

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	each type of waste. PPE will be provided during handling wastes. Wastes such as small stones, metal, empty cans will be collected and placed in designated localities so as to prevent littering. Signs showing hazardous wastes will be placed, in areas in which hazardous wastes are located before disposal.			aid kits		

8.0 GRIEVANCE MECHANISM

In order to ensure transparency and accountability, a Grievance Redress Mechanism (GRM) shall be established by the Project Support Team in line with the guidance provided in this ESMF. The GRM shall have a clear set of goals and objectives and a well-defined scope for its interventions, especially geographical area coverage to ensure its accessibility and effectiveness. A set of procedures for receiving, recording, and handling complaints shall be available in the GRM. This will be managed by a National Grievance Redress Committee (GRC) at Country level in each of the four countries consisting of a DWRM Chair, the DRESS-EA Project Coordinator, the assigned Sociologist from MWE, the Project's Environmental Focal Point, the chair of the Local community implementation committee, a member of a recognized non-government organization, and a community leader. The GRC members should be qualified, experienced, and competent personnel who can win the respect and confidence of the affected communities. GRCs shall also be established at District and Lower Local Government Levels as appropriate. For easy accessibility, GRCs shall also be formed at or closer to project implementation sites, especially for Component 1 and Component 3 with considerable infrastructure developments. Grievances shall be first reported and handled at the lowest level or project site, and referred to the next level if not resolved.

The GRM shall include procedures for:

- recording, registering, and sorting grievances;
- conducting an initial assessment of grievances;
- referring grievances to appropriate units or persons;
- determining the resolution process;
- making decisions, including parameters and standards for accurate and consistent decision making;
- directing relevant agencies responsible for implementing decisions;
- notifying complainants and other affected parties of eligibility, the resolution process, and outcomes;
- tracking, monitoring, documentation, and evaluation; and

- Grievance Log, that shall summarize all grievances registered, resolution reached, and feedback provided.

Depending on the nature and the severity of the complaint/s, the GRC in consultation with the Complainant, shall identify and decide on an approach for grievance resolution. Where appropriate, complainants shall be given the choice of selecting an affordable approach with which they are comfortable and confident and that is beneficial to them.

In projects with small-scale infrastructure, construction-related complaints can be numerous and managing them is the Contractor's responsibility under its contract with the implementing agency.

The Project Safeguards Staff, locality staff, HRC, HCENR, and Contractors shall be responsible for monitoring impacts based on the GRM. Duties would include:

a. Maintaining a database of all complaints related to environmental and social issues and forwarding them to the Supervision Consultants;
b. Assisting the Complainants to submit their environment and social -related complaints directly to the contractor;
c. Maintaining a list of PAPs who are directly or indirectly affected by construction, operations, and maintenance work, and monitoring the implementation of mitigation plans and
d. Consulting the affected PAPs and communities and participating in grievance resolution processes;

9.0 MONITORING AND ANNUAL REPORTS

9.1 Monitoring and Evaluation

Environmental and social monitoring will be mainstreamed in the overall Monitoring and Evaluation (M&E) system of the DRESS-EA Project. Environmental monitoring of sub-projects will be undertaken at different levels. MWRIE In-house Environmental / Social Experts will be responsible for day-day supervision and monitoring of implementation of environmental and social safeguards and preparing routine Reports. Also trained persons at lower local government level will, depending on the scale or scope of the projects, undertake the monitoring exercises in sequences and frequencies stipulated in the Project Implementation Schedule including where appropriate a Maintenance Schedule. The HCENR will mainly carry out "spot checks" to ensure that implementation of mitigation measures is done satisfactorily.

Supervision arrangements for the ESMP shall summarize key areas on which supervision will focus—critical risks to implementation of the ESMP, how such risks will be monitored during implementation and agreements reached with the key stakeholders including contractors.

Supervision of the ESMP, along with other aspects of the project, covers monitoring, evaluative review and reporting and is designed to**:**

- determine whether the project is being carried out in conformity with environmental and social safeguards and legal agreements;
- identify problems as they arise during implementation and recommend means to resolve them;
- recommend changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- Identify the key risks to project sustainability and recommend appropriate risk management strategies

It is vital that an appropriate environmental supervision plan is developed with clear objectives to ensure the successful implementation of this ESMP.

9.2 Annual Reviews and Periodic Audits

An independently commissioned environmental and social audit will be carried out periodically (between 12 – 36 months) depending on the level of implementation of the project and sub-projects. The audit team will report to HCENR, the MWRIE, GWPEA.OSS and the Adaptation Fund, who will lead the implementation of any corrective measures that are required. An audit is necessary to ensure (i) that the ESMF process is

being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

10.0 TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION:

10.1 Capacity Building and Training

The goal of the DRESS-EA project is to the maximum extent possible utilize existing institutional structures and capacity within the MWRIE and in particular the Locality staff and the MENRPD that is responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources to implement the Project. In order to successfully implement the guidelines and recommendations in the ESMF, it is important to ensure that target groups and stakeholders who play a role in implementing the ESMF are provided with the appropriate and continuous Environmental and Social Safeguards capacity development.

10.2 Institutional Strengthening

Under the DRESS-EA implementation arrangements, a Focal Point for the overall ESMF Coordination shall be designated from the mainstream staff of HRC & locality and will be responsible for coordinating activities of the project. Given the fact that mainstream staff are usually overstretched by many projects and their substantive roles, the project shall hire Environmental Specialist and a Social Development Specialist to undertake day to day coordination, management, implementation and supervision of ESMF requirements. These Specialists shall be based at the Project Implementation Unit at MWRIE; namely HRC. Hence, the Environmental Coordinator and project Environment and Social Safeguards staff will manage and monitor the implementation of the requirements of the ESMF and liaise with other stakeholders (national, regional and locality) on environmental and social issues related to the DRESS-EA.

Therefore, a special initiative is needed to develop the capacity of the Local Government staff, at the locality and Sub-county levels, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities to support implementation of the Project including social and environmental aspects.

However, capacities in the Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities are still low with regard to environmental and social management practices. Therefore, a special initiative is needed to develop the capacity of these key stakeholders to support implementation of the Project including social and environmental aspects.

a) Developing Capacity on the ESMF Process

The following institutions will need environmental training to ensure effective implementation of the ESMF:

- The main implementing agencies, -Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities.
- Professionals involved in the DRESS-EA at the Ministry of Water Resources, Irrigation and Electricity.
- Global Water partnership Eastern Africa –staff involved in project implementation.

It is recommended to organize, prior to the kick-off, a three-day workshop where the ESMF will be presented and discussed.

b) Developing Capacity in Environmental Screening

Environmental screening is also clearly a domain where capacity of future program implementers remains low and also needs to be built. This will target training of trainers, Technical staffs including, Social Scientists, Environmental officers, Forestry officers, Veterinary officer, Staff from meteorology, Engineers, and technicians as well as staff from construction supervision consultants and contractors,

It is recommended to organize, prior to the Project kick-off, a workshop where this ESMF will be presented and discussed. This workshop should also aim at reviewing and refining some aspects of the process, particularly the forms, toolkits and guidelines proposed in this ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the Project and sub-projects. This workshop will be facilitated by HRC of the MWRIE, HCENR, MENRPD, WNS-MPNR and El Salam Locality Officers with support from OSS Environmental and Social specialists. The training will try to address the following topics**:**

- Review of the Ugandan environmental policies, laws, regulatory and administrative frameworks
- Review of the Adaptation Fund and OSS Environment and social policies
- ESMP and environmental guidelines applicable to construction contractors,

- Environmental and social screening process (with one practical exercise on a real site)
- Assignment of environmental categories
- Carrying out of the environmental work as discussed in the ESMF
- Review and clearance of the screening results and separate ESIA reports,
- Preparation of terms of reference for carrying out ESIA/ESMPs
- How to monitor safeguard implementation
- Water quality management
- Waste management issues (safe disposal of domestic wastes, construction wastes etc.)
- Impacts and monitoring of groundwater and surface water
- Social impacts as per the ESMF,
- compensation for minor income/property loses),
- The benefits of public consultation,
- Areas of the DRESS-EA sub-projects where public consultation is required
- Public consultation process in view of the ESMF requirements,
- Case studies
- Discussion of, and amendments to, the environmental screening form.
- Awareness of the ESMF Process.

11.0 Institutional Arrangement and Implementation Responsibilities

The capacity building activities outlined above are to support the enhancement and implementation of the project's environmental and social management plan. The Implementing Authorities will oversee the implementation of all mitigation measures, especially those integrated in the program design. The WNS councils and sub county local administrations will also make all necessary arrangements at all levels in the identification of sites and their acquisition. At this stage, a broader view of Environmental and Social Management Plan (ESMP) for the proposed program has been developed, but ESMP for each intervention will be formulated during the detail design for each sub-project. Main institutions and officers that will be involved in the implementation of proposed ESMP, include the Ministry of Water Resources, Irrigation and Electricity, represented by the Hydraulics Research Center, Project team, WNS government. Contractor, Resident Engineer, Environment, Agriculture, Veterinary and Water officers.

11.1 Main Institutions and Officers that will be involved in the Implementation of the ESMF

Institution	Mandate
High Council for Environment and Natural Resources (HCENR)	Oversee, coordinate and supervise environmental management. it's overall goal is to promote sound environmental management and prudent use of natural resources in Sudan.
Ministry of Water Resources, Irrigation and Electricity (MWRIE)	The Ministry, through its Directorates responsible for Water Resources Management and meteorological authority in collaboration with ministry of Environment and Natural Resources, will monitor all activities. Capacity building will include full time specialists in social and environmental assessments review and monitoring and evaluation. They are also responsible to earmark budget and properly implement mitigation measures proposed by the general ESMP, ESIA studies and other relevant documents.
WNS Ministry of Finance, Economic and Manpower (WNS-MFEM)	The objectives of the WNS-MFEM are to minimize Occupational Accidents, Diseases and Injuries. promote good Health of the Worker at the Workplace promote good Working Conditions, promote construction of Safe and Healthy workplaces, promote awareness of Occupational Safety and Health among Workers, Employers and the General Public through Training. The ministry, through its department of Occupational Health and Safety (OHS) will be responsible for registering the workplace and monitoring of conditions under which employees on the project are subjected.
Local Government Administration Structures	Locality and its administrative units councils are stakeholders in the Project and had input into the EIA and ESMP process and will be involved in implementation of the project as well as subsequent monitoring. They will also take part in grievance mechanisms and sensitization of communities especially HIV/AIDS aspect.
WNS-MPNR	The WNS Ministry of Production and Natural Resources (Water, Agriculture, Livestock, Forestry & Fisheries) in collaboration with the respective Local Governments will be primarily responsible for program planning, management and overall coordination within the District and Sub-county. The assigned environmental and social personnel will also be responsible in conducting environmental and social screening, monitoring and following up of the implementation of the proposed mitigation measures.
Beneficiary communities	Being the primary beneficiaries of the project, the community will be made to participate fully in all aspects of the program including project identification, preparation, implementation, operation and maintenance.

The following table shows the proposed share of responsibilities between the different organizations involved in the implementation of the DRESS-EA implementation of the environmental management process.

Implementing Agencies	• Contract consultants for ESIAs study on ToRs prepared for each programs and reviewed by the relevant institutions. • Designate focal staffs that will take responsibility for environmental screening and generally for environmental management and get trained accordingly- this staff will ultimately conduct Environmental and Social Screening and supervise the implementation of mitigation measures proposed by ESS, ESIAs, ESM and by the Guidelines for Construction Contractors • Designate technical supervisor of works, who, in the absence of the environmental focal staff mentioned above, will supervise the implementation of mitigation measures • Take responsibility for and supervise the implementation of environmental mitigation measures at construction and operation phases • Take responsibility for and supervise the implementation of monitoring measures • Provide an annual environmental monitoring report to the review of the Ministry of Water, Irrigation and Electricity.
Construction contractors	• Implement the ESMP
Construction supervision consultants	• Take responsibility for and supervise the implementation of the ESMP
ESIA Consultants	• Develop ESIAs where required
Locality Environment Officers	• Participate in the provisions of training for regional, locality and community experts • Participate in the finalization of the screening forms based on this ESMF • Supervise the development of ESIAs by consultants where required, review Terms of Reference, draft ESIAs and participate in public consultations • Supervise the monitoring of environmental mitigations implemented by construction contractors • Supervise the implementation of this ESMF in the project
HRC of the Ministry of Water, Irrigation and Electricity	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs • Facilitate and provide training f other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and monitoring processes
GWPEA	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs

	• Facilitate and provide training for and other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and monitoring processes
OSS	• Review the draft ESMF • Review ESIAs • Monitor the overall implementation of ESMF, including the review of annual environmental reports provided by the MWE

12.0 ESMP BUDGET

The ESMP for each sub-project will outline the appropriate budget required to implement measures for mitigation and monitoring. It will also indicate the costs of extra training and capacity building required. Costs should be calculated based on estimates provided by Contractors or implementing agencies for any mitigation measures required during implementation of agreed upon activities including civil works. This should include the costs of mitigation measures as well as monitoring.

13.0 CONCLUSION

This ESMF has been developed through a widely consultative process and basing on experiences and lessons learnt from similar projects. It will be helpful in addressing environmental and social issues that apply to or might be triggered by the planned project activities of the DRESS-EA Project. Adverse Impacts of the project will include, Increased incidences of diseases, Increased accidents and occupational hazards, Disturbance in socio-economic activities, Increased soil erosion, Increased siltation of the aquatic habitats, Disturbance of floral and faunal communities, Increased noise levels, Gaseous emissions among others.

Sub-Project-specific Environmental and Social Management Plans (ESMPs) shall be developed in a manner that complies with the project ESMF, Adaptation Finds Environment and Social Policy and NEMA guidelines for assessing and managing environmental and social risks to address the above projected adverse impacts but also to enhance the positive benefits of this project.

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AN ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

FOR

THE STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

UGANDA

MARCH 2019

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

LIST OF ACRONYMS

AF Adaptation Fund

CMP Catchment Management Plan

DEA Directorate of Environmental Affairs

DRESS-EA Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region

DWD Directorate of Water Development

DWRM Directorate of Water Resources Management

ESIA Environmental and Social Impact Assessment

ESMF Environmental and Social Management Framework

ESMP Environmental and Social Management Plan

FPO Focal Point Officer

GWPEA Global Water Partnership Eastern Africa

IWRM Integrated Water Resources Management

MWE Ministry of Water and Environment

NDP National Development Plan

NEMA National Environment Management Authority

NEMP National Environment Management Policy

NFA National Forestry Authority

OSS SAHARA AND SAHEL OBSERVATORY

UWA Uganda Wildlife Authority

WMZ Water Management Zones

1 Introduction

1.1 Background

The proposed Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region project is to be implemented in four countries including Uganda, Djibouti, Sudan and Kenya.

In Uganda, the project is targeting areas that are highly vulnerable to severe droughts, located within a region commonly referred to as the "cattle corridor" an area stretching from Karamoja region in the northeast, through central to the southwest of the country. These areas are mainly rangelands and cover approximately 84,000 km^2 (about 40 percent) of the total land area of Uganda. In these areas, semi-arid and dry sub-humid conditions prevail characterized by low, unreliable and variable rainfall (450–800mm).

Pastoralism and crop production are the main economic activities from which local communities in these areas derive their livelihoods. However dry periods have become longer, drought periods are occurring more frequently and rainfall has been less regular and many of the perennial rivers have turned into seasonal rivers. This drastically affected livestock and crop production leading to severe food shortages and weakened abilities of these communities to cope with impacts of climate change. The ability of local community populations and ecosystems in the area to recover from the shocks is so limited that they have inevitably resorted to overexploitation of natural resources using unsustainable methods.

It is against this background that the Ministry of Water and Environment in Uganda together with sister ministries in Sudan, Djibouti and Kenya with Technical assistance from Global water partnership as an executing entity and Sahara Sahel Observatory (OSS) as an Implementing Entity have come up with the **"Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region"** Project proposal for submission to the adaptation fund to address some of these challenges. The project shall promote implementation of adaptation strategies for reducing climate change effects on agriculture to build climate resilient farming communities in the affected parts including drought-prone areas of Uganda.

1.2 Project Description and Components

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

The Project has four components.

1. Development and enhancement of a regional Drought Early Warning System,
2. Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects
3. **:** Drought and Climate Change adaptation actions and
4. Knowledge management and awareness creation.

1.2.1 Key Component Activities

In order to realise the overall goal a number of activities will be implemented under each component as outlined below;

Component 1: Development and enhancement of a regional Drought Early Warning System

The key Activities under this component include:

1. Baseline studies and assessments on the current status of the existing EWS for different types of hazards
2. Equipping and upgrading weather stations including observation and monitoring infrastructure
3. Updating options of traditional EWS with modern EW technologies
4. Development of an EWS prototype to be used at the regional and national levels,
5. Equipping /upgrading of selected weather stations,
6. Construction/renovation and equipping of EW information centers
7. Supporting/equipping project beneficiaries to access EW information (e.g. Devices including, brochure, SMS, Radio etc.
8. Development/Review EW information sharing frameworks and an implementation action plan to operationalize the frameworks,
9. Inter-ministerial and sectoral meetings for data sharing
10. National, regional and local EW information sharing Forums
11. Incorporation of EW information into planning and budgeting processes of targeted countries

12. *R*egular stakeholder EW information feedback platforms for farmers and pastoralists,
13. Quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders
14. Conducting KAP surveys on EW information
15. Developing periodic feedback user-friendly tools on accessing, utilizing and reporting EW information to mandated institutions

Component 2: Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects

The key Activities under this component include

1. Development/updating of existing Drought management plans (DMPS) at national and sub-national levels
2. Integrating CC aspects and adaptation actions,
3. Popularization and dissemination of the reviewed DMPs for use by the farmers and pastoralists,
4. Integration of DMPs into the national and sub-national development plans and formulation of bye-laws and ordinances at sub-national and lower political units.
5. Capacity needs assessment to identify gaps and hindrances to effective drought management,
6. Development of capacity building plans and capacity building materials, exchange visits and learning tours for cross-learning in areas with successful drought management innovations
7. Training staff in managing EW information centers and extension staff and artisans in drought adaptation interventions
8. Community training workshops for farmers and pastoralists in drought risk management and adaptation measures
9. Establishment of learning centers by farmers and pastoral groups for innovative Climate Smart agriculture interventions
10. Review/development of MOUs, protocols and stock route agreements establishment of regional and national drought management multi-sectoral/stakeholder platforms
11. Mobilization of resources for Drought Management jointly by regional and national partners

Component 3: Drought and Climate Change adaptation actions

The key Activities under this component include:

1. Assessment of surface water utilization potential and availability

2. Development water Management Plans in project sites,
3. Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
4. Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),protection of water wells and springs)
5. Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
6. Assessment on groundwater utilization potential and availability
7. Development of groundwater Management Plans in project sites, Review/develop regulatory framework and guidelines on groundwater sources
8. Restoration of degraded water catchments
9. Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dry land agroforestry),
10. Provision of inputs for irrigated agriculture technologies (Drip irrigation, small irrigation etc.)
11. Promotion of climate-smart agricultural practices
12. Developing of rangeland management plans
13. Reduction livestock stocking, integrated pest and disease management, and introduction of drought-tolerant livestock breeds as well as those with low feed requirements.
14.
15. Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells
16. Formation and/or facilitation of existing livestock associations/groups/cooperatives at the community level.
17. Introduction and promotion of Index-based weather insurance in partnership with insurance companies
18. Drought risk assessments, generation
19. Analysis and sharing of market information
20. Creating linkages between farmer and pastoralists associations at regional, national and sub-national levels
21. Pottery, Beekeeping,
22. Energy saving stoves and Briquettes
23. Making, and interlocking bricks,
24. Growing of sisal and Aloe spp such *Aloe ferox* that grow in dry land and produce quick returns,

25. Production of ropes and art crafts,
26. Making and marketing of aloe gel
27. Provision of grants for undertaking innovative IGAS or drought adaptation actions Provision of inputs for value addition crop and livestock products.

Component 4: Knowledge management and awareness creation

The key Activities under this component include:

1. Documenting lessons and best practices from project interventions,
2. Generating and packaging information dissemination materials on EW, cc and drought adaptation actions in forms for easy uptake (e.g. Policy briefs, brochures) adapted to the various stakeholders
3. Sharing knowledge and information through the use of existing and popular platforms e.g. Electronic and print media, telecom that is easily accessible to the stakeholders.
4. Information generation on (e.g. GHACOFFOR EW and IDDRISI for drought management platform and national platforms)
5. Engagement of policymakers in the dissemination of drought management information and best practices
6. Sharing and dissemination of information by drought management working groups

1.2.2 Description of the Project sites

The project will be implemented in different sites within each of four selected countries of the IGAD region. Basically, these are areas that are considered to be most vulnerable and prone to drought based on the following criteria:

- In terms of the environmental conditions, the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (focusing on vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).
- Communities inhabiting such sites are also food insecure characterized by recurrent famine and a shortage of food. There is high dependence on the rain-fed agriculture especially high dependence of farmers and pastoralists on crop and livestock farming.
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender. Low-income levels of the population/high poverty levels in such sites therein are known and reported.
- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income.

In Uganda, the project will be implemented in Rupa Sub County in Lokere Catchment. The catchment is located in the districts of Kaabong (5.4%), Moroto (32.0%), Kotido (3.8%), Napak (32.9%) and Nakapiripirit (2.2%) in the Karamoja Region and; Amuria (11.0%), Katakwi (9.5%) and Soroti (3.3%) in Teso Region Lokere Catchment covers a total area of 8,156 km2. Rupa Sub County in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya.

2 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

In Uganda it's a policy and legal requirement for project implementers to ensure that all the negative environmental and social impacts of a project on the environment and communities are adequately mitigated while the positive ones are enhanced. It will be used in addressing environmental issues that apply to or might be triggered by the planned project activities.

This ESMF has been prepared to aid various stakeholders to identify and effectively manage potential environmental and social impacts of the proposed "**Strengthening *drought resilience for small holder farmers and pastoralists in the IGAD region Project"*** during implementation, in accordance with international good practice as well as the Adaptation Fund's Environmental and social policy and Government of Uganda (GoU) requirements.

Specifically, the main purpose of the ESMF is to

- Establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and the subsequent ESIAs/ESMPs, as applicable; and
- Provide practical information on resources required to implement the ESMF requirements. 2.1 Methodology of Preparing the ESMF

The development of this ESMF entailed review of project related documents, review of the relevant policies laws and regulations, consultations with key stakeholders and review of the Final ESMF by NEMA as detailed below.

a) Review of project related documents

Relevant documents on the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project, project concept and other study reports.

b) Review of relevant policies, Laws and regulations

A review of the relevant environmental and social management policies, laws and regulations in Uganda was conducted. Additionally, the Adaptation Fund

and OSS environmental and social policies were also referred to ensure that the proposed project investments are in conformity.

c) Consultations with key stakeholders

This ESMP has been developed by the Ministry of Water and Environment with guidance from National Environment Management Authority (NEMA), and in consultation with key stakeholders. These consultations enabled the collection and analysis of information on possible environmental and social impacts of the project investments, possible enhancement and mitigation measures, and key stake holders responsible for the implementation of the mitigation measures among others. The key stakeholders consulted included:

- Government institutions and departments including Department of disaster preparedness office of the Prime Minister, the Ministry of Finance Planning and Economic Development, the Ministry of Water and Environment (MWE), the National Environmental Management Authority (NEMA), the Uganda National Meteorological Authority (UNMA), Directorate of Environment Affairs, MWE, Directorate of Water Resources Management, MWE, Climate Change Department, MWE, and Policy and Planning Department, MWE

- Non-Government Organizations, UWASNET, IUCN and Environmental Alert among others

- Kyoga Water Management Zones where Lokere catchment the proposed project area is located

- Political leaders and Staff of Natural resources and production departments of Kaabong, Moroto, Kotido, Napakand and Nakapiripirit Districts
- Rupa sub-county political leaders and technical
- Catchment and sub-catchment management committees in Lokere catchment
- CBOs and the target beneficiary communities

d) Consultations and Review of the ESMF by NEMA

This Environmental and Social Management Frame work was submitted to NEMA for review and approval as the Framework that will guide detailed assessments that will be carried out for certain specific projects depending on their size, location and type. Further consultation and guidance will be given by

NEMA and other relevant sectors during the preparation of detailed assessments and project implementation.

(e) Public disclosure

For projects such **DRESS-EA** the NEP as well as Adaptation fund and OSS Environmental and social policies require that the ESMF is prepared and publicly disclosed to all stakeholders. This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project, and for other reviewers to strengthen the frameworks, particularly measures and plans to prevent or mitigate any adverse environmental and social impacts. To this end, this document will be publicly disclosed through the ministry website. Also the stakeholder consultations undertaken during compilation of the ESMF partly served the purpose of disclosing the project to the stakeholders and their views, concerns and input has been considered, and will accordingly inform different design aspects of the project.

3 POLICY, LEGAL AND REGULATORY FRAMEWORKS

Uganda's policy, legal and regulatory frameworks as well as relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

3.1 Policy Framework

Policy	Relevance to the Project
The National Environment Management Policy	The NEMP sets out the overall policy goals, objectives and principles for environmental management in Uganda. Its overall goal is sustainable social and economic development, which maintains and enhances environmental quality and resource productivity to meet the needs of present generations without compromising the ability of the future generations to meet their own needs. In addition, the Policy also allows for the formulation of sectoral or lower level policies concerning environment and natural resources management including : the National Water Policy (1999), the National Wetlands Management Policy (1996), the Wildlife Policy (1996), the Forestry Policy (2001), the National Soils Policy, and several District Environment Management Policies among others. This is consistent with a rage of other Environment and social policies such as the Adaption fund and OSS which requires Environmental Assessments to be conducted before projects are
The National Water Policy 1999	The policy advocates for the management and development of water resources in Uganda in an integrated and sustainable manner so as to secure and provide water of adequate quality and quantity for all social and economic needs for present and future generations with the full participation of all stakeholders. This Project is planned to ensure provision of adequate water needs for domestic use, irrigation and livestock in the target communities.
The National Land Use Policy	The overall policy goal is to achieve sustainable and equitable socio-economic development through optimal land management and utilization in Uganda. The policy recognizes amongst others, the need for the protection and sustainable use of land resources through conducting environmental assessments and implementation of measures outlined in such assessment studies.
National Policy for the Conservation	The Policy has established principles by which wetlands resources can be optimally used and their productivity maintained in the future and end existing unsustainable exploitative practices in

Policy	Relevance to the Project
and Management of Wetland Resources, 1995	wetlands. All proposed modifications and restorations on wetlands shall be subject to an ESIA, the result of which shall determine whether such restoration or modification shall proceed and if so to what extent. This ESMF provides for measures for controlling degradation of wetlands and controlling their siltation in line with NEMA and AF policies
The National HIV/AIDS Policy, 2004	The policy applies to all current and prospective employees and workers, including applicants for work, within the public and private sectors. It also applies to all aspects of work, both formal and informal. The project will have to mainstream HIV/AIDS interventions into its plans, sub- Projects and activities
The National Cultural Policy, 2006	The National Culture Policy, 2006 complements, promotes, and strengthens the overall development goals of the country. Its specific objectives include amongst others, the need to promote and strengthen Uganda's diverse cultural identities and to conserve, protect, and promote Uganda's tangible and intangible cultural heritage. This ESMF outlines Chance Finds Procedures to ensure protection and conservation of any PCRs that will be encountered during project implementation
The Occupational Health And Safety Policy	This policy will be especially relevant for Occupational Health and Safety (OHS) of the workers and the public in the implementation of the project components. It focus on safety and wellbeing of workers in the different work environments These are all important considerations in the project implementation and operations especially during the construction, operation and maintenance of water infrastructure

3.2 Legal Framework

Legislation	Relevance to the Project
The Constitution of the Republic of Uganda, 1995	The right to a clean and healthy environment is enshrined in Article 39 of the Constitution of Uganda, 1995 as well as integration of people in the development process. In particular, the Constitution guarantees a range of basic human rights to the people of Uganda which include: gender balance and fair representation of marginalized groups in development process; protection of the aged; the right to development; access to clean and safe water; basic medical services; and access to

Legislation	Relevance to the Project
	education. These are some of the fundamental socio-economic aspects which are key for sustainability of mankind. The project contributes to some of these goals.
The National Environment Act, Cap 153	Section 20 of this Act obliges every developer to undertake an environmental assessment for projects listed in the Third Schedule of the Act. This ESMF has been prepared mainly to guide the implementers of the DRESS-EA project to fulfill this obligation and ensure that all project interventions are done within the law.
The Land Act, Cap 227	The Act and the Constitution of the Republic of Uganda vest land ownership in Uganda in the hands of Ugandans and guide matters of land acquisition for development project through compensation which has to be fair, timely and adequate. DRESS-EA project investments will be done for the people on their lands with their consent and no compensation will be involved. Land is considered as part of community contribution.
The Occupational Safety and Health Act, 2006	The Act provides for the prevention and protection of persons at all workplaces from injuries, diseases, death and damage to property. The key provision of this Act is safety and welfare of workers. ESMF provides for safety gear for workers during implementation of project activities especially for water infrastructure works among other subprojects
The Employment Act, 2006	This Act spells out general principles regarding forced labor, discrimination in employment, sexual harassment and provisions to settle grievances. It further provides that, a child under the age of twelve years shall not be employed in any business, undertaking or workplace. Therefore, project implementers will not engage any child workers at the project sites at any one time during the project lifecycle
National Forestry And Tree Planting Act, 2003	The National Forestry and Tree Planting Act 2003 is the main law that regulates and controls forest management in Uganda by ensuring forest conservation, sustainable use and enhancement of the productive capacity of forests, to provide for the promotion of tree planting and through the creation of forest reserves in which human activities are strictly controlled. Specifically, the Act will provide guidance for afforestation and other tree nursery subprojects under Project.
Historical Monument Act, 1967	The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. Section 10(2) requires that any person who discovers any such object takes such measures as may be reasonable for its

Legislation	Relevance to the Project
	protection. This implies that the project will undertake the Chance Finds Procedures in addressing possible encounters of any archaeological resources during project implementation

3.3 Regulatory Framework

Regulations	Relevance to the Project
The Environmental Impact Regulations S.I. No. 13/1998	Provides for preparation of project briefs ; Provides for conducting Environmental impact studies in accordance with the terms of reference developed by the developer in consultation with NEMA and the lead agency
Conduct and Certification of Environmental Practitioners Regulations, 2003	Provides guidance on conduct and Registration and certification of EIA practitioners.
The Water Resources Regulations, S.I. No. 33/1998	Provides for sustainable management Provides for the protection of water sources.
The Water (Waste Discharge) Regulations, S.I. No. 32/1998	Specifies what quality is acceptable in terms of effluent released into rivers. Water pollution prevention Provides for effluent discharge in aquatic and sewerage system standards
Wetlands, River Banks and Lake Shores Management) Regulations, S.I., No. 3 /2000	Provides for protection of Wetlands, River Banks and Lakeshore Zones

3.4 Other international institutions policies, Guidelines operational safeguards and Standards relevant to the project.

3.4.1 Environmental and Social Policy of the Adaptation Fund (Approved In November 2013; Revised in March 2016)

The Environmental and Social Policy of the adaptation fund emphasizes the need to ensure that projects/programmes supported by the Fund do not unnecessarily harm the environment, public health or vulnerable communities. All implementing entities are required to have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design, adopt measures to avoid or where avoidance is impossible to minimize or mitigate those risks during implementation, monitor and report on the status of those measures during and at the end of implementation as well as ensure adequate opportunities for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by the Fund.

3.4.2 Environmental and Social Principles of the Adaptation Fund

To ensure that all projects/programmes supported by the Fund comply with its environmental and social requirements the fund formulated 15 Environmental and Social Principles and all the projects are designed and implemented to meet these principles. However it is recognized that depending on the nature and scale of a project/programme all of the principles may not be relevant to every project/programme. These and their relevance to the project are discussed below:

Table 1: Summary of Environmental and social principles and how they relate to the Project

Environmental and social principles	Details	Comments
Compliance with the Law	Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	Yes. The project complies with both domestic and international laws and policies as reviewed in Table 1 above Any possible deviations from the law shall be mitigated as per the ESMP
Access and Equity	Projects/programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. Projects/programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups.	Yes. In general the project promotes fair and equitable access to benefits of the project. Some activities of the project, such as the livelihood target the most vulnerable community groups including youth and women.
Marginalized and Vulnerable Groups	Projects/programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	No project activities are anticipated to negatively impact marginalized and Vulnerable Groups. Some activities, especially income generation activities are actually targeting vulnerable groups especially youth and Women. All efforts shall be made to ensure that special interest groups are represented at all stages of the project implementation. Any possible negative impacts on these groups of people shall be mitigated
Human Rights	Projects/programmes supported by the Fund shall respect and where applicable promote international human rights.	No activities are anticipated to violet established international human rights. Project objectives promote basic human rights for equitable access to service and water for domestic use and irrigation and capacity building as well as access to information.

Environmental and social principles	Details	Comments
Gender Equality and Women's Empowerment	Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund gender policy (refer to Annex 4 for details); (b) receive comparable social and economic benefits; (b) receive comparable social and economic benefits; and (c) do not suffer disproportionate adverse effects during the development process	All project activities have been screened and analysed in order to take gender aspects into consideration An in depth gender analysis of the involvement of men and women in the in project activities will be undertaken in the initial project phase The project by design promotes equal participation in decision-making processes and project activities with more emphasis on vulnerable groups in some cases.
Core Labour Rights	Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labor Organization.	The project respects the labour standards as identified by ILO as well as domestic laws
Indigenous Peoples	The Fund shall not support projects/programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	The Project promotes the respect the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples. There are a number of tribes in the target project area but there is no tribe classified as indigenous peoples.
Involuntary Resettlement	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation.	The project will not be involved in resettlement activity of communities. The project will closely monitor the targeting of the project beneficiaries, to ensure that any issues arising are promptly handled.
Protection of Natural Habitats	The Fund shall not support projects/programmes that would involve unjustified conversion or degradation of	One of the key activities of the project shall be the restoration of degraded ecosystems/catchments

Environmental and social principles	Details	Comments
	critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities	while encouraging the Conservation of existing ones including Natural habitats Environmental assessments shall also ensure that activities detrimental to biological diversity are avoided while any negative impacts shall be mitigated
Conservation of Biological Diversity.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species	
Climate Change	Projects/programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	The project does not only increase the adaptation capacity of the local communities and the resilience of the ecosystems, but also reduces greenhouse gas emissions through the introduction of improved stoves and reforestation initiatives
Pollution Prevention and Resource Efficiency	Projects/programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants	The project will contribute to energy efficiency (e.g. introduction of cooking stoves), efficient use of water, prevention of water pollution, monitoring water quality.
Public Health	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health.	The project will not have negative impacts on public health. On the contrary the project will contribute to improve health conditions of the communities by reducing smoke out of traditional cooking stoves, improving living environment through restoration activities as well as providing clean water.
Physical and Cultural Heritage	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural	The project will not have any activity related to affecting physical and cultural heritages. Their protection/conservation will rather be promoted by the project. In case anything comes up it will be

Environmental and social principles	Details	Comments
	values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	handled as per the guidelines provided in the Historical Monument Act, 1967
Lands and Soil Conservation	Projects/programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	Soil conservation, reduction of land degradation through supporting terraces, afforestation and catchment management is a core objective of component 3 of the project.

3.5 Environmental and Social Policy of Sahara and Sahel Observatory (OSS) of 2016

As a policy OSS does not support projects/programmes that unnecessarily harm the environment, vulnerable communities or women or contribute to poverty, social inequality or gender discrimination.

To carry out its Policy, OSS ensures that all its supported projects/programmes:

a. Have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design
b. Adopt measures to avoid or where avoidance is impossible to minimize or mitigate or manage those risks during implementation
c. Monitor the status of those measures during and at the end of implementation.
d. Assure that adequate opportunities are provided for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by OSS.

In addition all projects/programmes supported by OSS shall be designed and implemented to meet the following ten Environmental and Social Performance Standards (PSs). It is recognized that depending on the nature and scale of a project/programme all of the PSs may not be relevant to every project/programme. These Performance Standards are also in line with the international best practices for assessment of environmental and social risks e.g. those of the International Finance Corporation (IFC), Adaptation Fund, etc. These include;

- PS1: Assessment and management of environmental and social risks and impacts
- PS2: Labour and working conditions
- PS3: Resource efficiency and pollution prevention
- PS4: Community health, safety and security
- PS5: Land acquisition and involuntary resettlement
- PS6: Biodiversity Conservation and sustainable management of living natural resources
- PS7: Indigenous peoples
- PS8: Cultural heritage
- PS9: Gender Equity and Women's Empowerment
- PS10: Access and Equity and protection of Human Rights

3.6 Environmental and social baseline information for the Project area

3.6.1 Location

In Uganda, the project will be implemented in Rupa Sub County in Lokere Catchment. Rupa Sub County is in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya.

Figure 1: Map showing the Location of Lokere catchment and Ruta Sub-county

The catchment is defined by River Lokere, its tributaries and downstream wetlands The system is set on a large plateau at 400 m Above Sea Level (ASL), and underlain by impermeable rocks. There are two major mountains in the catchment (Mount Moroto and Mount Napak) and a number of hills.

3.6.2 Climate

The total average annual rainfall varies between 550 mm/year in the upstream areas of Lokere and 1,300 mm/year in downstream areas. There is a short rainy season with heavy rainfall events from April to July with typically a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events from September till December/January. The long rainy season is almost absent in the upstream parts of Lokere. Precipitation is highly variable in space and time, with both intense rainfall events and long dry periods.

The dry season lasts between 2 to 9 months, depending on the year and the location in the catchment. The long dry season lasts longer the further one moves north in the catchment. As a result of the high rainfall variability Lokere Catchment suffers from acute water shortages during the dry season in the Middle and Upper Catchment and heavy flash floods during the rainy season in Middle and Lower Lokere. During the dry season the Karamojong migrate many kilometres in search of water and pasture for their animals. Climate change projections indicate that temperatures will rise, rainfall intensity will increase and extreme events such as droughts and floods will occur more often

3.6.3 Geology and Soils

Geologically Lokere Catchment is underlain by Precambrian crystalline basement rocks of the Gneissic Granulitic Complex, which have been modified by high-grade metamorphism, deposition of sediments, volcanic activity and rift faulting. Mount Moroto, Mount Napak and the smaller mountains along the Ugandan-Kenyan border are tertiary inactive and dormant volcanoes. These outcrops are chiefly characterized by soda-rich agglomerates, lavas and tuffs, while locally eroded remnants of former volcanoes, such as carbonatite rings and syenite complexes, are present. Some of these sediments are of volcanic origin, while others are associated with earlier depositional episodes. The river beds and flood plains form a fingered pattern which mainly consists of alluvium, black soils and moraines with inselbergs scattered throughout.

The soils in the far eastern highlands, at the border with Kenya, are mostly sandy gravels and red sandy loams (leptosols), all with a notable very low fertility. These

soils support little vegetation and are most suitable for extensive (migrant) pastoral activities. At the foothills, on the contrary, highly fertile luvisols can be found. In the large open plains in the upper and middle catchment cambisols – further away from the streams - and vertisols – closer to the streams – alternate.

Young soils formed on volcanic ashes, such as alisols and nitisols, occur in pockets around the extinct volcanoes of Mount Moroto and Mount Napak. Alisols are highly acid, which makes them unsuitable for many types of crop production. Nitisols are to a lesser extent characterized by this acidity, and in combination with their high fertility, better apt for crop production. The lower parts of Lokere Catchment are characterized by fluvial depositions and soils, such as arenosols and plinthosols, which developed in areas of seasonal and permanent waterlogging and are used by the local population, the Teso, for paddy rice cultivation.

3.6.4 Vegetation Cover

Land in Lokere Catchment is currently covered approximately by equal shares of forest and woodlands, grasslands and shrublands, and croplands. Extensive wetland systems are present in Lower Lokere. Most lands are communally owned, except in the town centres of Moroto and Katakwi, and the lands in Lower Lokere where individuals possess title deeds. Approximately 1/3 of Lokere Catchment has a protected status and is either under the management of the National Forest Authority (NFA) or the Uganda Wildlife Authority (UWA).

Figure 2: Vegetation cover in Lokere Catchment

3.6.5 Water Resources

In the upstream parts of Lokere rivers react quickly to rainfall, are characterized by large variations in low and peak flow, and contain large volumes of sand and silt due to soil erosion. Downstream, in the wetland areas, there is always water. The wetlands absorb water during the rainy season and release water slowly in the dry season.

Groundwater is concentrated in fractured rock and in a top-layer of loose material covering solid rock and in the riverbeds and floodplains. Chemical groundwater quality is in general good, although around Mount Moroto and Mount Napak locally high fluoride levels are found. Microbiological contamination, on the contrary, is a major concern, also in deep groundwater wells due to poor design, construction, operation and maintenance of the infrastructure. Safe water coverage in Lokere Catchment is low, and varies between 29% in Kaabong and 72% in Soroti.

Current total water use for domestic, livestock and irrigation purposes equals 6 Mm^3/year. To cover the water demand, however, 1.3 Mm^3/year of extra potable water needs to be supplied for domestic use, 14 Mm^3 for livestock watering and 87 Mm^3 for irrigation. Apart from these productive uses, estimates indicate that a so-called environmental flow of 238 Mm^3/year has to remain untouched to safeguard the adequate functioning of natural systems.

The water resources analysis shows that;

- There is sufficient water available in the catchment to fulfill the demand, even during dry years, but water needs to be stored during the rainy season for use in dry periods.
- Wetland areas are very important to mitigate droughts and floods, and
- Areas used for crop production have a negative impact on water availability, mainly due to poor farming practices.

Figure 3: Wetlands act as Water reservoirs in Lokere Catchment

3.6.6 Settlements

Settlements in Lokere Catchment are scattered with concentrations around productive agricultural areas, trading centres, and water sources. The upstream and middle parts of the catchment are mainly inhabited by pastoralists and agro-pastoralists; the downstream parts by crop farmers. Cattle, goats and sheep are grazed in open grasslands, wetlands, shrub lands, forests and agricultural lands after crops have been harvested.

3.6.7 Livelihood Activities

Livestock rearing is complemented with rain fed crop production of mainly sorghum, millet and maize, and flood-irrigated paddy rice. Mining (mainly marble around Moroto) is another important economic activity. Around Moroto marble mining permits are held by large companies from outside the catchment. Sand mining from rivers is small-scale and mainly by communities. Charcoal production for sale to Soroti, Mbale and Kampala is also an additional source of income. The population is poor. Recent studies indicate that nearly 80% of the population lives below the poverty line (WFP, 2015).

Figure 4: Charcoal production and sale in the catchment

3.6.8 Sanitation

Access to improved sanitation facilities is lowest in Karamoja sub region at 25% compared to the national average of 77 %. Karamoja sub region had the lowest rate of latrine coverage at 12.2% compared to the national average of 68% .There is progress towards eradication of open defecation but none of the districts has attained the status of Open Defecation Free environment. According to the UNICEF Annual Report (2013), open defecation has been eradicated in 200 communities. The use of hand washing facilities is lowest in Karamoja sub region (at 8%) compared to the national average of 33%.

3.6.9 Education

The Karamoja sub region has the lowest level of education attainment with the highest number of the population without education (58.1% females and 45% males) compared to the national average (12.9 males and 19.9% females); Completion of primary education stands at 1.4% and 6.7% for females and males respectively, compared with the national average of 6.5% and 7.3 % for females and males respectively.

3.6.10 Health

Whereas the child mortality indicators at national level have greatly improved since 1995, it has not happened in Karamoja sub region. Infant Mortality Ratio

reduced from 86 deaths per 1000 live births in 1995 to 54 in 2011 and further to 45 in 2013 but the Karamoja Sub region still ranks highest at 87 death per 1000 births. Under Five Mortality Ratio also reduced from 156 deaths per 1000 live births to 90 in 2011 and further to 69 but the Karamoja sub region still has the highest ratio of 153 death per 1000 live births

According to the Uganda Demographic and Health Survey (2011), the Karamoja sub region has the lowest nutritional status of children under 5 according to three Anthrometric indices- Height for Age (stunting); Weight for Height (wasting), and Weight for Age (Underweight) as indicated in the table below:

The Karamoja sub region has the worst Maternal Mortality ratio of 750, per 100,000 live births compared to the national trend where of Maternal Mortality ratio has reduced from 506 deaths per 100,000 live births in 1995 to 435 in 2011 but increased again to 460. Regarding reproduction health, only 27% of the deliveries in the Karamoja sub region take place in the health facilities compared to the national average of 57.4%. In addition, only 30.8% of the deliveries are assisted by skilled health workers compared to the national average of 58%.

3.7 Key Stakeholders

Main institutions and officers that will be involved in the implementation of the proposed project include, OSS, Global Water partnership Eastern Africa, the Ministry of Water & Environment represented by the Directorate of Water Resources Management, District and Sub-county Local Governments. Contractors, NEMA, Environmental Officers and Consultants. Others will include CBOs and NGOs as well as the beneficiary communities.

4 UGANDA'S ESIA PROCESS, SCREENING, PROJECT CATEGORIZATION AND ASSESSMENT.

The National Environment Act, Cap 153, Section 20 obliges every developer to undertake an environmental assessment for projects listed in the Third Schedule of the Act. For sub-projects under the DRESS-EA project that fall under the Third schedule standard processes and procedures shall be applied. The sub-projects that fall under this category may include but not limited to the following:

- Equipping and upgrading weather stations including observation and monitoring infrastructure
- Equipping /upgrading of selected weather stations,
- Construction/renovation and equipping of EW information centers
- Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
- Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),protection of water wells and springs)
- Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
- Restoration of degraded water catchments
- Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dry land agroforestry),
- Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells

These shall be subjected to the ESIA regulations and procedures including the following steps:

4.1 Screening process

The screening process is designed to determine which projects are exempt, require partial assessment (Project Brief) or require a full ESIA process. The nature, type and location of the project are described in the environmental screening form with a preliminary indication of potential socio-economic and biophysical impacts (number of people/ communities affected, sensitive habitats, threatened species, etc). Based on the screening exercise, NEMA makes a decision on whether an ESIA is required or not. In the event that an ESIA is not required, the proponent is still obliged to describe methods and procedures for proper environmental management, including health and safety management. The projects listed under Schedule III of the Act undergo mandatory full ESIA.

4.2 Screening form

A standardized Project Brief is submitted by a developer using a Screening Form. The form requires that the developer submit information on the proposed project/activity and inter-alia, on the following:

a. Developer;
b. Contact address;
c. Location and size of the site/facility;
d. Project design, activities-during & after, inputs required (utilities and raw materials);
e. Products and by-products (finished products and wastes);
f. Methods of waste disposal;
g. Anticipated environmental and social impacts (number of people/communities likely to be affected, sensitive habitats, vulnerable groups and species etc).
h. Proposed mitigation actions responsible institutions, and budget estimates.

The First Schedule of the EIA Regulations 1998, lists the issues that are considered in making environmental and social impact assessment, and these include:

a. Ecological considerations, which encompass biological diversity, sustainable use, and ecosystem maintenance;
b. Social considerations, including employment, social cohesion & disruption, culture, human health, communication and local economy;
c. Landscape impacts; and
d. Land use impacts.

General information is required at this first stage. If in-depth analysis has already been done, results should be indicated on the screening form. If however, only

preliminary analysis/surveys have been done, this will in general suffice for the screening form.

Where the developer needs assistance to complete the screening form, a lead sectoral department concerned staff or a consultant can be enlisted for help. Upon completion by the developer, the form is submitted to the lead department or the Authority. If the form has been completed correctly, the lead department forwards the form to the Authority for consideration. The Authority determines the follow- up actions required in consultation with the lead department. If necessary, the Authority, the lead department, and/or a designated sectoral working group may visit the proposed project site to clarify details or complete the information required.

4.3 Authority Project Classification

Based on information obtained from the screening form, a systematic review of the information is completed by the Authority to determine whether an ESIA needs to be conducted or not. Evaluation criteria have been established which provides a general guide for determining whether or not a full ESIA is required. This ensures a fair and consistent review of all proposed projects at this screening stage, based on the information provided by the project proponent. As a result of this screening, the project is classified in the following manner.

4.3.1 Class A Projects

Under this category, full ESIA will be required. In all, projects listed under the Third Schedule of the NEA are required to undergo full ESIA. If the project is not listed under the third Schedule of NEA, the Authority will review the screening form or after additional information has been provided, and if in their professional judgement that the project will cause a significant negative impact on the environment, it will require a full ESIA be made in accordance with the provisions stipulated below. Comprehensive and meaningful stakeholder consultations, including a public hearing (disclosure) are required for Category A projects.

4.3.2 Class B Projects

Projects placed under this category, will require partial ESIA to be conducted before their implementation. Such projects under this category are considered not to have adverse environmental and social impacts compared to Category A. Their impacts are readily mitigated, site specific and reversible. Typically, the Authority requires preparation of a Comprehensive ESMP as part of the Project Brief (Screening Document). In cases where doubts remain as to the significance of potential impacts on the environment, further information is required. In this

case, the Authority will give the project proponent, in writing, a clear indication of the information that needs to be provided. The Executive Director reserves the right to determine what additional information is required. After additional information has been provided, the Authority will reassess the proposed project and if the ESMP contained in the Project Brief is deemed adequate, EIA Certificate of approval is issued.

4.3.3 Projects under Class C Types

These basically require no ESIA before their implementation. A project may be categorized as Class C if it is determined that the proposed project will have no significant or adverse impact on the environment. The Executive Director may grant environmental approval to the project without further analysis.

Apart from the ESIA content, the procedures require a public survey and consultations prior to the issuance of any authorization on the basis of the ESIA. The ESIA conducted by the consultants at the request of the proponent is submitted for approval to the NEMA that among other aspects reviews the procedure for the conduct of ESIAs (approval of the TORs, authorization given to consultants and consultancy firms, evidence of stakeholder consultations undertaken, etc.)

4.4 Consultations during the ESIA Process

The Authority, upon receiving a Project Brief (screening checklist/ ESMP) consults the lead sectoral department. It invites public comments on statements of project intent submitted to it especially from those most likely to be affected by a proposed project. It is only subsequent to these two consultations that the Authority is required to invite interested organs of the State to comment on both the statement and the comments to follow. A public enquiry/hearing is the final form of consultation.

4.5 PHASE II –THE EIA STUDY PHASE

In the event that the Authority determines that a full ESIA study be undertaken, the study will be undertaken in accordance with the National Environment Act Cap 153 and EIA Regulations 1998. The following steps are followed:

4.5.1 Scoping

Scoping is an important component in EIA process. It determines the extent and approach of the EIA at an early stage in the planning process. If screening

determines that a partial environmental assessment (CLASS B) or a full EIA (CLASS A) is required for a particular project, terms of reference (ToR) need to be developed for these studies. For CLASS A projects, a scoping exercise will be carried out in order to identify issues and prepare the ToR for a full EIA Study. However, for CLASS B projects, ToR can be inferred directly from the information provided in the project brief; therefore, a scoping exercise will not normally be required for the review.

4.5.2 Terms of Reference for an EIA

The main output of the scoping exercise is to prepare the Terms of Reference (ToRs). Taking into account findings from project scoping, the developer shall prepare ToRs and submit to NEMA and any other relevant Lead Agencies for review and approval before the EIS study is conducted. The reviews ensure that the assessment will be conducted in an agreed-upon and focused manner. Based on the tasks specified in the ToRs, the developer shall then source and hire an experienced and multi-disciplinary team of EIA Practitioners and other relevant experts to undertake the different tasks specified in the ToRs. NEMA& DWRM shall examine the ToRs for the planned development and ascertain whether they address all pertinent issues on the basis of which, the developer shall be given a go-ahead to start on the study. In case the ToRs is found to be deficient, NEMA shall point out the deficiencies and request the developer to revise and include them in the ToRs.

4.5.3 Conducting Environmental Impact Study

Once the ToRs are approved by NEMA in consultation with DWRM and other relevant lead agencies, the next step in the EIA process is to carry out a detailed study of the key impacts according to the scoping report and ToRs. The EIA Study is done according the National Environment Act Cap 153 and EIA Regulations 1998. Stakeholder involvement and consultation is an important part of the EIA process. The consultant should identify key stakeholders (key groups and institutions, environmental agencies, NGOs, representatives of the public and others, including those groups potentially affected by the environmental impacts of the programme, project or activities. Stakeholder consultations should be by notifying the public, soliciting their and experts' comments, holding public and community meetings, and asking specific individuals for their input.

4.5.4 Reporting

An EIA study culminates in the preparation of an EIA report. The Environmental Management Plan is part of the information to be included in the EIA report. The EIA Regulations, 1998 specifies how environmental information should be

presented in an Environmental Impact Statement (EIS). Presentation depends largely on the importance of the various issues in the EIS. Where no significant natural resource issues arise, the EIS may simply refer to them in a general chapter on other environmental effects or information. Where natural resources issues are significant they should be addressed to the extent necessary in the main body of the EIS, although larger EIS may have separate volumes containing detailed information about specific issues.

4.5.5 Environmental Monitoring

The Environmental Impact Assessment Regulations 1998 requires that the developer carries out environmental monitoring in order to ensure that recommended mitigation measures are incorporated into the project design and that these measures are effective so that unforeseen impacts may be mitigated.

4.5.6 Environmental Audit

The Environmental Impact Assessment Regulations 1998 require that after the first year of operation, the developer must undertake an initial environmental audit. The purpose of the audit is to compare the actual and predicted impacts, and assess the effectiveness of the EIA, as well as its appropriateness, applicability and success.

5 PUBLIC CONSULTATIONS

5.1 Approach to the Consultations

In order to ensure that key interests of the public and key stakeholders at different levels are addressed and incorporated into the design and implementation of the DRESS-EA project, stakeholder consultations were carried out as part of the ESMF development process.

The MWE together with GWPEA have conducted rapid stakeholder consultations at various levels to solicit data and information on the current issues at National, Zonal and in the Lokere catchment-in particular Moroto District, Ruta sub-county as well as the Environmental and social issues likely to be associated with the design and implementation of the DRESS-EA project and associated sub-projects.

The key stakeholders consulted included:

- Government institutions and departments including Department of disaster preparedness office of the Prime Minister, the Ministry of Finance Planning and Economic Development, the Ministry of Water and Environment (MWE), the National Environmental Management Authority (NEMA), the Uganda National Meteorological Authority (UNMA), Directorate of Environment Affairs, MWE, Directorate of Water Resources Management, MWE, Climate Change Department, MWE, and Policy and Planning Department, MWE
- Non-Government Organizations, UWASNET, IUCN and Environmental Alert among others
- Kyoga Water Management Zones where Lokere catchment the proposed project area is located
- Political leaders and Staff of Natural resources and production departments of Kaabong, Moroto, Kotido, Napakand and Nakapiripirit Districts
- Rupa sub-county political leaders and technical staff
- Catchment and sub-catchment management committees in Lokere catchment

- CBOs and the target beneficiary communities

5.2 Methodology and Identification of key stakeholders

Stakeholder consultations were interactive in nature and targeted at different levels: National, district, sub-county and communities and included the relevant representatives in each. Below is a summary of key issues generated during consultations. Consultations were undertaken through the use of key informant interviews and focus group discussions and community meetings.

5.2.1 Summary of consultation findings

Summary of Consultation findings

Based on the consultation findings, it is clear that the DRESS-EA is supported by stakeholders especially where project investments will have a positive impact on improving social and public welfare and addressing environmental concerns, primarily those related to enhancement of early warning systems and the capacity of stakeholders to manage drought risks due to Climate Change effects, promotion of Drought and Climate Change adaptation actions including water infrastructure, improved crop production and pasture management as well as Knowledge management and awareness creation.

Table 2: A summary of the key issues identified during consultations with stakeholders are summarized below:

Main issues	Causes	Impact
Low safe water coverage	• Low groundwater potential and over abstraction of groundwater • Many boreholes are non-functional due to poor site selection, design, operation and maintenance • Microbiologic contamination is a major concern due to poor sanitation and sharing of water points with livestock	• Shortages of safe water supply for domestic use • High incidence of waterborne diseases
Food insecurity	• Dependency on pastoralism and subsistence farming • Traditional low-input farming practices • High incidence of pests and diseases • Barely production surplus for the market • High poverty (up to 80%) and low income	• Overexploitation of natural resources • Encroachment into wetlands and forests

Main issues	Causes	Impact
	levels • The region has the lowest education rates in Uganda, only 6% of women and 12% of men are literate • Limited access to basic services	
Shortage of water and pasture	• Demand for water and pasture is high and further increasing • Loss of traditional migration patterns and management systems due to sedentarisation • Shortages are aggravated by the influx of cattle from the Turkana (Kenya) and Topoth (South Sudan) • Existing valley tanks and valley dams do not cover livestock demand • Opening of new lands for cultivation leads to loss of grazing lands • Land grabing is on the rise	• Rise in pressure on and conflicts over resources between different groups of herders, and between farmers and pastoralists, particularly in around Moroto and Soroti towns, and in the wetlands of Napak • Limited resources to cope with hazards
Low agricultural productivity	• High variability of precipitation • Limited investment in soil and water conservation techniques • Limited use of improved crop production techniques • Poor agricultural practices undermine soil fertility and water retention capacity • Poor access to agricultural inputs	• Low income • High vulnerability to disasters
Vulnerability to natural disasters (floods and droughts)	• Population growth • Encroachment into wetlands and floodplains • Shortage of water storage capacity (natural and infrastructure**)**	• Regular crop failure • Reduced water availability • Loss of lives and propriety
Pressure on resources in and around urban areas	• Sedentarization and migration towards rural and urban growth centres • Move towards crop production to the detriment of traditional pastoralism • Changing livelihoods and lifestyles, and	• Increased dependence on alcohol, economic losses increasing powerless- ness • Loss of traditional natural resources

Main issues	Causes	Impact
	cultural practices • Population growth	• management systems • Land degradation around urban areas
Environmental issues	• Trees are cut for commercial charcoal production for urban centres, such as Soroti, Mbale and Kampala • Uncontrolled bush burning • Access to energy within the region is mostly limited to wood and charcoal, which results in tree cutting • Increased human pressure on the land • The power of responsible institutions for natural resources management has eroded over time leading to overexploitation of resources • Insecure land tenure due to communally owned lands discourages farmers from investing in conservation techniques • Encroachment into woodlands, forests and wetlands • Vegetation clearance during construction of harvesting and storage infrastructure • Inadequate popularization of policies and low enforcement of laws and by-laws due to limited capacity of institutions, understaffing of local governments, and limited budget for the environment sector • Low levels of awareness concerning environmental conservation • Limited feeling of ownership amongst water users because of their limited involvement in decision making • Abandoned borrow pits which accumulate stagnant water and thus form breeding effectively deal with issues of resettlement. • The district has, Natural Resources, environment and community development officers who can monitor compliance to	• Environmental Degradation • Soil erosion • Increased frequency of floods and droughts • Drying up of springs

Main issues	Causes	Impact
	environment and social issues but the environment office does not have adequate facilitation to monitor compliance. • Lack of capacity greatly affects compliance because the district does not have resources for effectively monitoring environment and social safeguards for the project. • Water, air and noise pollution due to use of machinery • Soil erosion, habitat destruction and loss of biodiversity • Over abstraction of water may damage the ecosystem	
Social issues	• Accidents which are likely to occur during the construction of the project. • Labour camps during the construction process. This would lead to other associated problems such as social disorders e.g. prostitution,	• Injuries and spread of diseases
Concerns regarding natural disasters	• Flooding from the construction of dams • Effects of drought	• Destruction of property • Conflicts over water resource use among the communities
Capacity gaps	• Capacity gaps in undertaking the project activities • Lack of skills and resources to maintain the water infrastructure	• Failure to achieve the desired project outputs • Failure of water infrastructure

6 ANALYSIS AND PROPOSED MITIGATION MEASURES

The proposed DRESS-EA subprojects are not likely to result in significant adverse environmental or social impacts if carefully managed as their main objective is to empower local communities to undertake Drought and Climate Change adaptation actions including water harvesting and storage infrastructure, irrigation systems, improved crop production and pasture management, income generating activities as well as Knowledge management and awareness creation.

However, if not carefully designed and implemented, these types of subprojects can lead to negative environmental and social impacts, particularly those which entail investments in infrastructure development and new construction (e.g. Water storage and harvesting infrastructure and irrigation systems). Furthermore, weak or inadequate capacity for designing, managing and monitoring subprojects can lead to poor design and implementation and exacerbate adverse impacts.

Thus, it is important to identify potential risks early in subproject preparation and design, both in terms of the Project's overall design and of the specific investment activities. Impacts can be divided into negative environmental and social impacts and these depend specifically on the size and nature of the subproject and the environmental and social sensitivities associated with the location of the subproject.

6.1 Positive Environmental and Social Impacts

Below is a summary of likely positive environment and social (direct and indirect) impacts of the Project that will contribute to other benefits of the Project:

1. Provision of timely early warning information to farmers –The rehabilitated or newly constructed weather stations will enable collection, analysis and dissemination of early warning information to farmers to enable them plan their activities properly

2. Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside

water harvesting facilities, water ponds, and locally dug underground tanks as well as deep and shallow wells, will make safe water for communities improving their health as well as reducing or eliminating prevailing agriculturalist/pastoralist conflicts-Mitigation of tension/conflict over water: as scarcity of water is one of the sources of conflict in the beneficiary communities

3. Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems), protection of water wells and springs) will increase the amount of water available for agricultural and livestock production. This will enable the small scale farmers to increases their production, realize more benefits and increase their drought and climate change adaptive capacity.
4. Creation of short-term employment opportunities: use of appropriate labor-intensive during construction of of weather stations and water harvesting, storage and delivery infrastructure will provide direct income to the households;
5. Investments in river banks restoration will protect the rivers from siltation and sedimentation from run-off;
6. The contour and stone bands will help in checking erosion on hilly areas and this will lead to improved productivity in these areas;
7. Afforestation programmes will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels;
8. The activities of the program will help to identify and to implement the necessary measures or the protection of biodiversity areas thus conserving the wealth of the species at the local and national level. Also, these investments will contribute to combating desertification; enhancing

reforestation, soil restoration and the implementation of national conservation activities

9. Enhance women participation in household and socio-economic activities through sustainable water supply which will create more time for them to engage in other income generating activities
10. Capacity building and training in drought adaptation actions for the community, and resulting enhancement of organizational, financial and technical capacities of communities in the catchment.

6.2 Project negative environmental and social impacts

The implementation of the proposed DRESS-EA Project is anticipated to have a number of negative environmental and social impacts both direct and indirect. These may include but are not limited to the following.

1. Loss of vegetation and disturbance of floral and faunal communities – The program activities are likely to destroy vegetation with subsequent loss of trees, shrubs and grasses from the areas highlighted for infrastructure sub-projects. This is likely to cause loss of habitat and disturbance to faunal communities in the affected sites.

2. Increased soil erosion –Increased vegetation clearance and soil erosion is likely to occur in the vicinity of program sites during the construction of the water harvesting, storage and delivery infrastructure
3. Increased siltation of the aquatic habitats- Some of the excavated sediments from the sub-project sites and the construction spoils emanating from excess excavated material and construction debris are likely to increase siltation of the nearby aquatic habitats associated with nearby rivers& streams wetlands and other sensitive ecological zones.
4. Increased noise levels- Noise levels are likely to increase in the program area during the construction of the water infrastructure due to the use of

heavy machinery in construction activities and operations at the quarries, borrow pits and crushing plants.

5. Increased accidents and occupational hazards- mainly due construction activities for the water harvesting, storage and delivery systems that will involve use of machinery and transportation of materials. This is likely to result in a higher risk of accidents and occupational hazards occurring in the area of operation.
6. Dust pollution– Program activities have the potential to generate high levels of dust in the program area especially where construction is taking place. In addition, activities taking place in the quarries, borrow pits and crushing plant sites have great potential to generate high quantities of dust thus creating a hostile environment and a health hazard to the workers and the affected local community
7. Ponding- The program activities may lead to creation of stagnant water bodies in quarries, borrow pits and depressions created during the construction works. The resultant stagnant water bodies are likely to be suitable habitats for the breeding of mosquitoes and snails that are disease vectors for malaria and bilharzias respectively.
8. Gaseous emissions- Pollution through gaseous emissions in the program area will emanate from exhaust pipes for vehicles and machinery used in the construction works.
9. Strain on social services -*Influx of workers for construction activities may put pressure on social services in the areas though temporarily including hospitals, housing among others*
10. Increased incidences of diseases- The influx of workers with specialized skills to work on the infrastructure projects is likely to increase the incidences of diseases in the program area especially sexually transmitted diseases including HIV/AIDS among the program workers and local communities.

11. Use of agro-chemicals may result in soil and water contamination.
12. Potential conflicts over water use especially amongst pastoral and host communities can arise especially where those with large herds tend to dominate the small herd owners;
13. Maintenance of some of the infrastructures such as dams will generate dredge materials whose disposal can pose environmental and public health challenges;
14. Generation of cut to spoil materials whose transportation and disposal will require proper management as well as other solid waste during construction and operation of the planned facilities;
15. Abstraction of substantial quantities of water from the water bodies especially for irrigation can bring about hydrological impacts on the main water bodies.

6.3 Enhancement and Mitigation Measures

In order to avoid or minimize negative impacts associated with activities to be undertaken the Project, mitigation measures must be implemented as well as enhancement measures for positive impacts. These measures must be included as part of each subproject ESMP and will be budgeted for in the Technical Specifications of each subproject. A set of monitoring indicators will be used to verify compliance with local and international standards and to identify corrective actions. The proposed enhancement measures for positive impacts and mitigation measures for negative impacts anticipated from the implementation of the DRESS-EA project are summarized in the project ESMP below:

7 Environment and social Management Plan (ESMP)

The management of Environment and social impacts during project implementation of the DRESS-EA Project shall be guided by an Environment and social management plan **(ESMP)** as outlined below;

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
Positive impacts and their enhancement measures						
Provision of timely early warning information to farmers	Ensure the generated information is disseminated widely using all possible channels	NMA,MAAIF	Karamoja Region	Better activity planning and timing by farmers and pastoralists-reduced losses	After rehabilitation of weather stations	NMA.DAO,DEO,DWRM
Provision of safe drinking water and improved community health	Ensure the most vulnerable areas are given priority in allocation of the Water infrastructure	DWRM/DWRD	Selected areas within Rupa Sub-county	Improved water availability and quality	After construction of the Facilities	Rural Water Team and Environment Officer
Increased amount of water available for agricultural and livestock production and mini-irrigation systems	Ensure the most vulnerable areas are given priority in allocation of the Water infrastructure	DWRM/DWRD	Selected areas within Rupa Sub-county	Improved availability of water for production	After construction of the Facilities	MAAIF and Water for production team

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
Increase in employment opportunities	Give preference for employment opportunities to local communities including women	DWRM, Project Managers and Contractors and District officials	Selected sites within Rupa Sub-county	No of Local people employed by the sub-projects		
Increase in Forest cover will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels	Engage as many farmers as possible through trainings and provision of free seedlings for planting	DFOs and Project staff	Selected sub-project sites	Area planted	After establishment	DFOs,DEOs
Enhancement organizational, financial and technical capacities of communities in the catchment	Capacity building and training in drought adaptation actions, planning and Financial management should cover as many farmers as possible	Project Manager, contractor, District Technical staff	Rupa Sub-county	Rate of adoption and the success of project activities	During and after project implementation	NEMA,DEOs Contractors

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
Reduction of pollution levels in the existing, rivers streams and other water bodies	Adopt an integrated catchment management approach	Directorate of Water Resources Management and District Natural Resources Department	Lokerere catchment	Improved water quality in Reduction in water-borne diseases in the proposed project area	During and after project implementation	NEMA, DEOs, DAOs, WOs
Improved knowledge and skills in crop and livestock production	Training of agricultural institution's personnel on modern agricultural practices Availability of competent agricultural expertise staff will contribute food security and consequently livelihood Engage communities and other beneficiaries on modern agricultural practices to improve	DAO, DVO, Project management	Selected institutions and selected project sites	No of extension staff trained	During project implantation	DAO, DVO, Project management

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	productivity					
Improved crop yields	Provision of water in required amount	DAO and farmers	Project area	Yields per ha of crop commodities	During and after the project	DEO, DAO, Environmentalist
Increased Livestock productivity	Improve animal health and productivity	DVO and pastoralists	Project area	Number of marketable livestock % increase in Milk production	During and after the project	DEO, DVO, Environmentalist
Negative impacts and their mitigation measures						
Loss of habitat and disturbance to flora and fauna	Discourage any wanton destruction of vegetation and habitats beyond the designed program works.	DWRM, Contractors Communities	In the vicinity and on of project sites where biodiversity has been disturbed or destroyed	Number of key trees left intact. No. of tree nurseries established and seedlings planted in the disturbed areas No of disturbed sites rehabilitated.	During construction and operation stages	NEMA, Resident Engineer, Environmental and Social Experts DEOs

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
Increased soil erosion and siltation	Where applicable install silt traps to reduce sediment load directly entering riverine and lacustrine environments. Carry out terracing and landscaping of the disturbed sites as appropriate Plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found appropriate.	DWRM, Contractors	At disturbed sites where there are cuts and fills especially around quarries borrow pits and exposed slopes.	Number of silt traps installed Number of sites landscaped Levels of turbidity recorded in the receiving waters	During the and after construction phases	NEMA, Resident Engineer, Environmental and Social Experts DEOs
Increase in dust levels	Limit levels of dust through good practice such as watering of access routes, construction	DWRM, Contractors	In the vicinity of construction sites, at the quarries and borrow pit sites, crushing plants and other sites		During construction stage	NEMA, Resident Engineer, Environmental and Social Experts DEOs

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	sites, and other disturbed sites Cover lorries transporting construction materials. Provide workers with appropriate dust protective gear including masks and overalls.		where Project works are taking place			
Increase in noise levels	Selection of appropriate machinery and regular servicing of machinery and vehicles. Use of protective hearing devices such as ear plugs and ear muffs among workers when	DWRM, Contractors	In areas where project activities are taking place.	Type of machinery and vehicles purchased for the project Complaints from local residents Noise levels recorded Number and type of protective	During the construction and operation stages.	NEMA,Resident Engineer, Environmental and Social Experts DEOs

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	noise levels exceed 80 dBA for 8 hours			hearing devices dispensed to workers		
Increase in gaseous emissions	Reduce gaseous emissions by selection of appropriate machinery and regular servicing of vehicles. Provide workers with appropriate protective gear including masks to cut down on gaseous emissions inhaled.	DWRM, Contractor	at the sites where program works are taking place.		During construction and operation stages.	Complaints from workers at project sites and local Levels of nitrogen and sulphur oxides produced Carbon monoxide produced
Increase in accidents and occupational hazards	Design and implement safety measures and emergency plans to contain	DWRM, Contractors	Selected sub-project sites	Number of complaints from workers and local community Number of traffic	During construction and operation stages of the water infrastructure and weather stations	NEMA, Resident Engineer, Environmental and Social Experts DEOs

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	accidents risks Provide workers with protective clothing (nose and mouth masks, ear muffs, overalls, industrial boots and gloves) and helmets as applicable			accidents Number and type of protective clothing and gear provided to workers		
Increased ponding conditions	Make changes at the design stage to address overall surface water drainage system in affected program sites Improve impeded drainage through landscaping and filling in the created	DWRM Contractor	In all the proposed sub-project sites	Copies of sensitive designs Number of drains and depressions rehabilitated Malaria incidences in the project sites	During construction stage.	NEMA, Resident Engineer, Environmental and Social Experts DEOs

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	depressions.					
Increased incidences of diseases (such as HIV/AIDS, Malaria and Bilharzia)	Raise awareness and support mechanisms to prevent and control spread of HIV/AIDS among the program workers and local communities. Implement disease awareness and and management programme for Malaria and Bilharzia	Directorate of Water Resources Management Ministry of Health, NGOs.	In all the proposed project sites	Incidences of STDs among workers and local community Number of cases treated Number of condoms dispensed to workers and local community Number of meetings held to raise awareness on HIV/AIDS, Malaria and Bilharzia and other water related diseases	Before the commencement of project activities and throughout the project cycle	DWRM. District Officials National AIDS Council Environmental Expert and Social Experts
Loss of habitat and disturbance to flora and fauna	Discourage any wanton destruction of vegetation		In all the proposed sub-project sites	In the vicinity and on of project sites where		

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	and habitats beyond the designed program works. Restore lost biodiversity on the disturbed area through planting of appropriate grasses, shrubs and trees.			biodiversity has been disturbed or destroyed.		
The use of chemicals may cause air, soil, and water pollution	Regular training on handling, storage and disposal of agro-chemicals	DAO, and Farmers	In all the proposed sub-project sites	Number of Extension staff, farmers and contractual laborers trained on chemicals handling No. of water and soil samples collected for testing	During and after the project	DAO.DEO Environmental expert
Possibilities of land degradation as a	Adopt conservation	DAO, and	In all the proposed sub-	Number of small-scale	During and after	DAO.DEO

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
result of agricultural activities	agriculture practices	Farmers	project sites	farmers adopted CA practices assessed	the project	Environmental expert
Over abstraction of water may damage the ecosystem	Irrigation system installed and fully monitored Irrigation schedule controlled	DWRM,DAO, and Farmers	In all the proposed sub-project sites	Number of Irrigation system properly maintained Quantity of water used for irrigation	During and after the project	DAO.DEO Environmental expert, Hydrologist
Wastes, regardless of the nature, pose health risk to workers.	Workers will be trained on safety management of wastes and first aid measures to take depending on the injury caused by each type of waste. PPE will be provided during handling wastes.	DWRM, Contractor	In all the proposed sub-project sites	Presence of clearly labelled warning signs. Fully equipped first aid kits	Continuous during and after construction phase	NEMA,DEO Environmental Expert

Environmental/Social impact	Enhancement /migration measures	Responsibility for implementation	Site for implementation	Monitoring Indicators	Implementation schedule	Responsibility for monitoring
	Wastes such as small stones, metal, empty cans will be collected and placed in designated localities so as to prevent littering. Signs showing hazardous wastes will be placed, in areas in which hazardous wastes are located before disposal.					

8 GRIEVANCE MECHANISM

In order to ensure transparency and accountability, a grievance redress mechanism (GRM) shall be established by the Project Support Team in line with the guidance provided in this ESMF. The GRM shall have a clear set of goals and objectives and a well-defined scope for its interventions, especially geographical area coverage to ensure its accessibility and effectiveness. A set of procedures for receiving, recording, and handling complaints shall be available in the GRM. This will be managed by a National Grievance Redress Committee (GRC) at Country level in each of the four countries consisting of a DWRM Chair, the DRESS-EA Project Coordinator, the assigned Sociologist from MWE, the Project's Environmental Focal Point, the chair of the Local community implementation committee, a member of a recognized non-government organization, and a community leader. The GRC members should be qualified, experienced, and competent personnel who can win the respect and confidence of the affected communities. GRCs shall also be established at District and Lower Local Government Levels as appropriate. For easy accessibility, GRCs shall also be formed at or closer to project implementation sites, especially for Component 1 and Component 3 with considerable infrastructure developments. Grievances shall be first reported and handled at the lowest level or project site, and referred to the next level if not resolved.

The GRM shall include procedures for:

- recording, registering, and sorting grievances;
- conducting an initial assessment of grievances;
- referring grievances to appropriate units or persons;
- determining the resolution process;
- making decisions, including parameters and standards for accurate and consistent decision making;
- directing relevant agencies responsible for implementing decisions;
- notifying complainants and other affected parties of eligibility, the resolution process, and outcomes;
- tracking, monitoring, documentation, and evaluation; and

- Grievance Log, that shall summarize all grievances registered, resolution reached, and feedback provided.

Depending on the nature and the severity of the complaint/s, the GRC in consultation with the Complainant, shall identify and decide on an approach for grievance resolution. Where appropriate, complainants shall be given the choice of selecting an affordable approach with which they are comfortable and confident and that is beneficial to them.

In projects with small-scale infrastructure, construction-related complaints can be numerous and managing them is the Contractor's responsibility under its contract with the implementing agency.

The Project Safeguards Staff, Districts DEOs & CDOs, and Contractors shall be responsible for monitoring impacts based on the GRM. Duties would include:

a. Maintaining a database of all complaints related to environmental and social issues and forwarding them to the Supervision Consultants;
b. Assisting the Complainants to submit their environment and social -related complaints directly to the contractor;
c. Maintaining a list of PAPs who are directly or indirectly affected by construction, operations, and maintenance work, and monitoring the implementation of mitigation plans and
d. Consulting the affected PAPs and communities and participating in grievance resolution processes;

9 MONITORING AND ANNUAL REPORTS

9.1 Monitoring and Evaluation

Environmental and social monitoring will be mainstreamed in the overall Monitoring and Evaluation (M&E) system of the DRESS-EA Project. Environmental monitoring of sub-projects will be undertaken at different levels. MWE In-house Environmental / Social Experts will be responsible for day-day supervision and monitoring of implementation of environmental and social safeguards and preparing routine Reports. Also trained persons at lower local government level will, depending on the scale or scope of the projects, undertake the monitoring exercises in sequences and frequencies stipulated in the Project Implementation Schedule including where appropriate a Maintenance Schedule. The regulatory Agency NEMA will mainly carry out "spot checks" to ensure that implementation of mitigation measures is done satisfactorily.

Supervision arrangements for the ESMP shall summarize key areas on which supervision will focus—critical risks to implementation of the ESMP, how such risks will be monitored during implementation and agreements reached with the key stakeholders including contractors.

Supervision of the ESMP, along with other aspects of the project, covers monitoring, evaluative review and reporting and is designed to**:**

- determine whether the project is being carried out in conformity with environmental and social safeguards and legal agreements;
- identify problems as they arise during implementation and recommend means to resolve them;
- recommend changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- Identify the key risks to project sustainability and recommend appropriate risk management strategies

It is vital that an appropriate environmental supervision plan is developed with clear objectives to ensure the successful implementation of this ESMP.

9.2 Annual Reviews and Periodic Audits

An independently commissioned environmental and social audit will be carried out periodically (between 12 – 36 months) depending on the level of implementation of the project and sub-projects. The audit team will report to NEMA, the MWE, GWPEA.OSS and the Adaptation Fund, who will lead the implementation of any corrective

measures that are required. An audit is necessary to ensure (i) that the ESMF process is being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

10 TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION:

10.1 Capacity Building and Training

The goal of the DRESS-EA project is to the maximum extent possible utilize existing institutional structures and capacity within the MWE and in particular the DWRM and the Directorate of Environmental Affairs (DEA) that is responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources(DEA) to implement the Project. In order to successfully implement the guidelines and recommendations in the ESMF, it is important to ensure that target groups and stakeholders who play a role in implementing the ESMF are provided with the appropriate and continuous Environmental and Social Safeguards capacity development.

10.2 Institutional Strengthening

Under the DRESS-EA implementation arrangements, a Focal Point for the overall ESMF Coordination shall be designated from the mainstream staff of DEA and will be responsible for coordinating activities of the project. Given the fact that mainstream staff are usually overstretched by many projects and their substantive roles, the project shall hire Environmental Specialist and a Social Development Specialist to undertake day to day coordination, management, implementation and supervision of ESMF requirements. These Specialists shall be based at the Project Implementation Unit at MWE. Hence, the Environmental Coordinator and project Environment and Social Safeguards staff will manage and monitor the implementation of the requirements of the ESMF and liaise with the WMZ Focal Point Officers and other stakeholders (national, regional and district) on environmental and social issues related to the DRESS-EA.

Therefore, a special initiative is needed to develop the capacity of the Local Government staff, at District and Sub-county levels, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities to support implementation of the Project including social and environmental aspects.

However, capacities in the Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities are still low with regard to environmental and social management practices. Therefore, a special initiative is needed to develop the capacity of these key stakeholders to support implementation of the Project including social and environmental aspects.

a) Developing Capacity on the ESMF Process

The following institutions will need environmental training to ensure effective implementation of the ESMF:

- The main implementing agencies, -Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities
- Professionals involved in the DRESS-EA at the Ministry of Water and Environment- Directorate of Water Resources Management
- Global Water partnership Eastern Africa –staff involved in project implementation

It is recommended to organize, prior to the kick-off, a three-day workshop where the ESMF will be presented and discussed.

b) Developing Capacity in Environmental Screening

Environmental screening is also clearly a domain where capacity of future program implementers remains low and also needs to be built. This will target training of trainers, Technical staffs including, Social Scientists, Environmental officers, Forestry officers, Veterinary officer, Staff from meteorology, Engineers, and technicians as well as staff from construction supervision consultants and contractors,

It is recommended to organize, prior to the Project kick-off, a workshop where this ESMF will be presented and discussed. This workshop should also aim at reviewing and refining some aspects of the process, particularly the forms, toolkits and guidelines proposed in this ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the Project and sub-projects. This workshop will be facilitated by MWE-DEA, NEMA and District Environment Officers (DEO) with support from OSS Environmental and Social specialists. The training will try to address the following topics:

- Review of the Ugandan environmental policies, laws, regulatory and administrative frameworks
- Review of the Adaptation Fund and OSS Environment and social policies
- ESMP and environmental guidelines applicable to construction contractors,
- Environmental and social screening process (with one practical exercise on a real site)
- Assignment of environmental categories
- Carrying out of the environmental work as discussed in the ESMF
- Review and clearance of the screening results and separate ESIA reports,
- Preparation of terms of reference for carrying out ESIA/ESMPs
- How to monitor safeguard implementation
- Water quality management

- Waste management issues (safe disposal of domestic wastes, construction wastes etc.)
- Impacts and monitoring of groundwater and surface water
- Social impacts as per the ESMF,
- compensation for minor income/property loses),
- The benefits of public consultation,
- Areas of the DRESS-EA sub-projects where public consultation is required
- Public consultation process in view of the ESMF requirements,
- Case studies
- Discussion of, and amendments to, the environmental screening form.
- Awareness of the ESMF Process

11 Institutional Arrangement and Implementation Responsibilities

The capacity building activities outlined above are to support the enhancement and implementation of the project's environmental and social management plan. The Implementing Authorities will oversee the implementation of all mitigation measures, especially those integrated in the program design. The District Local Government councils and sub county local administrations will also make all necessary arrangements at all levels in the identification of sites and their acquisition. At this stage, a broader view of Environmental and Social Management Plan (ESMP) for the proposed program has been developed, but ESMP for each intervention will be formulated during the detail design for each sub-project. Main institutions and officers that will be involved in the implementation of proposed ESMP, include the Ministry of Water & Environment represented by the Directorates of Water Resources Management and Environmental Affairs, Project team, District Local Government. Contractor, Resident Engineer, Environment, Agriculture, Veterinary and Water officers.

11.1 Main Institutions and Officers that will be involved in the Implementation of the ESMF

Institution	Mandate
National Environment Management Authority (NEMA)	Oversee, coordinate and supervise environmental management. NEMA's overall goal is to promote sound environmental management and prudent use of natural resources in Uganda.
Ministry of Water and Environment (MWE)	The Ministry, through its Directorate of Water Resources Management (DWRM) and Environmental Affairs will monitor all activities. Capacity building will include full time specialists in social and environmental assessments review and monitoring and evaluation. They are also responsible to earmark budget and properly implement mitigation measures proposed by the general ESMP, ESIA studies and other relevant documents.
Ministry of Gender, Labour and Social Development (MGLSD)	The objectives of the MGLSD are to minimize Occupational Accidents, Diseases and Injuries. promote good Health of the Worker at the Workplace promote good Working Conditions, promote construction of Safe and Healthy workplaces, promote awareness of Occupational Safety and Health among Workers, Employers and the General Public through Training. The ministry, through its department of Occupational Health and Safety (OHS) will be responsible for registering the workplace and monitoring of conditions under which employees on the project are subjected.
Local Government Administration Structures	District and Local Council Administrations (LC1-5) are stakeholders in the Project and had input into the EIA and ESMP process and will be involved in implementation of the project as well as subsequent monitoring. They will also take part in grievance mechanisms and sensitization of

Institution	Mandate
	communities especially HIV/AIDS aspect.
District Local Governments represented by District Water Officer, ,Agriculture, CDOs and Veterinary Officers	The Ministry if Water & Environment/ DWRM in collaboration with the respective Local Governments will be primarily responsible for program planning, management and overall coordination within the District and Sub-county. The assigned environmental and social personnel will also be responsible in conducting environmental and social screening, monitoring and following up of the implementation of the proposed mitigation measures.
District Environment Officer (DEOs)	DEOs are expected to review and approve ESIA documents, and oversee the Environment and social aspects of the Project. They will carry out spot checks on programs to confirm that environmental and social screening and environmental management plans are properly done. They will also advise the implementers including contractors in regard to impacts beyond the generic issues, determining if the mitigation measures are acceptable or program redesign is required.
Catchment Management committees	Catchment management committees will act on behalf of the community in planning and managing of natural resources management activities and water resources management activities within the catchment. Each Community Water and Sanitation Committee will be responsible for facilitating participatory planning and ensuring that implementation of mitigation measures are carried out.
Beneficiary communities	Being the primary beneficiaries of the project, the community will be made to participate fully in all aspects of the program including project identification, preparation, implementation, operation and maintenance.

The following table shows the proposed share of responsibilities between the different organizations involved in the implementation of the DRESS-EA implementation of the environmental management process.

Table 3: Proposed share of responsibilities between the different organizations involved in the implementation of the DRESS-EA

Implementing Agencies	• Contract consultants for ESIAs study on ToRs prepared for each programs and reviewed by the relevant institutions. • Designate focal staffs that will take responsibility for environmental screening and generally for environmental management and get trained accordingly- this staff will ultimately conduct Environmental and Social Screening and supervise the implementation of mitigation measures proposed by ESS, ESIAs, ESM and by the Guidelines for Construction Contractors • Designate technical supervisor of works, who, in the absence of the environmental focal staff mentioned above, will supervise the

	implementation of mitigation measures • Take responsibility for and supervise the implementation of environmental mitigation measures at construction and operation phases • Take responsibility for and supervise the implementation of monitoring measures • Provide an annual environmental monitoring report to the review of the Ministry of Water and Environment
Construction contractors	• Implement the ESMP
Construction supervision consultants	• Take responsibility for and supervise the implementation of the ESMP
ESIA Consultants	• Develop ESIAs where required
DEO's	• Participate in the provisions of training for regional, District and community experts • Participate in the finalization of the screening forms based on this ESMF • Supervise the development of ESIAs by consultants where required, review Terms of Reference, draft ESIAs and participate in public consultations • Supervise the monitoring of environmental mitigations implemented by construction contractors • Supervise the implementation of this ESMF in the project
Ministry of Water and Environment	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs • Facilitate and provide training f other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and monitoring processes
GWPEA	• Supervise and monitor the overall implementation of ESMF • As required, prepared the ESMF • Review and clear TORs and ESIAs • Facilitate and provide training for and other institutions' environmental and social specialists. • Provide assistance during environmental and social screening and

	monitoring processes
OSS	• Review the draft ESMF • Review ESIAs • Monitor the overall implementation of ESMF, including the review of annual environmental reports provided by the MWE

12 EMP BUDGET

The ESMP for each sub-project will outline the appropriate budget required to implement measures for mitigation and monitoring. It will also indicate the costs of extra training and capacity building required. Costs should be calculated based on estimates provided by Contractors or implementing agencies for any mitigation measures required during implementation of agreed upon activities including civil works. This should include the costs of mitigation measures as well as monitoring.

13 CONCLUSION

This ESMF has been developed through a widely consultative process and basing on experiences and lessons learnt from similar projects. It will be helpful in addressing environmental and social issues that apply to or might be triggered by the planned project activities of the DRESS-EA Project. Adverse Impacts of the project will include, Increased incidences of diseases, Increased accidents and occupational hazards, Disturbance in socio-economic activities, Increased soil erosion, Increased siltation of the aquatic habitats, Disturbance of floral and faunal communities, Increased noise levels, Gaseous emissions among others.

Sub-Project-specific Environmental and Social Management Plans (ESMPs) shall be developed in a manner that complies with the project ESMF, Adaptation Finds Environment and Social Policy and NEMA guidelines for assessing and managing environmental and social risks to address the above projected adverse impacts but also to enhance the positive benefits of this project.

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OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

REPORT ON REGIONAL AND NATIONAL CONSULTATIVE WORKSHOPS

10th February – I3th March 2019

APRIL 2019

Contents

Background and context

The Intergovernmental Authority on Development (IGAD) region stretches over an area of 5.2 million km^2 and has a population of about 200 million people. The region comprises of eight countries including Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. A large part (about 70%) of the region's land area is Arid and Semi-Arid Lands (ASALs) and receive less than 600 mm of annual rainfall (IGAD 2013)[2]. The area is a majorly water scarce area with minimal perennial river flows, making groundwater be the main source of water for the majority of the people in the horn of Africa. It is estimated that more than 80% of the inhabitant communities live in rural areas, with less than 20% having access to improved water supplies. This situation demands address. The situation is further complicated significantly by illicit activities such as deforestation and poor agricultural practices that lead to reduced water retention capacities, surface runoffs and soil cover losses. The dominant livelihood of the people in the region is agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems. The rural communities, who are mainly small-scale farmers and pastoralists, are highly vulnerable to droughts. The causes for vulnerability in the region include low adaptive capacity by communities to droughts, inadequate innovative adaptation actions to droughts, poor early warning systems and inadequate knowledge and skills in drought management. The impacts of droughts in the region have been manifested in form of acute water scarcity, significantly reduced precipitation levels and drying up of rivers. The effects of droughts have had destructive impacts on the region's economy, ecosystems and community livelihoods. Smallholder farmers and pastoralists in Djibouti, Kenya, Sudan and Uganda have been most affected due to their limited coping mechanisms. Global Water Partnership Eastern Africa (GWPEA) is collaborating with IGAD and governments of these countries through the Integrated Drought Management Programme (IDMP) and the Water, Climate and Development Programme (WACDEP) to enhance drought resilience in the region.

The proposed project entitled ***"Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region-DRESS-EA"*** will build on the existing initiatives and establish new mechanisms to address drought related challenges in the region through facilitating investments in early warning systems, building the capacity of targeted stakeholders, supporting innovative adaptation actions and enhancing knowledge management and skills.

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks, mainly those related to drought, through the establishment of appropriate early warning systems and the implementation of drought adaptation actions. More specifically, this project is intended to, promote investments in drought early warning systems (EWS) and improve the existing ones, strengthen and improve the capacity of key stakeholders in drought risks management at regional, national and local levels; Support communities to undertake innovative adaptation actions that reinforce their resilience to drought and enhance knowledge management and information sharing on drought resilience at the considered levels.

To address the drought challenges, the DRESS-EA project, has been developed by partners in the IGAD region. The project will be implemented by Sahara and Sahel Observatory (OSS), which is an accredited Regional Implementing Entity for the Adaptation Fund. Project execution will be done in partnership with GWPEA as a Regional Executing Entity in partnership with focal countries including Djibouti, Kenya, Sudan and Uganda. The four countries have fully

endorsed the project due to current challenges in their countries and have expressed support to undertake the proposed interventions. The concept for the project was endorsed by the Adaptation Fund. After endorsing the concept, the Adaptation Fund a full proposal is required. Consultative workshops were organized at national level in the respective countries (Figure 1) and a regional workshop was organized bringing country participants together for the final in puts into the proposal prior to submission to the Adaptation Fund.

Figure 1: Map showing the selected focal countries for the Project indicated by arrows

A one day regional workshop was organized by OSS and GWPEA at the Lake Victoria Hotel Entebbe, Uganda on 15th March 2019. The aim of the regional consultative workshop was present the status of proposal development to partners, gather additional input from key stakeholders especially on the appropriate interventions that are most critical in the targeted countries.

The workshop was carried out in an interactive manner- which included plenary discussions and group work based on focal countries as well as presentations of workshop objectives, project overview, Project objectives, presentation of the draft proposal, The impacts of drought felt by the countries, mitigation measures and potential adaptation mechanisms were also discussed. Additional information on potential activities and institutional arrangements and project sites were agreed up. Finally, a road map/wayforward binding to the partners to successful

submission of the proposal was developed and agreed up. OSS offered financial and technical support for the workshop.

Figure 2: *Presentation of the draft proposal*

Participants in the consultative workshop

Participants were drawn from the focal countries that include Djibouti, Kenya, Sudan and Uganda. The participants included:

- Representatives of national partner institutions for the executing countries: These are:
    - Directorate of Rural Hydraulics (DRH), Djibouti
    - Ministry of Environment and Forestry (MWEF), Kenya
    - Ministry of Water Resources, Irrigation and Electricity (MWRIE)
    - Ministry of Water and Environment (MWE)
- Representatives of GWPEA
- Representatives of the OSS Executive Secretariat
- Members from the Uganda Water Partnership
- One representative of NGOs with vast experience in community engagement for drought adaptation

Figure 3: The participants that attended the regional consultative workshop on 15th March 2019.

WORKSHOP PROCEEDINGS

The workshop ***was*** facilitated by the Lead Consultant – Dr. Lawrence Orikiriza. The Facilitator welcomed participants to the consultative workshop and provided them with an amended workshop agenda. The agenda was adopted without further amendments. He requested them to register for the workshop. He thereafter invited representatives from GWPEA Regional office, the OSS Secretariat and the host, Ministry of Water and Environment (MWE) Uganda to take front seats for the official opening of the regional workshop.

Welcome Remarks –GWPEA – Dr. Ahmed Khalid

The GWPEA representative thanked everyone for coming to the workshop and specially welcomed them to Entebbe –Lake Victoria shores in Uganda. He thanked the delegates from other countries, MWE and OSS the project implementing Agency for having spared time to come and contribute to the development of the DRESS-EA project. He further thanked Dr. Orikiriza Lawrence and team for developing the project proposal to level it was at. He informed the meeting about the main purpose of the workshop being to support the Consultancy team with more data and information for the proposal development process. It was also a buildup on the country level consultations that had just been concluded. He requested participants to refine the project interventions so that they applicable on ground in the proposed project sites. He informed the meeting that the consultative process will continue with the team and the focal institutions selected in the target countries. He urged participants to provide maximum

cooperation to develop a successful project proposal. He invited Mr. Nabil Benhantra as the OSS Representative to give his opening remarks.

Welcome Remarks by OSS –Mr. Nabil Benkhantra

The OSS representative welcomed participants to the workshop and encouraged them to work together as a family to prepare the project concept. He was happy to participate in the regional workshop which was a crucial step in the development of a successful proposal. He had participated in country level workshops or Uganda and Djibouti and he was happy to see representatives from all the countries as well as a representative from IGAD. He pledged OSS support to helping countries to access funds from OSS and Adaptation Fund. He thanked members for their efforts in generating data and information and urged them to continue helping the consultancy team in this regard till full proposal and submission that is in within month. He urged members to assist in getting the required documents including endorsement letters and ESMF approval letters.

Welcome Remarks by MWE- Mr. Louis Mugisha

The representative of the Ministry of Water and Environment, Uganda, welcomed everyone to Uganda including the OSS team and the IGAD representative. He informed the meeting that the Ministry was busy involved in the activities of the Water and Environment week at regional and National levels. Thanked the project proponents for having selected Karamoja region as it is in dire need of the proposed interventions. Area Members of Parliament (MPs) and other stakeholders are asking what can be done to improve the situation therein. He noted that since the concept stage the proposal has gone a long way and expressed confidence that with GWPEA and OSS involved in the process it would eventually be approved. He noted that in Uganda catchment management plans have been developed but there is limited funding for their implementation and that this was an opportunity to attract funds for their implementation. He also emphasized the need to look beyond the proposal and to be honest to the poor people, the teams met in the field and the responsibility to help them. He declared the workshop opened.

Introductions and Expectations

The participants were called upon to introduce themselves to one another highlighting their expectations from the workshop. In summary the participants expected to:

- complete project proposal
- know how Issues of the project and OSS will be coordinated
- Share what each country is prepared to do
- address the resilience of communities which is key to communities
- Share information at regional level
- Know the inputs captured from the Local people
- Make sure that interests of each country are taken care of
- Know the role of social science in the project and be emphasized
- Know the benefit from the Local knowledge
- How to increase resilience which is at the heart of the people we work for
- See how the interests of target countries are catered for in the proposal
- Meet the objectives of the workshop to provide information for the completion of the proposal
- Generate focused component interventions
- Move the proposal development process forward
- Generate enough information to fill the gaps
- Bring out clearly the regional aspect of the project
- Emphasize the need for the participants to interact with the consultants and be able to fill the GAPs.

Objectives of the workshop

The workshop objectives were presented by Mr. Gerald Kairu from GWPEA. The objectives were to:

i. Gather additional input and needs of project stakeholders to be included in the full proposal
ii. Inform project partners about the status of the proposal,
iii. Validate the priority intervention areas of the project;
iv. Gather the needs and expectations expressed by the project stakeholders;
v. Validate interventions following national level consultations that respond to the specificities of the intervention areas and the needs of users
vi. Update draft proposal for submission to Adaptation Fund

Key outcomes of the workshop

The expected outcomes of the workshop presented were

a) Updated proposal
b) Project priority intervention areas and validated;
c) Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the region harmonized
d) New activities and specific intervention areas incorporated
e) Integration of activity ideas, recommendations and comments from stakeholders into the draft proposal.

Overview of the Project

Mr. Gerald Kairu from GWPEA presented an overview of the proposed project. He said that GWPEA has been implementing a project on integrated drought management in the Horn of Africa since 2014. It was through assessments done by this project that GWPEA discovered that pastoralists and small holder farmers are the most vulnerable to the impacts of drought. This revelation subsequently informed the development of concept on "*Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region*"- Project that is currently being developed into a full proposal after approval by the Adaptation Fund.

He highlighted the issues that led to the development of the project including

- Severe water constraints and prolonged droughts in the IGAD member states
- Inadequate rainfall in most of the region -60-70% of the region receive less than 600mm of rainfall annually
- Illicit activities e.g. deforestation and poor agricultural practices
- Dominant livelihood of the people in the region is agriculture, mainly by smallholder farmers and pastoralists or semi pastoralist production systems highly vulnerable to drought impacts
- low adaptive capacity by communities,
- Inadequate innovative adaptation actions to droughts,
- Poor early warning systems and
- Inadequate knowledge and skills in drought management

He informed the participants that the Pre-concept for the proposed project was already endorsed by the Adaptation Fund and only needed to be developed into a full concept. The project will be implemented by OSS and executed by GWPEA in partnership with the following national agencies:

a) **Djibouti**: Directorate of Rural Hydraulics,
b) **Kenya**: Ministry of Environment and Forestry,
c) **Sudan:** Ministry of Water Resources, Irrigation and Electricity
d) **Uganda**: Ministry of Water and Environment.

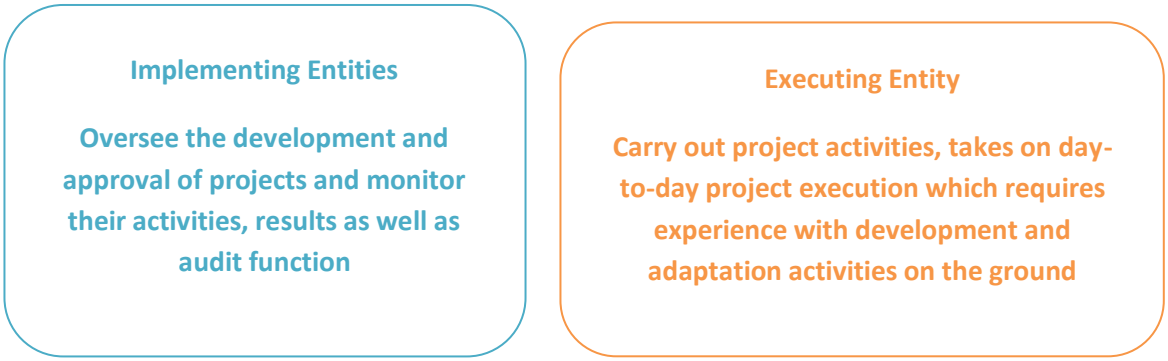
The National Designated Authorities (NDA) in the respective focal countries are;

Djibouti: Ministry of Environment
Kenya: Ministry of Environment and Natural Resources,
Sudan: Higher Council for Environment and Natural Resources
Uganda: Ministry Finance, Planning and Economic Development

Mr. Gerald Kairu emphasized the need for the focal Country representatives that attended the workshop to beginning pursue endorsement letters with urgency as there is limited time left to submit the documents.

The Adaptation Fund and institutional arrangements for DRESS-EA project

Information about the Adaptation Fund was presented by Mrs. Khaoula Jaoui. She said that the Adaptation Fund was established by the United Nations Framework Convention on Climate Change (UNFCCC) to finance concrete climate change adaptation projects and programmes in particularly climate vulnerable developing countries that are also parties to the Kyoto Protocol. It funds projects that reduce vulnerability and increase adaptive capacity to climate change impacts. She further said that:
The Adaptation Fund divides project roles between 'implementing' and 'executing' functions. It is important to distinguish the role of entities:



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Civil society and local community organizations often have relevant knowledge and can serve as EEs for adaptation projects under AF rules

Regarding the institutional arrangements for the project. The following were presented.

Implementing Entity	**Regional Implementing Entity (RIE)**: Observatoire du Sahara et du Sahel (OSS)
Executing Entities	**Regional Coordination:** Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat. **National Project Management Units (NPMUs):** Djibouti: Ministry of Agriculture Water Fisheries and Livestock / Directorate of Rural Hydraulics Kenya: Ministry of Environment and Forestry / Directorate of Climate Change Sudan: Ministry of Water Resources, Irrigation and Electricity / Hydraulics Research Center Uganda: Ministry of Water and Environment / Directorate of Water Resource Management

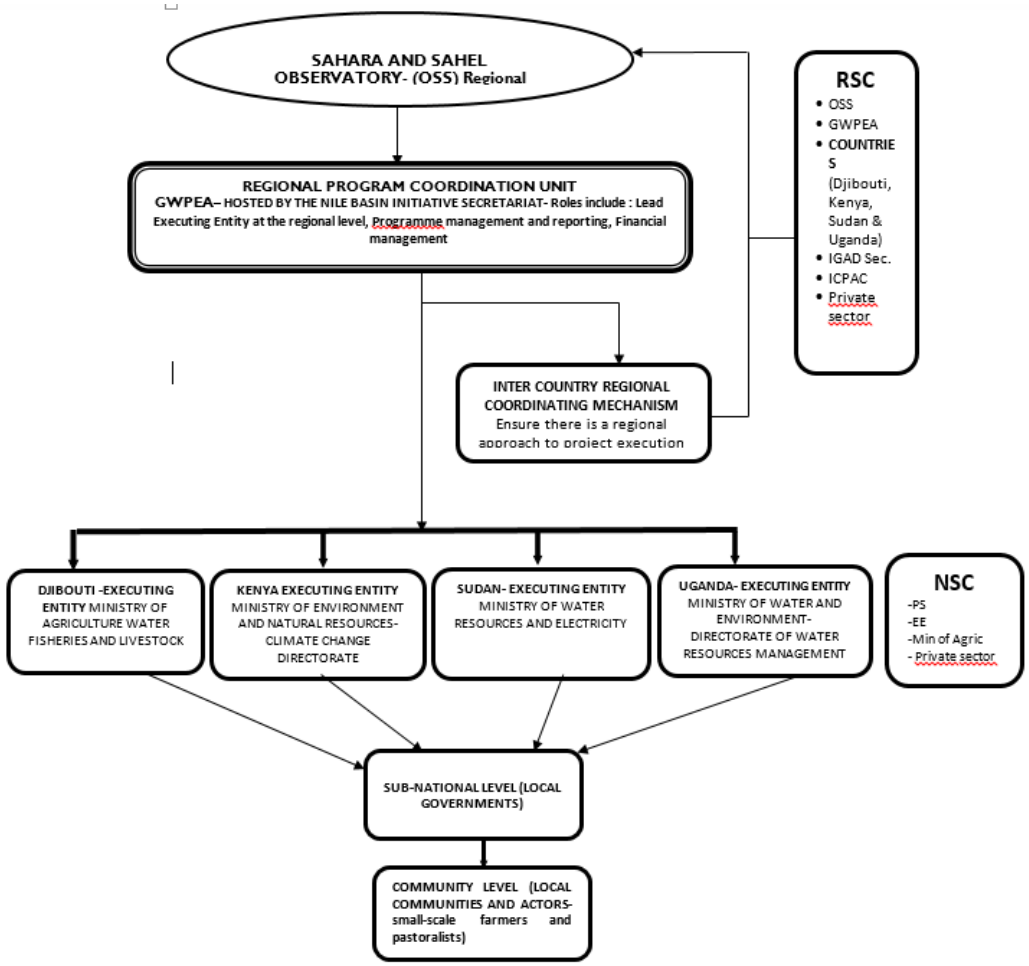

Figure 4: The organogram for the DRESS-EA project.

Mrs. Khaoula Jaqui also highlighted the Adaptation Fund requirements. She emphasized the need for proposals to precisely indicate the following key aspects that are mainly focused on by the reviewers.

- Country eligibility
- Endorsement by the respective Designated Authorities
- Concrete adaptation actions
- Environmental and socio-economic benefits
- Project cost effectiveness
- Consistency with national strategies and plans
- Meeting relevant national technical standards
- Duplication/overlap with other funding sources
- Knowledge management
- Consultations process
- Full adaptation reasoning
- Sustainability of project outcomes
- Adequacy of project management outcomes
- Detailed budget

She endeavored to elaborate on importance and relevance of each aspect and emphasized the specific issues considered while reviewing the proposal. These are outlined in the proceeding table.

Issue	**Comments**
Overview of Adaptation Fund	The goal is to produce 'visible and tangible results' on the ground The Adaptation Fund was established by the United Nations Framework Convention on Climate Change (UNFCCC) to finance concrete climate change adaptation projects and programmes in particularly climate vulnerable developing countries that are also parties to the Kyoto Protocol. It funds projects that reduce vulnerability and increase adaptive capacity to climate change impacts
Roles of implementing and executing entities	The Adaptation Fund divides project roles between 'implementing' and 'executing' functions It is important to distinguish the role of entities : ***Implementing Entities*** Oversee the development and approval of projects and monitor their activities, results as well as audit function ***Executing Entity*** Carry out project activities, takes on day-to-day project execution which requires experience with development and adaptation activities on the ground Civil society and local community organizations often have relevant knowledge and can serve as EEs for adaptation projects under AF rules
The project	➢ The IGAD region:

	➢ Severe water constraints and prolonged droughts in IGAD region ➢ Anomalies in seasonal rainfall and temperature due to CC ➢ Increased frequency and intensity of droughts in the area according to predictions (IPCC) ➢ Rarefaction of natural resources ➢ Conflicts between farmers and pastoralists **Project Title:** Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region **Overall objective:** Increase the **resilience** of smallholder **farmers** and **pastoralists** to **climate change** risks mainly those related to drought, through the establishment of appropriate **early warning systems** and implementation of **drought adaptation actions** in the IGAD region. **Countries:** Djibouti, Kenya, Sudan and Uganda Donor : Adaptation Fund (AF) Requested Amount : 13,079,540 USD Duration: 04 years **Components** • Developing of drought early warning systems (EWS) • Improving capacity of key stakeholders in drought risk management • Innovative adaptation actions reinforcing the resilience to drought • Enhancing knowledge management and information sharing ***Regional Implementing Entity (RIE):*** Observatoire du Sahara et du Sahel (OSS) **Executing Entities** Regional Coordination: Global Water Partnership Eastern Africa (GWPEA) hosted by the Nile Basin Initiative (NBI) secretariat. National Project Management Units (NPMUs): -Djibouti: Ministry of Agriculture Water Fisheries and Livestock / Directorate of Rural Hydraulics -Kenya: Ministry of Environment and Forestry / Directorate of Climate Change -Sudan: Ministry of Water Resources, Irrigation and Electricity / Hydraulics Research Center -Uganda: Ministry of Water and Environment / Directorate of Water Resource Management.
Timelines	• Pre-Concept Note October 2017 • Concept note July 2018 • Full Proposal development ongoing • Regional Workshop 15th March 2019 • Submission to AF 16th April 2019
THE AF REQUIREMENTS	A look at the review criteria •Country(ies) Eligibility –Country(ies) should be party to the Kyoto Protocol –Should be developing country(ies) particularly vulnerable to the adverse effects of climate change (all non-Annex I countries qualify) Endorsement by the government through its Designated Authority Most eligible countries have nominated DA

	• Letter template available under submission materials on AF website • Separate endorsement letter to be submitted for each submission
Concrete adaptation actions	The project / programme supports concrete adaptation actions to assist the country in addressing the adverse effects of climate change and builds in climate change resilience: description of activities • How the activities help with adaptation and resilience • Concrete: visible and tangible results. • Good project design: cohesion and alignment • Linking intervention to climate threat (not BAU, ENV) • Taking non-climatic barriers into account • Full proposal: details on specs, linking to CC scenario • Regional project to include both regional and country perspective/added value
Environmental, socio-economic benefits	The project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, including gender considerations •Who are the beneficiaries, particular reference to vulnerable groups; •Full proposal: whenever possible, quantifying the expected benefits; •Regional project: to demonstrate, whenever possible, how it promotes new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.
Cost-effectiveness	Logical explanation why the proposed scope and approach were selected to the particular adaptation challenge, given all other variables and available financing • Sustainability dimension is important • Full proposal: clear description of alternative options to the proposed measures, in the same sector, geographic region and/or community (typically 1 or 2 declined options) • Quantification in monetary terms not required as a rule • Regional project: should further explain how the regional approach would support cost-effectiveness
Others	• Consistency with national strategies and plans • Meeting relevant national technical standards • Duplication / overlap with other funding sources • Knowledge management • Consultation process • Full cost of adaptation reasoning • Adequacy of project management arrangements • Budget

She concluded her presentation with the status of project development (Figure 5) that had brought the participants together, i.e. to submit the full proposal to Adaptation Fund on April 16th 2019.

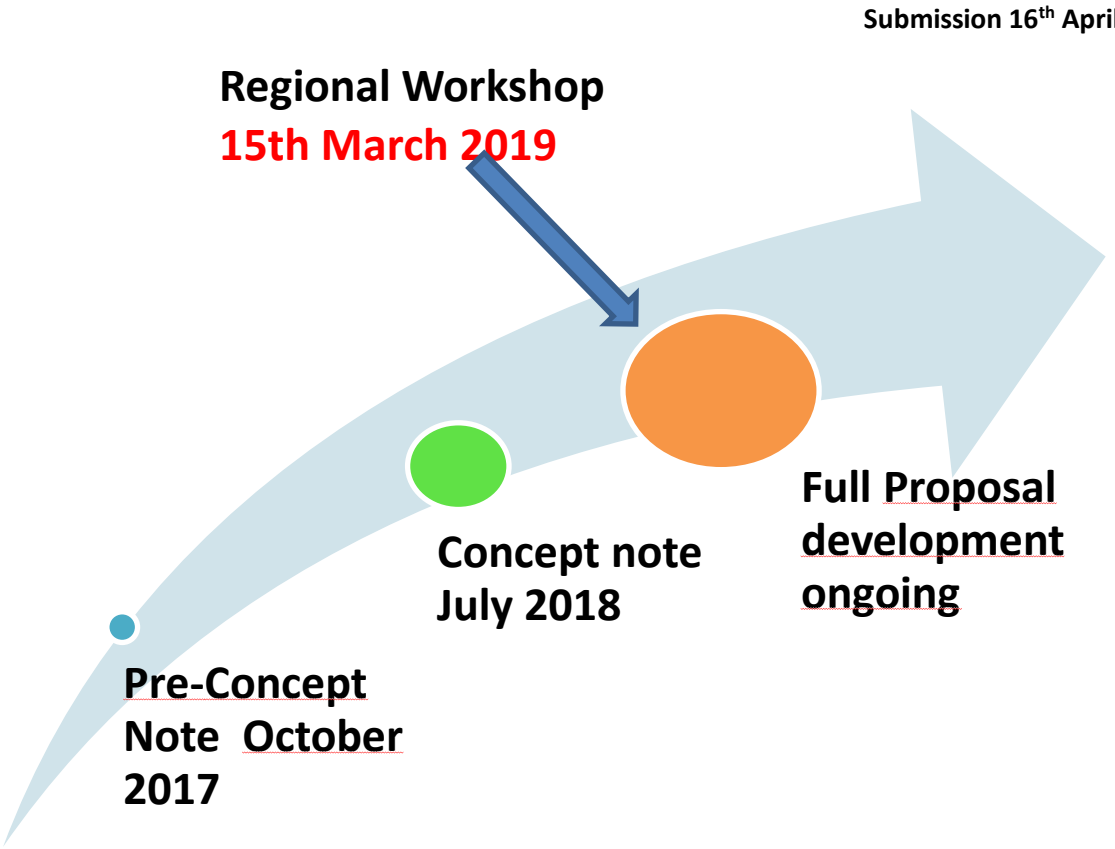

Figure 5: Status of the DRESS-EA proposal development process.

Presentation of Project Draft Proposal

The draft proposal was presented by the Consultant – Dr. Lawrence J.B. Orikiriza. He emphasized that the main purpose of the workshop was to gather information from the focal country teams such that concrete and detailed information regarding the proposed interventions, project sites and answers to the questions raised by the Adaptation Fund while reviewing the concept can be availed for improving the draft full proposal. He highlighted the problem being addressed by the project, objectives, components, outcomes and outputs of the project as well and the entire budget indicating the activities for the respective countries, regional implementing entity and executing entity fees. These are summarized below. .

Problem to be addressed

- The IGAD member states face severe water constraints and prolonged droughts
- Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm of rainfall annually.

- The dominant livelihood of the people in the region is agriculture, mainly dominated by smallholder farmers and pastoralists or semi pastoralist production systems.
- These communities are highly vulnerable to drought risks due to low adaptive capacity by communities to droughts, inadequate innovative adaptation actions to droughts, poor early warning systems and inadequate knowledge and skills in drought management.
- Consequently, there is an urgent need to enhance drought resilience of these vulnerable communities.

Objectives

- Promote investments in drought early warning systems (EWS) and improve the existing ones
- Strengthen and improve the capacity of key stakeholders in drought risk management at regional, national and local levels
- Support communities to undertake innovative adaptation actions that reinforce their resilience to drought
- Enhance knowledge management and information sharing on drought resilience at the considered levels

Project Components and outcomes

- Component 1: Promoting investments in early warning systems and improving on the existing ones (Investments in Early warning)
- Component 2: Strengthening capacities of key stakeholders at regional, national and local levels (Strengthening capacity of stakeholders)
- Component 3: Supporting innovative drought adaptation actions (Drought adaptation actions)
- Component 4: Knowledge management and information sharing (Knowledge management

Guidelines for selecting project areas

The Consultant also highlighted some of the key factors/issues that were considered in selecting the project focal areas. These include but are not limited to:

- High rainfall variability
- High frequency of drought occurrences
- Country priority (e.g. from NAPAs)
- Low income levels of the population/high poverty levels
- High environmental degradation
- Food insecurity
- High dependence on crop farming
- High dependence on livestock farming
- Vulnerable members (women, youth, disabled, elderly) in society (by Gender)
- Potentiality for alternative sources of livelihoods/income
- Potential conflict areas
- Issues of soil water retention
- Alignment and level of contribution to global initiatives e.g. SDGs
- He also stressed the need to furnish the Consultants with more information including socio-economic information relating to all these areas

Group work and Country level presentations

The participants were divided into groups based on the focal countries they represented. Groups were required to deliberate on the issues raised by the Adaptation Fund, answer and present in the plenary. The detailed presentations by the respective countries are indicated in Annexes III, IV, V and VI. The issues raised are as follows.

1. How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive.
2. What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?
3. What are the standard procedures and/or limitations to the flow of funds for project implementation in your country?
4. For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?
5. What are the existing channels for receiving, recording and handling complaints about the project in your country?
6. Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?
7. Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?
8. Any information/idea/input that is vital for project implementation

Key issues and comments raised during the workshop

Issues	Comments/Way forward
Commitment of Participating countries	It was observed that all participating countries had been committed to the development of the proposal
Relevance of the Project	It was noted that the project is good as it addresses the issue of resilience which is the main issue in the IDDRIS
Use of the Name IGAD	It was noted that the project had used IGAD in its title and it was suggested that unless IGAD has a specific role to play in the project the name may need to be changed to Horn of Africa instead The IGAD representative was happy with the project and promised to support it.
Co-financing Mechanisms	This need to crafted properly even to reflect other projects in the region
Ground water utilization Potential	These need to be understood better for proper analysis to be done. Meetings need to be held at specific sites Need to be developed further especially in Djibouti Need to undertake ground water assessment studies
Inclusivity	Everyone should have an opportunity to benefit from the project Specific numbers of women and men benefiting should be spelt out
Grievance Redress Mechanism	Project should have a GRM to handle all issues arising from the project are handled promptly
Role of Country Water partnerships	It was agreed that during GWPEA engages with Country water partnerships at Country and utilize their potential during project implementation

Action plan

At the end of the workshop an action plan in regard to providing the necessary information from the country teams for finalizing the proposal as well as providing the endorsement letters, ESMP approval letters and submission of the full proposal to AF.

Below is the summary of the Action plan.

Activity	Responsible	Expected date
Submission of draft reports	National Consultants	20/03/2019
Submission of Final draft proposal	Consultants	28/03/2019
Providing the Endorsement letters for each Country	QWPEA with support from Country level offices	29/03/29
Validation of the ESMFs and other studies	OSS	05/04/2019
Providing the approval letters for the ESMP in each Country	National Agencies/GWPEA	30/03/2019
Submission of final proposal to Adaptation Fund	OSS/GWPEA Consultant	10/04/2019

Workshop closure

OSS Representative

In his closing Mr. Nabil the OSS representative thanked the organizers and the participants for their commitment the workshop. He pointed out that a lot of information had been collected from the country teams although more was still needed. He urged the country teams to do their best to avail the remaining information and endorsement letters. He assured the participants and GWPEA that OSS is at their disposal to offer all the necessary support to ensure the success completion of the full proposal development process. He thanked GWPEA for organizing the workshop and the continued collaboration and confidence they have always placed in OSS. He also thanked all the participants for their valuable time spent in participating and providing useful information that will be used to elaborate the proposal for submission to the Adaptation Fund.

GWPEA Regional Coordinator

On behalf of GWPEA who were the main organizers of the workshop Dr. Ahmed Khalid invited Country Representatives to make their remarks before he could conclude his remarks. Lastly Dr. Ahmed Khalid thanked everyone for the good deliberations, information shared and consultants for leading the process. He was optimistic that the national consultants and regional consultant would be able to collect useful and good information for the full proposal. He said he was looking for more partnership between OSS and GWPEA in developing other proposals so as to improve the livelihoods and environment for the people of Uganda and the region in general.

IGAD Country Representative

The IGAD representative (Dr. Fred Mwango) gave closing remarks, thanking every one for the dedication and time so far put in the development of the project proposal. He urged everyone to put in a little more to ensure successful completion and submission of the proposal. He also

thanked OSS and GWPEA for the facilitating role so far done in the process. Lastly he pledged total support to the project and urged the consulting team to put in more to ensure completion of the proposal in time. He declared the workshop closed.

Annexes

Annex I: List of participants for the régional workshop

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY
OSS

Global Water Partnership
Eastern Africa

ADAPTATION FUND

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

***Lake Victoria Hotel* – Entebbe**

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
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2	PETER M. MACHARIA	KWP	V. chair GWPEA Kitale-KWP	+254-722 48 4413	machariia10@yahoo.com	
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4	TUMWESIGYE ANTHONY	[illegible] Consultant	Consultant	0778457912	tumwesigye [illegible] @gmail.com	
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8	Ahmed K. ELDAW	GWPEA	Regional Coordinator	+256752680 896	Ahmed.k.Eldaw @gwpea.org	

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

Lake Victoria Hotel – Entebbe

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
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OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership
Eastern Africa

ADAPTATION FUND

REGIONAL CONSULTATION WORKSHOP

Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in The IGAD Region- DRESS EA

***Lake Victoria Hotel* – Entebbe**

Date: 15th March 2019

Registration Form

Ref.	Name	Organization	Position	Telephone	Email	Signature
17	KAIRU GERALD	GWPEA	Program Manager	0776446891	gerald.kairu@gwpea.org	[signature]
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21	LAWRENCE J.B. ORIKIRIZA	MAK-UNIVERSITY/CONSULTANT	CONSULTANT	+256772570985	orikirizalaw@gmail.com	[signature]
22						
23						
24						

Annex II: Agenda for the Regional Consultation Workshop

AGENDA
REGIONAL CONSULTATION WORKSHOP
STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION- DRESS EA

Date: ***15th March 2019*** ***Venue: Lake Victoria Hotel, Entebbe***

Time	Activities	Facilitators
8.30 – 9.00 a.m	Registration	GWPEA and OSS Secretariat
09.00 - 09.15	Welcome Remarks and Official opening of Workshop	GWPEA, MWE and OSS
09.15- 09.30	Introduction of workshop participants	GWPEA
09.30 – 09.45	Objectives of the workshop	GWPEA

09.45 – 10.30	• Brief of the DRESS-EA project (Background, project cycle, and status)
	• Institutional/implementation arrangements
	  ○ Proposed arrangements
	  ○ Key national institutions, roles and responsibilities
		OSS

10.30 – 11.00	• Presentation of the draft DRESS-EA proposal
	  ○ Objectives
	  ○ Project components
	  ○ Outcomes and outputs
	  ○ Project sites
	  ○ Budget
	• Key information needs
	• Requirements for submission to Adaptation Fund
		Consultant

11.00 – 10.30	***Coffee-break***	
11.30 – 13.00p.m	Additional information ○ Country specific information	Consultant
13.00 – 14.00	***Lunch***	
14.00 – 16.00	Country Presentations and discussions	All
16.00 – 16.30	***Coffee-break***	
16.30 – 17.00	Way forward	Consultant
17.00 – 17.15	Closing remarks	MWE, GWPEA and OSS

Annex III: Group work- Country presentations

Country Presentations
SUDAN

Issue	Response
How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive?	➢ In Sudan no restrictions to the involvement of women in all livelihood activities and one of the Sudan Water Policy principles and Objectives is to empower women role; ➢ Within the scope of the project women can involve in the followings: • Technical and managerial or activities of EWS; • Drinking water supply intervention; • Stakeholder leadership (organizing & implementing CB programs in collaborationS with the existing women associations and the general women union; • Implementation of innovative interventions (diary, agriculture … etc.).
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	• Gender equity. • Avoid ethnic dimension. • Marginalized and poor groups. • Avoid political categorization.
What are the standard procedures and/or limitations to the flow of funds for project implementation in For establishment and running the national executing unit, the activities have to financially facilitate your country?	The Hydraulics Research Center (HRC), the national executing entity, has special foreign account approved by law from the Federal Ministry of Finance & National economy - Sudan. Setup of the unit (tentative) – • Unit leader (Technical staff) ➢ Accountant ➢ Auditing ➢ Driver ➢ clerk • Logistics (car + consumables). • Incentives (topping). • Running cost.
What are the existing channels for	Arising complains could be resolved through negotiation with steering

receiving, recording and handling complaints about the project in your country?	committee members and the complainers. Confidence building and aware of ownership have to take care of from the start of the project.
Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	•Government locality administrative units. •The stakeholder participation in O&M through CBOs. •Private sector through tendering

9. Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?

Category	**Risk**	**Level**	**Mitigation**
Social	- Social resistance (tenure) - Conflict of interest	Low low	Compensation Negotiation and confidence building
Economical	Market instability	high	Procurement should be fixed in hard currency
Environmental	**Water quality**	**Low**	**- Introduce WQC** **- Awareness**
Gender	Lack of capacity	moderate	ToT, collaboration with governmental and NGOs, women associations and unions.
Financial management	Restrictions on hard currency exchange	high	To liaise with central bank

KENYA

Issue	**Response**

How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive.	• Inclusivity as prescribed the Constitution of Kenya 2010 and the one third gender rule • Engendering policies, strategies and plans where there is an aspect of gender mainstreaming into all activities of projects and programmes • Development of a climate change gender strategy as prescribed in the Climate Change act, 2016 • Engage with women and youth, PWD and marginalized groups projects specifically on the ground
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	• The beneficiaries should be registered as groups and have recognized registration certificate from the government; • The Community based organization (CBO) and women groups should be gender sensitive; • The CBO and women groups, PWD and marginalized groups needs to have been established and operational; • The CBO and women groups, PWD and marginalized groups should have been engaged in activities that are income generating; • The CBO and women groups, PWD and marginalized groups should have a records management system; and • The CBO and women groups, PWD and marginalized groups should be based locally and operate within the identified project areas inter alia.
What are the standard procedures and/or limitations to the flow of funds for project implementation in your country?	**LIMITATIONS** • Bureaucracy in the GoK system in terms of disbursement from The National Treasury – National Implementing Entity – Project implementation on the ground • Capacity reallocation with no institutional memory of the project • Procurement processes delays and turn over time • Status reporting of the project and its delays causing lag in implementation and execution of the project at country level • Setting up of new structures such as the Project coordination

	unit nomination which also reduces on the workload cause of other duties/ engagements
For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?	• Facilitate a focal point/ desk officer to be a liaise in the project for tracking and reporting/ administrative costs • Workshops • Field visits • Capacity building by training
What are the existing channels for receiving, recording and handling complaints about the project in your country?	National Environment Complaints Committee The National Environment Complaints Committee on Environment is an organ established by the EMCA whose role is to address complaints by the public on projects and investments that the public oppose due to environmental and social impacts. In an event that the public is dissatisfied with the proposed projects the PCC will serve as the first stop for getting redress and if this fails then the National Environmental Tribunal (NET) another organ set up by NET to resolve environmental and social disputes on investments will form the next avenue for redress. ***Land and Environment Courts*** The Constitution of Kenya (GoK) has further provided for specific courts to deal with land and environment (Land and Environment Courts) that are charged with playing a vital role in reconciling environmental related disputes and these courts will serve as the ultimate stop in the event of disputes or complaints that cannot be resolved through other alternative means.
Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	• Availability of other donors who are hosted in Kenya and we can submit applications for support • Internal structures and policies like the Constitution which advocates for sustainable projects with GoK involvement and the use of existing systems like National Drought Management Authority and policies such as the National Climate Change Action Plan 2018-2022, National

	Adaptation Plan 2030, Climate Change Directorate, other MDAs • Up-scaling of existing projects
GOVERNANCE STRUCTURE	• The project should be properly structure in terms on implementation with clear lines of deliverables • Inclusivity • Fiduciary matters as far as the project is involved as far as the financial

Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?

IDEA	**SOCIAL, ECONOMIC, ENVIRONMENTAL, GENDER**	**MITIGATION MEASURES**
Political good will	We need	Political buy in, advocacy and
Poverty	Social, economic	Poverty reduction measures such as enhanced crop production and livestock development, LIVELIHOOD ENHACEMENTS
Low income level	Social, economic	enhanced crop production and livestock development, LIVELIHOOD ENHACEMENTS
Disparities in the social set up	Social, economic	Capacity building, awareness and sensitization
Climate change risks – drought prone (inadequate precipitation and lack of water, high temperature variations	Environmental	Sensitization, advocacy and trainings (CSA)
Cultural issues	Social	Capacity building, awareness and sensitization
Gender inequality where a lot of work is left to the women	Social	Capacity building, awareness and sensitization -

		ADVOCACY
High unemployment level	Economic	Job creation activities through increased agriculture and livestock activities, capacity build, training, decentralization of the micro industries to sub-counties, enhance TIVET

UGANDA

Issue	**Response**
How do you think the proposed project can be gender responsive in your country? Suggest the different ways by which the proposed project could be gender responsive	✓ Abide by MGLSD Gender policy, Gender mainstreaming, gender equity and budgeting (MDAs focal points) ✓ Specifically- stakeholder structures should be made up 50% and more by women ✓ Some intervention should specifically target women and the youth
What criteria can be used to select beneficiaries for the competitive grants to implement drought adaptation actions in your country?	✓ Follow the existing Govt procurement and disposal procedures ✓ Membership to GWP-EA CWP can be considered ✓ Local presence
What are the standard procedures and/or limitations to the flow of funds for project	✓ There are already govt procedures governing the flow of funds (TSA at BOU) ✓ The timeliness of decision making among institutions may delay the timely execution of the project

implementation in your country?	
For this regional project, the Adaptation Fund has allowed to facilitate project unit in each country, for which activities should such facilitation be used?	✓ Provide a component dedicated to supporting the national project coordination unit-provision for M&E activities, capacity building and tooling of the coordination unit
What are the existing channels for receiving, recording and handling complaints about the project in your country?	✓ There are existing Grievance handling Mechanisms e.g. Whistle Blower policy. Inspector General of Govt, Monitoring Institutions e.g. the office of the RDCs, ISO ✓ Community monitoring groups, CSOs
Which social, economic, environmental, gender and financial management risks are likely to affect the project implementation in your country? How can they be mitigated? What is the level of these risks (low, moderate or high)?	✓ Socio- economic: Low Literacy levels, High poverty levels(High)-increase viable livelihood activities ✓ Environmental: Climate Change and Variability (high).Mitigation: Designing of intervention should put consider climate change variability put in place mitigation/adaptation measures. Refer to Climate Change Policy ✓ Gender: Low participation of women and youth during design and implementation of project. Decision making in most societies is mainly by men (moderate). More women and youth should be involved. ✓ Financial –Delays in disbursement of funds due to donor procedures (Moderate).Timely Release of funds ✓

Which financial support systems exist in your country that can be used to ensure that continuity and sustainability of project interventions (e.g. constructed valley dams) after project closure?	✓ Community contribution, ✓ provision within the annual budgets ✓ Provisions within the CMPs

Annex IV: National Consultations

The national consultative meetings were held in each of the four countries (Djibouti 10th – 12th February 2019; Kenya 19th – 22nd February 2019, Sudan 2nd to 4th March 2019 and Uganda 11th – 13th March 2019).

Objectives of the workshop

The workshop objectives were to:

i. Gather input and needs of project stakeholders to be included in the proposal to be submitted to the Adaptation Fund;
ii. Inform project stakeholders about the scope of the project;
iii. Gather the needs and expectations expressed by the project stakeholders;
iv. Propose new activities that respond to the specificities of the intervention areas and needs
v. Seek consent and endorsement for project implementation in the sites visited.

Key outcomes of the workshop

a) The expected outcomes of the workshop presented were:
b) Identified climate change threats and natural resources;
c) Understanding the project's aspirations and the measures to be implemented to address the effects of drought in the country harmonized;
d) New activities and specific intervention areas identified and incorporated; and
e) Integration of activity ideas, recommendations and comments from stakeholders into the final proposal.
f) Endorsed DRESS-EA project with signed consent forms and attendance lists.

Annex V: National workshop- Kenya

CONSULTATIVE WORKSHOP

A one day consultative workshop was organized by MEF, OSS and GWPEA at the Kitui Enterprise Promotion Company (KEPC) Hall on the 22nd February, 2019 in Kitui County, Kenya. The aim of the consultative workshop was to gather inputs from the smallholder farmers and pastoralists towards their innovative adaptation actions that reinforce their resilience to droughts and the the appropriate interventions they are undertaking that are most critical in the targeted identified areas. The workshop was carried out in an interactive manner that engaged all participants present in discussions towards climate resilience and mitigation actions as well.

Picture 1: Participants during the workshop

WORKSHOP PROCEEDINGS

Opening Remarks

Mr Wambua Munyao a representaive of the community who had mobilized the participants welcomed them to the workshop. He requested for opening the session with a word of prayer. He stressed that the farmers have been hit hard by the climate changes that Kitui is experiencing and that the Workshop would identify all interventions that they would employ on the ground to cushion the impacts and enhnace their livelihood. He wished the participants a fruitful and successful workshop. He invited Mr Steve Muhanji as the MEF Representative to give his opening remarks.

Picture 2: Opening remarks by Community representative/ leader Mr. Wambua Munyao

Remarks by National Consultant –Mr. Steve Muhanji

The National Consultant welcomed participants to the workshop and encouraged them to cooperate with the representaives and be as free as possible with sharing of information. He emphasied that the exercise is a regional project that brought together East Africa in its endeavour to combat the effects of Climate Change. He noted that climate change does not affect one person or one country but cross cuts borders and noted that the most hit were the women, youth, marginalised and people living with diabilities. Mr Muhanji highlighted how they have been working with the County Government and the public in various projects that would have institutional memory and hassist in the development and success of the DRESS-EA project as a conceited effort. He welcomed the GWPEA Representative who introduced the visiting team.

Remarks by GWPEA –Mr. Gerald Kairu

GWPEA Representative Mr Kairu introduced himself and thanked the team from Kenya for their efforts towards organising the workshop. He emphasized the importance of the workshop which was organized to enrich the project proposal which was at the final stages towards submission to the Adaptation Fund. He highlighted the importance of the representatives that encompased the

local communities where the project shall be implemmented as they are the key informants on the ground and their input plays an important role. Mr. Gerald Kairu further gave an overview of the proposed project. He said that GWPEA has been implementing a project on integrated drought management in the Horn of Africa since 2014. It was through assessments done by this project that GWPEA discovered that pastoralists and small holder farmers are the most vulnerable to the impacts of drought. This revelation subsequently informed the development of the Pre-concept on "Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region" Project that is currently being developed into a proposal after implementation approval by the Adaptation Fund in the identified region.

Mr Kairu further went to introduce the Kenya Water Partnership (KWP) team with their chairman Mr Peter Macharia who is also the vice chair of GWPEA and Mr George Sanga. He noted that they are an integral part of the project and their input contributes towards implementation. He also introduced the Regional Consultant Dr Lawrence Orikiriza.

Remarks by Regional Consultant - Dr Lawrence Orikiriza

Dr Lawrence welcomed the participants to the consultative workshop and requested them to review the program and make amendments if necessary. The agenda was adopted without amendments and he requested the participants to register for the workshop. He emphasized on what Mr Kairu said about the project and gave a brief to the participants on the genesis. He noted that OSS is part of the process of developing the project proposal and that OSS was selected by GWPEA and Project focal countries as the implementing Entity for the regional project. He informed the participants that OSS pledged technical support as well as support in mobilizing resources needed for successful development of the project with the Adaptation Fund. He further informed participants that OSS has since October 2017, been accredited by the Green Climate Fund (GCF) highlighting that such accreditation also presents more opportunities for developing projects. He once again reiterated OSS's appreciation to be part of the entire process. He concluded by pledging OSS's continued support of providing oversight to the concept development and submission process in order to ensure that the proposal meets Adaptation Fund standards. He also informed the participants that the concept for the proposed project was already endorsed by the Adaptation Fund. The project will be implemented by OSS and executed by GWPEA in partnership with the national designated agencies.

Picture 3: Dr Lawrence giving opening remarks during the consultative workshop

Introductions and Expectations

The facilitator Dr Lawrence called upon the participants to introduce themselves and to highlight their expectations from the workshop. In summary the participants expected to:

1) Provide substantial input into the project
2) Support in the development of a proposal that will be submitted to the Adaptation Fund
3) Understand what the project is all about
4) Work together as a team towards the implementation of the project
5) Discuss the issues of climate change and their resilience
6) Suggest adaptation and mitigation measures that can be used to strengthen local innovations against drought with coping mechanisms
7) Learn from one another their status' on the ground
8) Share ideas from the different sub-counties represented
9) Understand how the project will contribute to their livelihoods

Objectives of the workshop

The workshop objectives were presented by Dr Lawrence Orikiriza. The objectives were to:

- Gather input and needs of project stakeholders to be included in the proposal to be submitted to the Adaptation Fund;
- Inform project stakeholders about the scope of the project;
- Gather the needs and expectations expressed by the project stakeholders;
- Propose new activities that respond to the specificities of the intervention areas and the needs of users

Key outcomes of the workshop

The expected outcomes of the workshop presented were:

a) Identified climate change threats and natural resources;
b) Identified and addressed the main risks of early warning systems to the project;
c) Identified and engage the grievance mechanism within the community that works;
d) Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the country harmonized;
e) New activities and specific intervention areas identified and incorporated; and
f) Integration of activity ideas, recommendations and comments from stakeholders into the final proposal.

Discussions

Dr Lawrence first engaged the participants by placing them according to their locations where the participants represented the whole of the Kitui sub-counties namely: Kitui South; Kitui East; Kitui Central; Kitui West; Kitui Rural; and Mwingi. He further engaged them by requesting what type of livestock and crops they were growing and keeping on their farms. These are shown in table 1 below:

Table 1: Crops grown and livestock reared	
Crops	Livestock
Cow peas	Bees
Chick peas	Goats
Mangoes	Sheep
Sorghum	Cattle
Millet	Pigs
Maize	Chickens
Sukuma wiki (kale)	

As per the programme, the discussion was as follows:

Discussion on Natural Resources and Climate Change threats

The participants noted that Kitui is mostly characterized by:

Seasonal rivers and ponds such as:

- River Kaui in Kitui West
- River Ngooni in Kitui Central
- River Mutendea in Kitui West
- Thua River in Kitui East
- Kalundu River in Kitui Central
- Nzeeu River in Kitui South

i. **Permanent Rivers such as:**
    - Athi River in Kitui South
    - Tana River in Mwingi

ii. **Forests**
    - Kavonge Forest in Kitui Cental

iii. Yatta Plateau in Kitui South

The participants informed the team that River Nzeeu had a lot of investment from the Government of Kenya which constructed a dam that serves the community surrounding it. They also informed the team that along Kalundu River, a dam was constructed that also served the community around the dam. The participants also noted that one of the seasonal rivers, River Thua was heavily polluted with asbestos which made water resource utilization difficult as asbestos is harmful to human health.

The participants noted that Kitui Central has seventeen (17) sand dams that they use as a natural resource and that the dams support about 5 villages by the Water Resources Utilization Authority (WRUA) They noted that they have earth dams along the rivers that serve about 2000 individuals across the water way.

The participants informed the team that they mostly experience the two rainy seasons annually and noted that they occur during the months of April-June and November-December. They informed the team they occasionally experience sporadic rainfall which sometimes causes flash floods and destruction. The participants emphasized that due to climate change, the rainfall seasons are not predictable as before and hence planting seasons are not as before.

Some of the threats that they mentioned in regard to climate change threats included:

i. Deforestation
ii. Farming practices
iii. Urbanization and migrations

The participants noted that the major issue in regard to crop farming and livestock rearing is availability of potable water. They noted that they needed to invest in water harvesting technologies and irrigation schemes as water management practices.

Interventions to address the impacts of Climate Change in Kitui County

The participants noted that they have been engaging in various interventions to address climate change impacts as discussed below:

a) Water Conservation and Management Interventions
   i. Building of sand dams across small rivers at small scale level to hold water for irrigation;
   ii. Digging of Zai pits around the crops and trees;
   iii. Buying of water reservoir tanks at communal level as part of the distribution system from sunken boreholes;
   iv. Digging of shallow wells; and
   v. Involving the county governments and WRUAs in the development of water management plans

b) Adaptive Crop farming and livestock rearing practices
   i. Brachiaria grass and Boma Rhodes are also forms of interventions towards increasing livestock fodder;
   ii. Planting of Napier grass during the rainy season and harvesting for storage during the drought season;
   iii. Keeping of drought resilient animals like goats, KALRO improved chicken breeds and bees which also help in pollination processes
   iv. Intercropping of drought resistant crop species with normal species like the cow peas and chick peas which are also leguminous (nitrogen fixing)
   v. Terracing of land with multipurpose trees which also host bees and reduction of surface run off from flash floods
   vi. Use of organic manure visa vie artificial to increase crop yields and reduce on alkalization of the soils due to high temperatures
   vii. Practicing Agroforestry where they plant trees and fruit crops for create calculated shading that assists in reducing evapotranspiration and maintain soil moisture content

Participants Views on Early warning systems and the main risks of the project

The facilitator moved the participants to the next discussion on Early warning systems (EWS) and the main risks of the project. He introduced them to the concept and noted that the intensity and frequency of climate-driven natural disasters and conflicts is increasing. He noted that climate driven natural disasters now occur nearly five times as often as 40 years ago. The impact on local economies, on peoples' livelihoods and lives has similarly grown. In some of the worst-hit places, it can seem unrelenting. One drought will follow another, every time stripping away at the limited assets of poor and vulnerable people, robbing them of their self-reliance and wounding their humanity and dignity.

Dr Lawrence noted that carefully-timed support also protects and empowers people the most, giving them the confidence to keep going or to resume their livelihoods. He noted advancements and investing in early action means that the DRESS-EA project can help shelter longer-term development gains and increase resilience to the impacts of climate change and increase crop yield and livestock productivity. He engaged the participants to identify some of the EWS that they are familiar with and they mentioned the following:

- Mass media – television, radio and newspaper
- Kenya Meteorological Department bulletins
- Climate Information network bulletins
- Short message services from agriculture extension workers

The participants noted that currently some of the systems mentioned above were not effective and sorted for enhancement of:

- Short message system
- Use of the RANNET radio from KMD
- Engage in participatory scenario planning

The participants brought forth the risk that the project is well developed and can easily be adopted by the community yet the issue came about when it comes to implementation. They noted that many projects have been developed and a lot of information sharing has been exchanged but then the projects become "paper projects" that are eventually shelved and no outcome on the ground. The team noted their concerns and assured the participants that the DRESS-EA project was a very inclusive and implementable project that had regional and National support. This was also heightened by the courtesy call to the local county government through the County Executive Committee Member for Agriculture, Water and Livestock Development, Mr. Emmanuel Kisangau who embraced and endorsed the project.

Participants Views on Criteria for selecting beneficiaries for competitive small grants and Unidentified sub projects and other needs

Dr Lawrence introduced the participants to the next discussion item on criteria for selecting beneficiaries for competitive small grants. He noted that the DRESS – EA projects had developed a criterion that was inclusive and representative (*picture 17*). He highlighted the criterion as follows:

- The beneficiaries should be registered as groups and have recognized registration certificate from the government;

- They Community based organization (CBO) and women groups should be gender sensitive;
- The CBO and women groups needs to have been established and operational;
- The CBO and women groups should have been engaged in activities that are income generating;
- The CBO and women groups should have a records management system; and
- The CBO and women groups should be based locally and operate within the identified project areas inter alia..

Picture 4: Participants submitting views on criteria for selecting beneficiaries for competitive small grants

The participants were requested to submit the names of the CBOs and women groups in the area, their representation (membership and gender), activities and issues if any. (*Annex 4*)

The team noted as the participants were submitting the CBOs and women group organizations, they also were identifying unidentified sub-projects and other needs that the DRESS-EA projects can support. Some of the projects identified included:

1. Rehabilitation of existing water pans
2. Up-scaling of water reservoir systems

3. Capacity building of the communities and local government

Picture 5: Participants during the workshop submitting unidentified sub-projects and other needs

Participants Views on Grievance Mechanism within the community

Dr Lawrence thanked the participants for the progress and inputs towards the projects and noted that the information was very critical in the proposal development. He noted that the insights gave a clear picture towards implementation of the project. Furthermore, he noted that the project also has a grievance redress mechanism which the community occasionally encounters conflict and what resolutions they implement. He requested the participants to share experiences that cause conflict. Some of them included:

- Bee keepers and crop farmers – the farmers use pesticides on their crops which affect the bees in the production of honey and sometimes cause fatalities to the bees.
- Farmers and livestock herders and conflicts caused by their livestock wandering into the farmers and destroying the crops
- Human wildlife conflicts when the animals from the national reserves in Kitui County and destroy crops causing conflicts

- Social conflicts from natural resource management use

Dr Lawrence invoked the participants to propose conflict resolution mechanisms that the community engages in and were as follows:

- Resolution from courts
- Administrative resolution from the chief
- Traditional conflict resolution using elders

The participants were further probed by the consultant who noted that some conflicts sometimes but rarely remain unresolved. Further probing highlighted that the main mechanism for conflict resolution was traditional conflict resolution. It was noted that village elders interceded and representatives were scoped from the families around the conflict or resources under dispute and they nominated members of equal numbers and gender inclusivity to form the committee. The committee also appointed local authorities that consist of organizations represented a resource under conflict for autonomy purposes and technical support. This was the best mechanism portrayed on the ground and the local leaders kept a record for institutional memory.

Participants Views on Alternative Income generating activities

The community was engaged by Dr Lawrence to list some of the alternative income generating activities they are pursing. These include:

1. Establishment of tree nurseries for selling of seedlings
2. Calabash making
3. Own and managing retail shops
4. Brick making
5. Briquette making
6. Table banking
7. Boda boda operation
8. Sand mining and selling
9. Charcoal production
10. Basket making and rope making by the women groups
11. Ornament making
12. Firewood selling
13. Formal employment
14. Detergent and disinfectant making
15. Pot making (KCJ) Ceramic jiko making

Dr Lawrence thanked the participants for the in-depth participation and knowledge towards their area and noted that the information would be used appropriately towards finalization of the proposal. He handed back the programme to Mr. Kairu who gave closing remarks.

Closing Remarks

In his closing remarks, Mr. Kairu the GWPEA representative thanked the organizers and the participants for their commitment during the workshop and achieving the objectives of the workshop. He pointed out that a lot of information had been collected from the participants. He urged the consultants to do their best to avail the remaining information and finalise the proposal.

He assured the participants that the consultants are up tp the task and that GWPEA and OSS is at their disposal to offer all the necessary support to ensure the success of the full proposal development process for the proposed Project. He thanked Mr Muhanji with the local facilitator, Mr Wambua for organizing the workshop and the continued collaboration. He also thanked all the participants for their valuable time spent in participating and providing useful information that will be used to elaborate the proposal for submission to Adaptation Fund through OSS.

Annex VI: National workshop – Sudan

PROJECT: STRENGTHENING DROUGHT1 RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION PROJECT - DRESS-EA PROJECT

Awareness Meeting & Consultative Workshop Report - **Sudan**

March, 2019

1. Within the framework of the preparation of the full proposal of DRESS-EA Project: **"Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region"**, awareness meeting and consultative workshop at national level were organized.

The main objective of such activities, is to endorse the project by countries, and hence grantee the ownership.

2. **The awareness meeting** was held at the premises of the Ministry of Water Resources, Irrigation and Electricity (MWRIE) at Khartoum on the 3rd of March 2019. It was attended by twenty one participants most of them are from the MWRIE with accumulated experience and three of them are former ministers (Minister of Irrigation & hydroelectric power, Minister of Agriculture & Forest, and minister of Physical Planning – Gezira State). The list of participants is shown in **Annex I**.

Photo 1: Awareness meeting (03/03/2019 – Khartoum).

3. The meeting was opened with a welcoming remark from the national consultant, followed by a speech from DR. Ahmed Khalid ElDaw - the

GWP_EA Regional Coordinator, reflecting the role and mandate of the GWP-EA and the regional and national dimensions of the proposed project. He also stated the reasons behind selecting Es Salaam Locality at the White Nile State, as study area. Then after, the chance was given to Prof. Lawrence Orikiriza, the Regional Consultant, to give an overview on the project and enumerated the main components of the project. The floor was then open for discussion.

4. The main findings of the awareness meeting are summarized as follows:
    - The selected study area "Es Salaam Locality" is witnesses decline in rainfall during the last decades (Drought is chasing the south) and it is an area of conflict among different stakeholders: farmers, pastoralists, refugees … etc. So, it fits the selection criteria of the project.
    - The project should be tangible and it has to be community oriented addressing the actual needs of the people.
    - The success of the project, lessons learned and sustainability, lead to upscaling and extension to neighboring communities.
    - Water points and agroforestry come as the first interventions to be think of.
    - Ownership and Synergies with local partners (government institutes, NGOs … etc.) is essential for the success of the project and optimal use of available resources.
    - The Social Sciences such as: Sociology, Social Anthropology, Political Science, and other relevant disciplines, have crucial roles in this project in terms of building a strong understanding of the social context of local communities in Sudan. Considering the multidimensional characteristics of the local communities in Sudan, we will pay special attention to the whole social context in which the Sudanese farmers and pastoralists are interacting. This could be done through benefiting from the Participatory Rural Appraisal methods and other participatory approaches. We strongly believe that the violence of the climate might lead to the climate of violence between our stakeholders, but the potentiality of cooperation between them is an inevitable issue in order to strengthen their capacity to resilience,

cope and adapt with the climate challenges in general and the droughts in particular.

5. **The Consultative Workshop** was held at the premises of the General Union of the Sudanese Women, at Kosti (the capital of the White Nile State) on the 4th of March 2019. It was attended by thirty-four participants most of them are representing Um Galala, El Keywaik, El Naeem, El Rawat and El Zeylate administrative units of Es Salaam Locality. Also the former minister of Agriculture & Forest and the Mayor of Es Salaam Locality are ones of the attendees. The list of participants is shown in **Annex II**.

Photo 2: Consultative Workshop (04/03/2019 – Kosti)

6. Prior to the workshop, three-hours site visit was organized. The regional consultant accompanied by El Rawat Administrative Unit representative, former minister of agriculture and forests, the gwp-ea representative, DR. Younis of the Hydraulics Research Center and the national consultant, have visited different locations within the unit. This includes, water points: shallow hand-dug wells, artificial ponds (haffirs), local market at El Sabaat village and the surrounding environment. The main observations noticed during the visit are summarized as follows (see photos below):
    - Vast fertile land (clayey soil) with some scattered trees (sign of deforestation).
    - Shallow hand-dug wells provide good water quality, while the artificial ones are of low quality. Both males and females are sharing home water delivery.
    - Local products are dominating the market, although some vegetables such as tomatoes are available.
    - Scattered herds of camels and sheep.

Photo 3: Vast Fertile Land at El Rawat administrative unit – Es Salaam Locality.

Photo 4: Shallow Hand-Dug Wells.

Photo 5: Artificial water pond (Haffir).

Photo 6: Local Market at El Sabaat – El Rawat Administrative Unit.

7. **The consultative workshop** was opened with welcoming remarks from the national consultant, Mayor Nasr Elzain Musa and officially opened by the former minister of agriculture and forests. Overview on the project was delivered by the national consultant and then after floor was opened for discussion and listening to the participants to reflect their ideas and the associated problems and explain what they propose and expect as solutions.

8. The main findings from the consultative workshop are summarized below, while the participants' interventions are given in **ANNEX III.**

- In case of drought and dry seasons, pastoralists use to move to the south (South Sudan) and east (White Nile river) looking for water. After cessation of South Sudan and the extension of the traditional and irrigated farming along the left bank of the White Nile river, more conflicts appear to the surface.
- The present of refugees and returnees, increase the rate of deforestation, as wood is the main source of energy.
- Spread of animal diseases and shortage of drugs and vaccinations, are dominant phenomena within the locality.
- Lack of capacity building programs from the government side.
- Technical, managerial and financial capacities are not enough to coup with drought.
- Farmer use and concentrate to purchase biomass, as a fodder, rather than producing seeds.
- Both males and females are sharing the different livelihood activities at the locality (farming, animal breeding, drinking water supply, marketing … etc.).
- It is essential to open windows for youth to participate in the production process.
- Some of the villagers participate in the O&M of the water point (Haffirs).

- Irrigated schemes along the left bank of the River are in bad need for rehabilitation.
- Animal routes act as head-ache to pastoralists.
- Spread of Mosquite trees is a real thread to productive land.
- Construction of water point, animal routes, establishment and activation of existing legislations … etc. are some proposal for solving the accumulated problems emerged during dry years and drought.
- …. Etc.

9. All the participants, on behalf of the selected study area population (Es Salaam Locality – The White Nile State – Sudan), gave the consent to the implementation of the regional project entitled " "Strengthening Drought Resilience of Small Holder Farmers and Pastoralists in the IGAD Region" proposed by the Global Water Partnership – East Africa (GWP_EA) and executed by the Ministry of Water Resources, Irrigation and Electricity (MWRIE) at national level with the support of the Sahar & Sahel Observatory (SSO), for fund to the Adaptation Fund (AF). Upon this, Mr. Nasr Elzain Musa Ali, the Mayor of Es Salaam Locality, has signed the letter of consent.

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Osman Mustafa Ahmed	WRTO	+249912910034	omaduri@hotmail.com
2	Wagdi Ata Ali	DIU	+249123494414	wagdiata@yahoo.com
3	Mohamed Hassan Abdelrahman	Dams Safety Unit (DSU)	+249123847700	mohdbaly@yahoo.com
4	Abd Elaziz Abdalla Nour eldin	DIU	+249123494744	azizadiu@gmail.com
5	Balla Ahmed Abd Elrahman	Nile Waters & Dams Affairs (NWDA)	+249912693455	ballashaheen1@yahoo.com
6	Younis Abdalla Gismalla	HRC	+24912833773	hrs_younis@hotmail.com
7	Abdelhafiz Younis Mohd.	El Sugya Charity Organization	+249122517176	
8	Ahmed Abdalla Dafalla	DSU	+249123494366	a.dafalla13@gmail.com
9	Ahmed Mohamed Adam	Adviser – WRTO	+249912320485	Ahmoadam293@gmail.com
10	ElRayah AbdelSalaam El Haj	Adviser – MWRIE	+249912309609	Elhaj.10966@gmail.cm
11	Osman Eltom Hamad	Adviser – WRTO	+249912541351	oehamad@hotmail.com

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Awareness Meeting – 03 March 2019, Khartoum, Sudan. - Attendance Sheet (2)

No.	Name	Organization	Phone (mobile)	e.mail
12	Hassan Aboalbashar Ali	MWRIE – Irrigation	+249912325145	Abosha.99999@gmail.com
13	Nagla Eltayib Elzain	GW	+249123484239	naglaeltayib@yahoo.com
14	El Sidig Hamid Mohamed	Savvama.org	+249122278991	Kaefo75@gmail.com
15	Safiya Abdalla Zaroug	NWDA	+249911276533	Safyzaroug@hotmail.com
16	Mazin Hakim Bashir	HRC	+249963496349	m.bashir@hrc-sudan.sd
17	Hasab El Nabi Musa Mohamed	EX-minister of Agriculture	+249912324454	hassabelnabi@yahoo.com
18	Abu Obieda B. Ahmed	HRC	+249123813813	hrs_abdo@hotmail.com
19	Ahmed Khaild ElDaw	GWP-EA	+249912258047	ahmed.k.eldaw@gwpea.org
20	Gerad Kairu	GWP-EA	+256776446892	Geraldkairu@gwpea.org
21	Lawrence Orikiriza	Regional Consultant	+256772570985	orikirizalaw@gmail.com

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (1)

No.	Name	Organization	Phone (mobile)	e.mail
1	Rahma Gubair Salih	El Naeem administrative unit (NAU)	+249913412574	
2	Alemama Mohamed Abdalla	El Zeylate administrative unit (ZAU)	+249906248336	
3	Maha Elnoour Belala Elkhalifa	ZAU	+249906248336	
4	Fayiza Elhaj Mohamed Ageed	El Rawat administrative unit (RAU)	+249911027753	
5	Khadija Eisa Mohamed	NAU		
6	Salma Hago Mahadi	NAU		
7	Shebair Elkhidir Shebair	NAU	+24915870756	
8	Ibrahim Yousif Mohamed	El Keywaik administrative unit (KAU)		
9	Gamal eldin Mohamed Ahmed	KAU	+249917755499	
10	Kabir Gamal eldin	KAU	+24995084487	

	Mohamed			
11	Saeed Khairalla Saeed Khairalla	NAU	+249914716172	

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (2)

No.	Name	Organization	Phone (mobile)	e.mail
12	Shebair Elshaikh Elnour	NAU	+249919187083	
13	Barsham Ali Ismail	NAU	+249911712509	
14	Idress Mohamed Adam Sulliman	ZAU	+249900824825	
15	Siddig Rebaih Shiekh Nour	ZAU	+249919369334	
16	Musa Khalid Musa	ZAU	+249909002420	
17	Saeed Musa Mohamed	Um Galala (GAU)	+249917743378	
18	Mostafa Hamid Adam	NAU	+249918234248	
19	Nasr Elzain Musa	GAU	+249912284459	
20	Khalifa Basheer Mohamed	KAU	+249912111382	
21	Khalifa Abu Talib Elnour	NAU	+249122706371	

22	Mahadi Daydan Ismail	NAU	+249914668897	

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Eastern Africa
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DRESS-EA Project: Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (3)

No.	Name	Organization	Phone (mobile)	e.mail
23	Adam Ismail Adam Ismail	NAU	+249913643122	
24	Elsadig Hasabelnabi Mohamed	NAU	+249915684472	
25	Ahmed Khalifa Belal	ZAU	+249912152088	
26	Fakhreldin Khalifa Belal	ZAU	+249923416696	
27	Elsadig Mohamed Osman	Irrigated sector	+249907677741	
28	Mohamed Omara Mohamed	ZAU	+249913630407	
29	Belal Ali Ameen Musa	NAU	+249913792882	
30	Hasab El Nabi Musa Mohamed	EX-minister of Agriculture	+249912324454	hassabelnabi@yahoo.com
31	Abu Obieda B. Ahmed	HRC	+249123813813	hrs_abdo@hotmail.com
32	Younis Abdalla Gismalla	HRC	+24912833773	hrs_younis@hotmail.com
33	Gerad Kairu	GWP-EA	+256776446892	Geraldkairu@gwpea.org
34	Lawrence Orikiriza	Regional Consultant	+256772570985	orikirizalaw@gmail.com

Annex VII: Letters of Consent from Communities

Letters of consent for DRESS-EA project by communities
The following are the letters consenting to the implementation of the DRESS-EA project.

Djibouti

(Ville, Pays) DJIBOUTI

(Date) 11-02-19

Lettre de Consentement de [DEBNÉ DE GOBAAD]

Madame, Monsieur,

Je soussigné(e) M./Mme [MOHAMED ABDOULKADER HASSAN] en ma qualité de représentant(e) de la population de [tribu / de GOBAAD rattachée administrativement à [DIKHIL] basée l'un des sites d'intervention identifiés pour son approbation à la mise en œuvre du projet régional intitulé «Renforcement de la résilience à la sécheresse pour les petits exploitants et pasteurs de la région de l'IGAD: Djibouti, Kenya, Somalie et Ouganda», proposé par le Partenariat Mondial pour l'Eau en Afrique de l'Est (GWPEA), exécuté par [MIN. AGRI.] au niveau national avec le soutien de l'Observatoire du Sahara et du Sahel (OSS), pour un financement auprès du Fonds d'Adaptation (FA).

Je reconnais avoir pris connaissance et accepte les objectifs du projet et je suis conscient de l'importance de l'implication de la population locale aux différentes étapes de la préparation et de la mise en œuvre du projet proposé.
Ainsi, cette lettre vient souligner que tout au long du processus de formulation du projet, la population [de GOBAAD DEBNE / communauté] a été convenablement sensibilisée aux risques environnementaux et sociaux liés aux activités à entreprendre, à leurs mesures d'atténuation ainsi qu'au mécanisme de plaintes spécifique mis en place.

A cet effet, cette lettre confirme notre approbation et notre participation à la prise de décision dans le cadre du projet susmentionné. Nous nous engageons à collaborer avec les parties nationales et régionales pour la bonne exécution des différentes activités.

Fait pour servir et valoir ce que de droit.

Nom et Prénom

MOHAMED ABDOULKADER HASSAN
Président de la coopérative
agro-élevage de Gobaad
TEL = 77.12-39.45
(AS-Eyla)

Signature

(Ville, Pays) Djibouti Region Dikhil

(Date) le 11/02/2019

Lettre de Consentement de [Afar Hanlelé]

Madame, Monsieur,

Je soussigné(e) M./Mme Ali Hamad Ali en ma qualité de représentant(e) de la population de [tribu / Afars] rattachée administrativement à [ville / pays], l'un des sites d'intervention identifiés, donne son approbation à la mise en œuvre du projet régional intitulé «Renforcement de la résilience à la sécheresse pour les petits exploitants et pasteurs de la région de l'IGAD: Djibouti, Kenya, Somalie et Ouganda», proposé par le Partenariat Mondial pour l'Eau en Afrique de l'Est (GWPEA) et porté par [MADR] au niveau national avec le soutien de l'Observatoire du Sahara et du Sahel (OSS), pour un financement auprès du Fonds d'Adaptation (FA).

Je reconnais avoir pris connaissance et accepte les objectifs du projet et je suis conscient de l'importance de l'implication de la population locale aux différentes étapes de la préparation et de la mise en œuvre du projet proposé.

Ainsi, cette lettre vient soutenir que tout au long du processus de formulation du projet, la population [de Hanlelé / communauté] a été convenablement sensibilisée aux risques environnementaux et sociaux liés aux activités à entreprendre, à leurs mesures d'atténuation ainsi qu'au mécanisme de doléances spécifique mis en place.

A cet effet, cette lettre confirme notre approbation et notre participation à la prise de décision dans le cadre du projet susmentionné. Nous nous engageons à collaborer avec les parties nationales et régionales pour la bonne exécution des différentes activités.

Fait pour servir et valoir ce que de droit.

Telp = 77 60 26 31

Nom et Prénom

Ali Hamad Ali

President de la Coopérative

Signature

ASSOCIATION POUR LE DEVELOPPEMENT AGRO-PASTORALE DE HANLE
A.D.A.P.H
Le President

Kenya

(City, Country) KITUI, KENYA

(Date) 22nd FEB, 2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/~~Mrs~~ [CRACK WAMBUA MUNYAO.....] in my capacity as representative of the ~~[tribe/~~**community]** population attached administratively to **[city/country]**, KITUI COUNTY, KENYA one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [.....MEF.....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the ~~(tribe/~~community name).KITUI.....population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name)
CRACK WAMBUA MUNYAO
MANAGING DIRECTOR
Signature

SKEP CO. LTD
KITUI ENTERPRISE PROMOTION COMPANY LTD.
P O BOX 77-90200
KITUI - KENYA

+254 722 584 365

Alex M. Mutioka
Chairman Board of Directors.

22nd Feb 2019
+254721406207.

(City, Country)...KITUI, KENYA

(Date)...22.02.2019...

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned ~~Mr~~/Mrs [Rhoda Musyoka...] in my capacity as representative of the [~~tribe~~/community] population attached administratively to [city/country] Kitui | Kenya, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [...M.E.F......] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (~~tribe~~/community name)....Kitui.......population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) RHODA M. MUSYOKA
ASST. CHIEF [illegible]
KYANIKA LOCATION
DATE 22-2-2019 SIGN [signature]
Ag. chief.

Signature [signature]

+254 0721 674051

Sudan

(City, Country) Es Salaam, Sudan

(Date) 04 March 2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/~~M~~s Nasr ELzain Musa Ali [.....] in my capacity as representative of the **[~~tribe~~/community]** population attached administratively to **[city/country]**, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [MWRIE....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (~~tribe~~/community name) Es Salaam population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) Nasr ELzain Musa Ali

Mayor EsSalaam Locality, Chair the Center of Conflic Resolution

Signature

Kosti, 04 March 2019

Uganda

(City, Country) MOYO, UGANDA

(Date) 13/03/2019

Letter of consent from [concerned communities]

TO WHOM IT MAY CONCERN

I, the undersigned Mr/~~Mrs~~ MR & MRS PAUL OTYANG and ACHOK VERONICA [.....] in my capacity as representative of the **[tribe/community]** population attached administratively to **[city/country]** MOYO/UGANDA, one of the identified areas for intervention, hereby give the consent to the implementation of the regional project entitled « Strengthening Drought Resilience for Smallholder farmers and pastoralists in the IGAD Region : Djibouti, Kenya, Sudan, and Uganda », proposed by the Global Water Partnership Eastern Africa(GWPEA), executed by [...MWE.....] at national level with the support of the Sahara and Sahel Observatory (OSS), for funding to the Adaptation Fund (AF).

I acknowledge and agree to the project's goals and objectives, and I understand the involvement of local population at the different stages of preparation and implementation of the proposed project. Thus this letter is to point out that all along the project formulation process, the (tribe/community name) RUHA SUB-COUNTY population has been properly sensitized on the environmental and social risks related to the project activities as well as on its mitigation measures and its specific Grievance Mechanism.

Hence, this letter is prepared particularly to serve as an endorsement of the above mentioned project and it confirms our participation in decision making and our commitment to collaboration with national and regional parties.

Signed at (place) on (date) with all rights privileges and responsibilities thereto pertaining.

Yours Sincerely,

(Full Name) 1. OTYANG PAUL (LOCAL LEADER)

Signature 2. ACHOK VERONICA (WOMEN COUNCIL)

Annex VIII: Participants for national consultative workshops

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender	Telephone	Email
1	Mohamed AbdoulKader Hassan	Coopérative	M	77 12 39 45	
2.	Ali Ibrahim Aden	agro-élevage	M	77 [illegible] 77 48	
3.	AbdoulKader Othman [illegible]	de Gobaad	M		
4	[illegible] Loita Helem		M	77 75 38 39	
5.	Ali Mohamed Barkat		M		
6.	Mohamed Ebo Robahé				

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

No.	Name	Location/Position/ organization	Gender F H	Telephone	Email
01	Ali Hamad Ali	President	Homme	77 60 26 31	
02	Hamad Lalitea	Vice president	Homme	77 78 82 30	
03	Mohamed Boritto Ali	Secretaire general	Homme	77 05 48 55	
04	Moussa Wais Adou	Membre	Homme	77 84 47 33	
05	Fatouma Mohamed Kassim	Tresorier Adjointe	Femme	77 13 76 65	
06	Yamina Daher Hamadou	membre		77 80 96 05	
07	Assia Houmed Wais	Controleur Adjointe	Femme	77 34 31 98	
08	Adou Houmed Adou	comite de sage	Homme	77 28 30 58	
09	Mariam Ilad Hassan	membre	Femme	77 27 30 88	
10	Agass Ali Adou	membre comite sage	Femme	77 42 93 32	
11	Hasma Abdoulkader	membre comite sage	Femme	77 72 93 72	
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13	Dafa Haisama Ali	Membre	Femme	77 35 73 86	
14	Ali Sabah Ahmed	membre	Homme	77 18 00 96	
15	Deima Adou Hamadou	membre	Femme	77 17 00 97	
16	Hamad Moussa Abdallah	membre	Homme	77 53 02 19	
17	Houmed Ali Abdallah	membre comite sage	Homme	77 42 42 17	
18	Adou Moussa Hassan	Controleur	Homme	77 06 20 46	

Observatoire du Sahara et du Sahel
Sahara and Sahel Observatory

Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

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43	Hamad Adou Hamadou	membre	Homme	77 87 76 82	
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51	Ahadi Hamadou Ali	membre	Homme	77 81 27 18	
52	Hamadou Med Ghafrar	membre	Homme	77 81 26 15	
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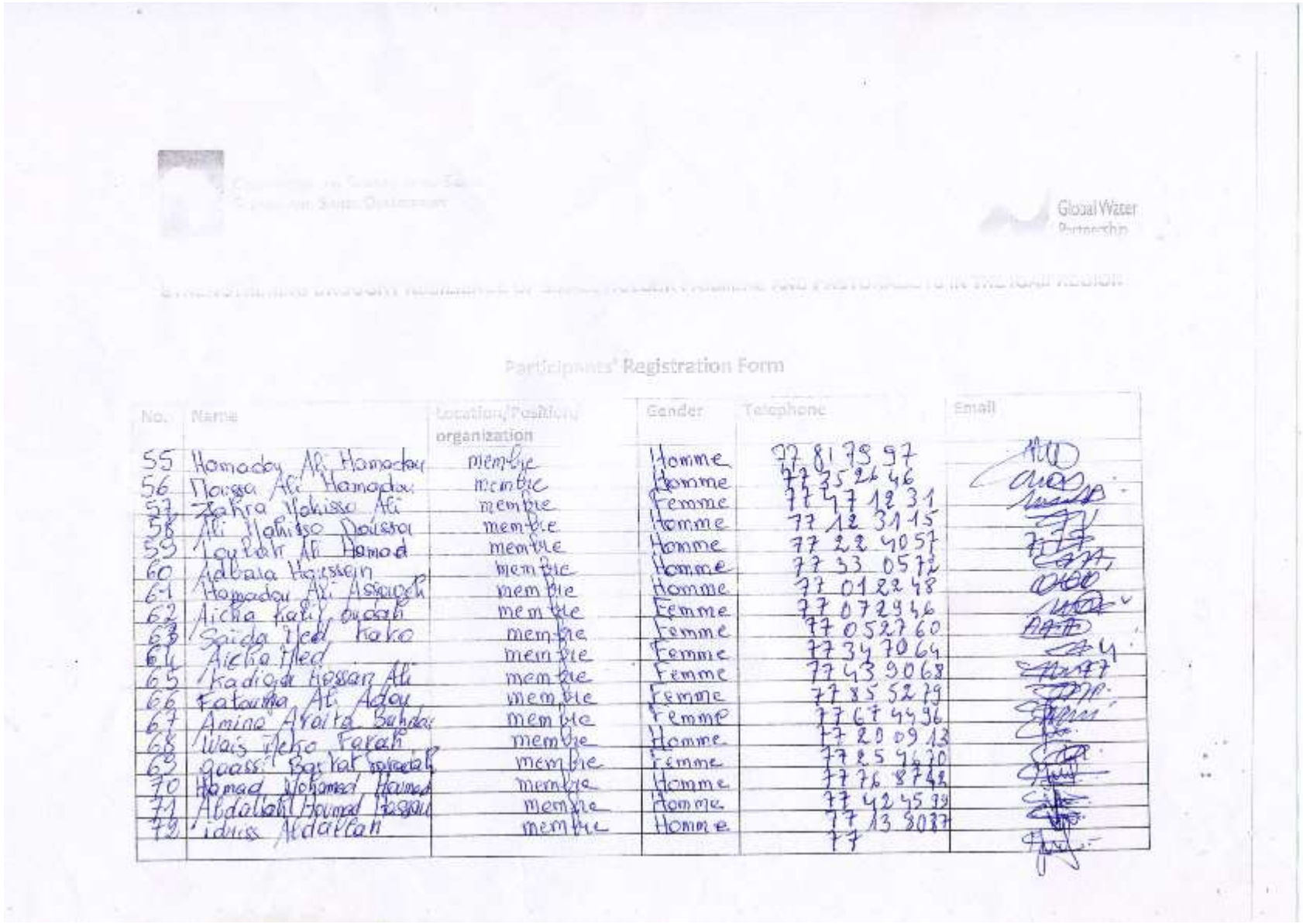

Participants' Registration Form

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59	Loutah Ali Hamad	membre	Homme	77 22 40 57	
60	Adbala Hassein	membre	Homme	77 33 05 72	
61	Hamadou Ali Asgueh	membre	Homme	77 01 22 48	
62	Aicha Kali Oudah	membre	Femme	77 07 29 46	
63	Saida Ilad Hako	membre	Femme	77 05 27 60	
64	Aicha Ilad	membre	Femme	77 34 70 64	
65	Kadidja Hassan Ali	membre	Femme	77 43 90 68	
66	Fatouma Ali Adou	membre	Femme	77 85 52 79	
67	Amina Awaita Bahdo	membre	Femme	77 67 44 96	
68	Wais Ilekro Farah	membre	Homme	77 20 09 13	
69	Guass Bayrat Ismaël	membre	Femme	77 85 96 70	
70	Hamad Mohamed Hamad	membre	Homme	77 76 87 48	
71	Abdallah Hamad Hassan	membre	Homme	77 42 45 79	
72	Idriss Abdallah	membre	Homme	77 13 30 87	
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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

KITUI COUNTY – KENYA

Participants' Registration Form

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

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DRESS-EA Project:

Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

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Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

Stakeholder Consultative Workshop – 04 March 2019, Kosti, Sudan. - Attendance Sheet (2)

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Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

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31	[illegible]	[illegible]		
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Strengthening Drought Resilience for Small Holder Farmers & Pastoralists in the IGAD Region

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Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

Participants' Registration Form

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Global Water Partnership

STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

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STRENGTHENING DROUGHT RESILIENCE OF SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

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STRENGTHENING DROUGHT RESILIENCE FOR SMALL HOLDER FARMERS AND PASTORALISTS IN THE IGAD REGION

DRESS-EA PROJECT

DJIBOUTI, KENYA, SUDAN AND UGANDA

Environmental and Social Impact Framework

Sahara and Sahel Observatory

April, 2019

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

LIST OF ACRONYMS

AF	Adaptation Fund
DRESS-EA	Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region
DWRM	Directorate of Water Resources Management
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FPO	Focal Point Officer
GWPEA	Global Water Partnership Eastern Africa
IWRM	Integrated Water Resources Management
MWE	Ministry of Water and Environment
NDP	National Development Plan
NEMA	National Environment Management Authority
NEMP	National Environment Management Policy
NFA	National Forestry Authority
OSS	SAHARA AND SAHEL OBSERVATORY
WMZ	Water Management Zones

1 Introduction

The proposed Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region project is to be implemented in four countries including Uganda, Djibouti, Sudan and Kenya. The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region. The project has been formulated and is to be implemented by the Directorate of Rural hydraulics in Djibouti, Ministry of Environment and Forestry, Directorate of Climate change in Kenya, the Ministry of Water Resources, Irrigation and Electricity in Sudan the Ministry Water and Environment in Uganda, with technical assistance from Global water partnership Eastern Africa the Executing entity and OSS the implementing Entity.

1.2 Project description

The IGAD member states face severe water constraints and prolonged droughts. Between 60- 70 percent of the land area in the IGAD region consists of Arid and Semi-Arid Lands (ASALs) that receive less than 600 mm of rainfall annually (IGAD 2013). It is predicted that the frequency and intensity of droughts would increase because of climate change, especially in semi-arid areas. In fact, climate change has exacerbated drought occurrences due to high anomalies in precipitation. From 2015 to-date, high rainfall anomalies have been recorded. Moreover, the region faces uncontrolled activities such as deforestation and poor agricultural practices that led to reduced water retention capacities, surface runoffs, and soil cover losses. Such activities not only impact negatively on water resources, environment and other ecosystems that serve as community livelihood sources, but also increase their vulnerability to droughts. Significantly reduced precipitation levels lead to pollution, food insecurity, civil strife over water, food and pastures, the drying-up of rivers, streams and aquifers as well as loss of plant available water in the soils on which smallholder farmers and pastoralists derive their livelihoods.

The natural resources of the region represent a major asset for the local populations whose livelihoods rely mainly on agriculture, livestock, fishery, forest resources, pastures, etc.

In view of all these observations and with the aim of strengthening the resilience of the region's populations and ecosystems, the Sahara and Sahel Observatory (OSS) in collaboration with the four riparian countries (Djibouti, Kenya, Sudan and Uganda) and in partnership with Global Water Partnership Eastern Africa (GWPEA) have prepared and are to submit to the Adaptation Fund (AF) a proposal for a regional project entitled "Strengthening Drought Resilience for Small Holder Farmers and Pastoralists in the IGAD Region - DRESS EA". The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.

The project targets to consolidate synergies and adapt innovative and resilient drought management actions from selected IGAD region countries including Djibouti, Kenya, Sudan and Uganda. The holistic approach of the proposed project is designed as a more integrated way to support communities in locations that are considered most vulnerable to droughts.

1.2.1 Description of the Project sites

The project will be implemented in different sites within each of four selected countries of the IGAD region. Basically, these are areas that are considered to be most vulnerable and prone to drought based on the following criteria:

- In terms of the environmental conditions, the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (focusing on vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).
- Communities inhabiting such sites are also food insecure characterized by recurrent famine and a shortage of food. There is high dependence on the rain-fed agriculture especially high dependence of farmers and pastoralists on crop and livestock farming**.**
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender. Low-income levels of the population/high poverty levels in such sites therein are known and reported.
- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income.

In Djibouti, the project will be implemented in three sites that are considered most vulnerable to droughts. The sites include Bieidley in Ali Sabieh region as well as, Wadi Gobaad, and Hanle sector in Dikhil region. Ali Sabieh Region is located at latitudes 11.1516° and Longitude 42.7122N and 9.6" 42° 42.44" E. It lies at in southern Djibouti with a total land area of about 2,400km2. It borders Somalia and Ethiopia near the Dikhil region to the west. Dikhil region is the largest region in Djibouti with a total land area of approximately 7.200 km2 (Figures 4a and 4b). In Dikhil region, the Wadi Gobaad is 120 km long and drains south of the Gobaad depression to the southwest of the Republic of Djibouti. It is the confluence of many superficial flows of the Adigala region in Ethiopia that crosses from south to north into Djibouti territory via Abbot Lake as Eyla. The Hanle sector is found 150-200m above sea level. The three project sites in Djibouti are characterized by warm and dry climate, very low precipitation and highly variable (not exceeding 200 mm annually) with scattered shrubs and grassland patches. .

In Kenya, the project will be implemented in Kitui and Samburu counties that lie between latitudes 0°10‟ and 3°0‟ south and longitudes 37°50‟ and 39°0‟ East and latitudes 0°30'and 2° 45' north of the equator between longitudes 36°15' and 38° 10'east of the Prime Meridian respectively. Kitui covers an area of 30,496.4 km^2 including 6,369 km^2 occupied by Tsavo East National park. Samburu covers an area of 21,022.27 km^2. Samburu is bordered by Turkana to the Northwest, Baringo to the Southwest, Marsabit to the Northeast, Isiolo to the East and Laikipia to the South.

In Sudan the project shall be implemented in the White Nile state. The White Nile State (WHS), as one of the Sudan's most vulnerable regions, is severely impacted by the climate change induced droughts and floods. Most notably, increasing temperatures, decreasing trends of annual rainfall as well as increasing variability, are causing gradual shift of ecological zones from north to south. This situation has adversely impacted water availability, agricultural and livestock potential, as almost, 70% of the total land area (40 km^2) earn a living based traditional rain fed agriculture and livestock (animal resources: sheep, goats and cattle - are estimated as more than 8 million head).

While in Uganda, the project will be implemented in Rupa Sub County in Lokere Catchment. The catchment is located in the districts of Kaabong (5.4%), Moroto (32.0%), Kotido (3.8%), Napak (32.9%) and Nakapiripirit (2.2%) in the Karamoja Region and; Amuria (11.0%), Katakwi (9.5%) and Soroti (3.3%) in Teso Region. Lokere Catchment covers a total area of 8,156 km^2. Rupa Sub County in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya. This calls for transboundary approaches and interventions in tackling the drought problem across neighboring areas in Uganda and Kenya.

1.3 Project Components

The overall objective of the project is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region.
The Project has four components.

1. Development and enhancement of a regional Drought Early Warning System,
2. Strengthening the capacity of stakeholders to manage drought risks due to Climate Change effects
3. Drought and Climate Change adaptation actions and
4. Knowledge management and awareness creation.

1.3.1 Key Component Activities

Key activities and sub-projects that are likely to have negative Environment and social impacts during the implementation of the DRESS-EA project may include but not limited to the following**:**

- Equipping and upgrading weather stations including observation and monitoring infrastructure
- Equipping /upgrading of selected weather stations,
- Construction/renovation and equipping of EW information centers
- Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
- Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),protection of water wells and springs)
- Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
- Restoration of degraded water catchments
- Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dry land agroforestry),

- Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells.

1.4 Environmental and Social Management Framework

It is requirement for project implementers to ensure that all the negative environmental and social impacts of a project on the environment and communities are adequately mitigated while the positive ones are enhanced. This ESMF has been prepared to aid various stakeholders to identify and effectively manage potential environmental and social impacts of the proposed "**Strengthening *drought resilience for small holder farmers and pastoralists in the IGAD region Project"*** during implementation, in accordance with international good practice as well as the Adaptation Fund's Environmental and social policy and Government of Uganda (GoU) requirements.
Specifically, the main purpose of the ESMF is to

- Establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and the subsequent ESIAs/ESMPs, as applicable; and
- Provide practical information on resources required to implement the ESMF requirements. 2.1 Methodology of Preparing the ESMF

The development of this ESMF entailed review of project related documents, review of the relevant policies laws and regulations, consultations with key stakeholders and review of the Final ESMF by NEMA as detailed below.

a) Review of project related documents

Relevant documents on the Strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project, project concept and other study reports.

b) Review of relevant policies, Laws and regulations

A review of the relevant environmental and social management policies, laws and regulations for the four countries was conducted. Additionally, the Adaptation Fund and OSS environmental and social policies were also referred to ensure that the proposed project investments are in conformity with their Environment and social policy requirements.

c) Consultations with key stakeholders

This ESMP has been developed in consultation with all the relevant stakeholders in the four countries. These consultations enabled the collection and analysis of information on possible environmental and social impacts of the project investments, possible enhancement and

mitigation measures, and key stake holders responsible for the implementation of the mitigation measures among others. The key stakeholders consulted included:

- Government institutions and departments
- Non-Government Organizations
- Technical units at regional and site levels
- Political leaders
- CBOs and the target beneficiary communities

d) Consultations and Review of the ESMF by NEMA

This Environmental and Social Management Frame work was submitted to Authorities responsible for Environment and Social issues for Projects in the four countries for review and approval as the Framework that will guide detailed assessments that will be carried out for certain specific projects depending on their size, location and type.

(e) Public disclosure

For projects such **DRESS-EA** the Environmental Authorities in the four Countries as well as Adaptation fund and OSS Environmental and social policies require that the ESMF is prepared and publicly disclosed to all stakeholders. This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project, and for other reviewers to strengthen the frameworks, particularly measures and plans to prevent or mitigate any adverse environmental and social impacts. To this end, this document will be publicly disclosed through the responsible Ministries or Directorates websites. Also the stakeholder consultations undertaken during compilation of the ESMF partly served the purpose of disclosing the project to the stakeholders and their views, concerns and input has been considered, and will accordingly inform different design aspects of the project.

DJIBOUTI

2. Baseline Assessment

2.1 Physical Environment

2.1.1 Location

The landscape of the Dikhil region is essentially divided into two zones, one in the West (the largest) and the other in the East. To the west, there are a succession of great topographic depressions: Plains of Gobaad (West of Dikhil), Hanle (West of Yoboki), Gaggadé-Derela and basaltic plateaux (Dakka-Amaïlé, Yagger, Babbalou-Gabadou, Datalé, Gamare). The altitude of the plains varies from 150 to 450 m from North to South.

2.1.2 Climate, Rainfall and Temperature

The average annual rainfall over the country is of the order of 150 mm. Maximum annual rainfall is observed in the mountainous areas west of Tadjourah (Goda Massif). Rainfall decreases sharply in the direction of the northeast to the coast at Obock-Khor Angar-Doumeira with 50 to 100 mm per year. In the northern parts of the country, the annual rainfall is 100 to 150 mm (Dorra-Balho), while in the western regions (Hanle Plain, Gobaad Plain) precipitation exceeds 150 mm. In the south of the country, in the coastal plain, the annual rainfall is between 130 and 200 mm, and decreases towards Dikhil.

2.1.3 Geology and Soils

The territory covered by the Dikhil region is dominated by basaltic geology. The visible consequences are the existence of rocky materials and steep reliefs near mountain ranges and that of more sandy and loamy formations in the plains and valleys, with gentle slopes. The ability and receptivity of soils to agricultural activities are concentrated in the plains of application (Gobaad, Hanlé) and the alluvial valleys (Chekheit) which represent large areas. These activities are conditioned by the hydrological factor which is, however, very unfavorable in Dikhil District. Currently, the fertile areas are the subject of invasion of the thorny and invasive prosopis.

2.1.4 Hydrology and Drainage

The hydrographic network is formed only by temporary flow streams called "wadis". The wadis drain twenty-six major watersheds, themselves composed of many sub-basins. This network of intermittent streams drains the southern plateaus of Djibouti. The mountainous areas, on both sides of the Gulf of Tadjourah, flow into the sea. The rest of the national network feeds the depressions that present a pastoral potential, agro-pastoral in some places. However, the country is characterized by the scarcity of irrigable agricultural land: the national irrigated area does not exceed 1,000 hectares. The soil cover is often skeletal (lithosols), this explains the runoff which is still tempered by the state of roughness of the soil, strongly covered with pebbles thus partially limiting the erosion.

2.2 Biological Environment

2.2.1 Flora and Fauna

According to the National Biodiversity Strategy Paper, Djibouti's (terrestrial and marine) biodiversity consists of 826 plant species and 1,417 animal species, including 493 species of invertebrates, 455 species of fish, 40 species of reptiles, 3 species of amphibians, 360 species of birds and 66 species of mammals.

2.3 Socio-Economic Environment

2.3.1 Local Economy

The physical and climatic constraints result in the reduction of arable land and agricultural activity. Hence the insufficiency of the agricultural practice in the two regions of the project where it would be practiced in wadis and occupy very few assets outside the small kitchen gardens of huts. Livestock is the major activity in the project area, but with the same constraints as agriculture.

2.3.2 Population Characteristics (Demography)

The Dikhil region occupies about 30% of the national territory with a total area of about 6,800 square kilometers. The population of the region is estimated at about 88,948 inhabitants, or 10.87% of the total population of Djibouti or 25.9% of the total national population living outside the city of Djibouti. The new zone straddles the Obock and Tadjourah districts, but covers only about 80,000 hectares. About 8000 inhabitants are considered in this area outside Tadjourah.

2.3.3 Land use

In Dikhil, access to land is complicated and its occupation opaque. The land issue must therefore be settled since it plays a preponderant role that contributes not only to the achievement of urban development, but also sometimes to the emergence of conflict situations in the absence of a security of tenure and security policy. 'access. It becomes imperative to consider land regularization as a prerequisite for the act of urbanization and construction.

2.3.4 Water resources

Djibouti is generally poorly endowed with natural resources. It has inadequate arable land, insufficient rainfall, and underground water resources. There are a number of water pump schemes

SUDAN

Location

In Sudan, the project will be implemented in EL Salam Locality – The White Nile State, which lies along the western bank of the White Nile river, with the following boundaries

East : White Nile River

South : Border with South Sudan (SS)

West : Border with South Kordofan State

North : Mid way between Kosti town and Border with SS (North El Zelate town) with the border of the Republic of South Sudan. The locality covers an area of about 5919 km2 represents about 11.2% of the WNS area.

The population of the area is around 136,000 in addition to huge number of refugees (120,000) an returnees (68,000).

Climate

Despite that the area is in the south of the state, it severely impacted by the climate change induced drought, and it is one of the most vulnerable locations for agriculture, water and health. The total average annual rainfall varies between 300 t0 600 mm/year there is a short rainy season with heavy rainfall events from July to October with typically up to a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events during August. As a summary the following is valid:

Average minimum temperature (1963 – 2004):15.7 (Jan.) – 25.3 (May)

Average maximum temperature (1964 – 2004): 32.5 (Jan.) – 41.5 (Apr/May) Average annual rainfall (1961 – 2008) : 350 mm

Geology and Soils

The study area is with the basement complex which indices the absence of groundwater. Most of the top soil of the area is clayey one which rich. Some sand dunes are scattered here and there.

Vegetation Cover

The increased frequencies of drought, dust storms and heat waves, have negatively impact water availability and agricultural potential. Such climate trends and risks are exacerbated by a number of non-climate issues such as: decreased vegetation cover due to overgrazing and deforestation, and inefficient water resources management, thus further increasing trends of ecological zone shift and desertification. Referring to the photo of fig. 3 below, captured during the last site visit on 4th. March 2019, it is clear that the successive drought had left a warning sign of desertification.

Water Resources

The main resources of water is rainfall water which is harvested in small scale dams and artificial pond (haffirs). The White Nile River is another source of water. Irrigated pump schemes along the left bank of the river act as barrier for animals to reach the river and most of the time conflict arise between farmers and pastoralists. During wet years floods from seasonal khors, particularly Khor Abu Habil which originates from Kordofan mountains, hits the west side of the locality.

It is worth-mentioning that the rainfall water need to be stored for use during dry periods (summer), as filing of the ponds and small earth dams, and recharge of the shallow well completely depend on rainfall water.

Settlements

El Salam locality is maintaining long open border with South Sudan as well as historical social/blood relationships as a result of mix-marriages particularly with Shuluk and Nuer tribes, the most dominant in Upper Nile States, these factors have motivated/driven majority of the South Sudanese flee to WNS in seek of safe refuge.

Generally, the settlements in Es Salam locality are scattered with some concentrations around productive agricultural areas, trading centres, and water sources.

Livelihood Activities

Livestock rearing is complemented with rain fed crop production of mainly sorghum, millet, Okra and legumes. The area is very rich with livestock. The movement of animals from one place to another place resulted in spread of dangerous and killing diseases. Lack of drugs and vaccinations are important issues need to look at. The area is famous with home-made cheese and milk oil (Samin) as the main milk products. Animal skins are usual exported to large markets (Kosti, Um

Dorman …) for production of shoes, bags … etc.It evident that 80% of the pastoralists move from the locality to South Sudan (SS) and stay there from September to June every year.

Sanitation

Access to improved sanitation facilities is very poor in Es Salam locality. The use of hand washing facilities is lower compared to the national average.

Education

El Salam locality is relatively has low level of education attainment with the highest number of the population without education. Most of the population prefer to go to animal breeding and farming at early age of their life. Within the locality, the percentage of male and female pupils enrolling in the primary schools is 58% and 42%, respectively. Among the teachers, 57% are females and 43% are males.

Health

Health facilities in El Salam locality is very limited. One public hospital exists in Al Naeem town, the capital of the locality. The second is the Police hospital at El Rawat administrative unit and the third one, which serves the refugees and stationed in El Kashafa camp. In additional to that, there are twelve medical centers and 18 medical units scattered within the locality. It is evident that all the above medical facilities are suffering the lack of staff and medicines and drugs, and most of them are just buildings.

KENYA

Location

In Kenya the Project will be implemented Kitui and Samburu Counties. Kitui County is one of the 47 counties in the country located about 160 km east of Nairobi City. It is the sixth largest county in the country, covering an area of 30,496.4 km2 including 6,369 km2 occupied by Tsavo East National park. It is located between latitudes 0°10‟ and 3°0‟ south and longitudes 37°50‟ and 39°0‟ east while Samburu County (0030’ – 2 045’N and 36015’ – 38010’E) is within the northern parts of Great Rift Valley in Kenya. The County lies within ASAL region covering an area of 21,022 square kilometers.

Climate

Kitui has three different climates: Hot semi-arid climates, Tropical savanna climate, and Warm-summer Mediterranean climate. The county receives between 500mm and 1050mm of rainfall annually, with average rainfall of 900mm a year. It has two rainy seasons; May-June (long rains) and September-October (short rains).Kitui County is mostly dry and hot with temperatures ranging between 14°C during the coldest months (July-August) and 34°C during the hottest months (January-March).

Samburu is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). The county receives between 200mm and 250mm of rainfall annually. The rainfall pattern is unpredictable and

at times the county receives no rain in a whole year. Annually, the county has annual mean temperature of 290c with the maximum range being 330c and minimum of 240c. The central plains and the region east of the Matthews Range have the highest temperatures while the highland belts in the North Eastern side of Lorroki Plateau are cooler.

Soils

Generally, soils are predominantly sandy to loamy sand texture, hence they are susceptible to erosion and are limited in their capacity to retain water and nutrients. The major soil type of the proposed project area is lixisols (red soils). Alluvial deposits (fluvisols) occur in isolated patches along rivers and on hill slopes. The soils are generally poorly drained and easily eroded by runoff.

The soils in Sanburu county are mostly Sandy loam soils. Kirisia area has sandy loam and sandy clay soils, which are lithosol (shallow stony soils) and cambisols. In the areas covered by lithosols water run-off is common and erosion quite prevalent. Just as Kiriasia, Lorroki has loam soils as the dominant one. These soils are mostly well-drained phaezems. However, some parts of it is covered by shallow lithosols, including the surrounding of Suguta Marmar where the risk of flooding is classified as medium. The lithic phase of the soils encourages run-off during periods of high precipitation. In the northern part of the County consisting of Baragoi and Nyiro areas, the predominant soil covers are bouldery cambisols and lithosol. The soils are particularly more stoney and rocky on the southern slopes of Mt Nyiro and Ndoto mountains.

Drainage

The distribution of drainage is determined by the watershed of the Kitui hills which form an axis between the south-westerly trending tributaries of the Tiva and those of the main watercourses passing through the area. The western half of the area is dissected by a trellised drainage pattern in which secondary tributaries of the Thowa and lkoo are deeply entrenched parallel to the prevailing strike, and follow the softer members of a contrasting series of metamorphic rocks. Most streams within the area only carry flowing water for a few weeks during each rainy season, when they may become torrents for short periods. With the cessation of seasonal rain, they rapidly dry up, but during the dry seasons water can usually be found by digging in their sand beds to a depth of a few feet.

Samburu County fall in drainage areas number two (Kerio Valley) and number five (Ewaso Nyiro). Main water sources in the county constitute surface and ground water. The Ewaso Ng ‘iro River flows northwards about 30 km, then changes the direction to flow eastwards. After turning sharply east through the gap between the Mukogodo hills in the south and the Karissa hills in the north, the river flows through a 70m deep gorge for about 60 km in Barselinga. There are several seasonal riverbeds or "laggas" which during rainy seasons are filled with runoff water, making roads impassable and often leaving the area cut-off from the rest of the country.

Vegetation

Kitui County has 14 gazetted and 15 ungazetted forests. Taking all forms of forests into account, there are about 35,592.6 Ha of forest cover in Kitui County, under different forms of ownership. The

forest cover is crucial for climate change mitigation, water resource management, control of soil erosion and boosting of agriculture in the County.

There is a total of 3,250 km2 of gazetted forests translating to a 15.4percent forest cover in the county. This mainly consists of indigenous forests uniformly distributed across the county. The main tree species are the acacia, commisera, brocella which are dominant in the lowlands of Samburu North and Samburu East as well as sections of Samburu Central. The highland species include: cedar, podo, chepnuts and olea, Africana amongst others these are mainly found in kirisia and porror areas. The most endangered species are the Cedar and Podo because of their value in construction of houses particularly in upcoming urban/trading centers.

The County boasts of having the largest number of wildlife outside the game reserve. Some of the wild animals found in the County include; Reticulated Giraffe, the endangered bevy zebra, Besia Oryx, Grater and Lesser Kudu, Gerenuk, Somali ostrich, Pun cake tortoise, Wild Dog, lions, elephants, and buffalos in addition to the small wildlife.

Agriculture

Agriculture is the backbone of Kitui County. In the highlands of Kitui, farmers are involved in subsistence agriculture - mainly growing cotton, tobacco, sisal, mangoes, maize, beans, cassava, sorghum, millet and pigeon peas. These crops are well adapted to the climatic conditions of Kitui. Crops produced are consumed locally with the surplus being sold to traders from Nairobi and neighbouring towns. In the lowlands, farmers keep livestock - mainly cattle, sheep, goats and chicken - as a means to supplement crop farming as their source of income. Tourism is a low-key economic activity with some of the residents building hotels and lodges that serve visitors coming to the main towns for business and leisure, Mwingi National Reserve, South Kitui National Reserve as well as the Tsavo East National Park. These tourist attractions also offer a thriving market for local artefacts such as baskets and soapstone/woodcarvings - another major source of revenue to the people of Kitui.

Health

Kitui County has several hospitals and health centers to meet the health needs of residents, among them Kitui County Referral Hospital, Mwingi Sub-County General Hospital, Kitui Nursing Home, Neema Hospital, Jordan Hospital, mission-run hospitals such as Muthale Mission hospital and some private health centers. Kitui County has commissioned 23 new health facilities to reduce the distance, time and cost to accessing healthcare services. There are 240 functional public health facilities in the County, accounting for 6% of the country's 4, 000 public health facilities.

Samburu County has one level four hospital situated in Maralal town, one faith-based hospital in Wamba and one sub-county hospital in Baragoi town in Samburu North. The county also has 15 level three health facilities, 54 dispensaries (47 owned by GoK, 6 faith based and one owned by NGO,) and 15 private clinics in the county. Currently the county has a total of 30 functional Community Health Units accounting for 48% of the total expected units in the County. These Community Health Units are distributed across the three sub counties in the following order, S-North 9, S-East 10 and S-Central=11 respectively.

Population

According to KNBS (2009), the county has population of 1,012,709. According to KNBS (2009) 531,427 are females while 481,282 are males. The population was projected to grow to 1,065,330 by 2013. The population growth rate of the county at 2.1% is slightly lower than the national rate of 2.6%. High population exerts pressure on social and natural resources, and it is imperative for the county to develop strategies in addressing the population growth rate.

According to the 2009 Population and Housing Census, the population of Samburu County was 223,947. Given a population growth rate of 4.45 percent per annum, as opposed to the national growth rate of 3 percent, the County population is projected to increase to 399,378 by 2022 and 456,418 by 2025. These changes represent about 25% population rise between 2017 and 2022.

Housing

The main types of houses are classified in terms of the different materials used in construction. Roofing materials in the County are mainly Corrugated Iron sheets roofs at 94.5 percent. A large percentage of households use earth/sand, and cement as floor material at 58.6 percent and 40.4 percent, respectively. Walling of houses also varies with 33 percent having cement finish, 25.8 percent with bricks, and 23.5 percent with bamboo with mud/cow-dung.

The housing sector within Samburu the County is mostly private sector driven with most individuals striving to construct their houses or avail houses for rental purposes. Most of permanent housing units are mostly evident in urban areas with distinct types like marionettes, bungalows and flats

Water and sanitation

Improved sources of water comprise protected spring, protected well, borehole, piped into dwelling, piped and rain water collection while unimproved sources include pond, dam, lake, stream/river, unprotected spring, unprotected well, jabia, water vendor and others. In Kitui County,

26% of residents use improved sources of water, with the rest relying on unimproved sources. A total of 52% of residents in Kitui County use improved sanitation, while the rest use unimproved sanitation.

The county has two permanent rivers. There are 35 protected springs and 104 boreholes. Households with piped water are 17,133 while 5,500 households have access to potable water. There are 112 water pans and 213 surface dams. The county has 141 shallow wells, 37 unprotected springs and 9800 houses with roof catchment. In the entire county, only 13.5% of the population has piped water. To ensure water quality at household level, the county department of health provides water treatment chemicals (Aqua tabs) and there is ongoing health education on water quality and safety. Samburu is generally a water scarce County. The main sources of water for domestic and Livestock uses are; Boreholes (137), Water conservation structures (83 water Pans, 29 Dams, Rock Catchments, Roof catchments), Shallow wells, and 21 springs of which 5 have been improved and protected. The department continues to increase water sources through drilling and equipping of boreholes, construction of dams/pans, rock catchments, subsurface dams, and Pipeline extensions on developed sources. Water quality in the county is generally poor with most surface water and shallow wells not protected hence contamination may occur.

Livelihoods

Livestock rearing is the backbone of Samburu County's economy. The majority of people are nomadic pastoralists who mainly keep cattle, camels, sheep and goats. These animals are mainly sold to the Kenya Meat Commission as well as traders from Nairobi and other neighboring towns especially during droughts. Bee-keeping is also a major economic activity.

Despite the harsh climatic conditions, some Samburu residents have recently started growing crops in effort to fight starvation. Drought-resistant crops such as millet, sorghum and certain species of maize are grown in areas such as Lpartuk, Poros and Malaso.

Tourism is also a major source of revenue to the Samburu people, with some of the residents being employed in the county's safari lodges and others working as tourist guides. The county's main attraction sites offer a thriving market for Samburu artifacts such as beads, necklaces and bracelets**.**

Land use

The county has a total area of 30,496.4 km2 of which; 6,369 km2 of the County land consists of the Tsavo East National Park and is not available for agriculture, 14,137.2 km2 is arable agricultural land and 6,364.4 km2 nonarable land. Over 85% of the County's population lives in rural areas. The average population density is 44 persons/km2 which is generally sparse. The average size of land holding in the County is 0.12 km2 per person (12 ha per person).

The County is blessed with huge land mass of an approximate size of 21, 022. 01 square kilometers and it host numerous natural resources and human activities. Of the total area, 3,103.41km2 (15.5% of the County land area) is under gazetted forests; 170km2 (0.85%) is under game reserves and animal sanctuary; 1.8 km2 (0.0085%) is under surface water and 16,746.8 Km2 or 83.64% is the land remaining for occupation under urban centers, Group Ranches, land set aside for public uses, individual ownership and hosting other natural features.

The significant land cover within the county is rangeland and gazetted forest that occupies15.5% of the county. On the other hand, the dominant land uses include nomadic pastoralism, wildlife

conservation areas such as West Gate, Namunyak, Kalama & Samburu National Reserve, urban development and crop farming.

Uganda

Location

In Uganda, the project will be implemented in Rupa Sub County in Lokere Catchment. Rupa Sub County is in Moroto district borders Kotido District to the North, Katikekile Sub County to the South East, Moroto Municipality to the south and Turkana County of the Republic of Kenya.

Climate

The total average annual rainfall varies between 550 mm/year in the upstream areas of Lokere and 1,300 mm/year in downstream areas. There is a short rainy season with heavy rainfall events from April to July with typically a 2-week dry spell at the beginning of June, and a long rainy season with less heavy rainfall events from September till December/January. The long rainy season is almost absent in the upstream parts of Lokere. Precipitation is highly variable in space and time, with both intense rainfall events and long dry periods.

The dry season lasts between 2 to 9 months, depending on the year and the location in the catchment. The long dry season lasts longer the further one moves north in the catchment. As a result of the high rainfall variability Lokere Catchment suffers from acute water shortages during the dry season in the Middle and Upper Catchment and heavy flash floods during the rainy season in Middle and Lower Lokere. During the dry season the Karamojong migrate many kilometres in search of water and pasture for their animals. Climate change projections indicate that temperatures will rise, rainfall intensity will increase and extreme events such as droughts and floods will occur more often.

Geology and Soils

Geologically Lokere Catchment is underlain by Precambrian crystalline basement rocks of the Gneissic Granulitic Complex, which have been modified by high-grade metamorphism, deposition of sediments, volcanic activity and rift faulting. Mount Moroto, Mount Napak and the smaller mountains along the Ugandan-Kenyan border are tertiary inactive and dormant volcanoes. These outcrops are chiefly characterized by soda-rich agglomerates, lavas and tuffs, while locally eroded remnants of former volcanoes, such as carbonatite rings and syenite complexes, are present. Some of these sediments are of volcanic origin, while others are associated with earlier depositional episodes. The river beds and flood plains form a fingered pattern which mainly consists of alluvium, black soils and moraines with inselbergs scattered throughout.

The soils in the far eastern highlands, at the border with Kenya, are mostly sandy gravels and red sandy loams (leptosols), all with a notable very low fertility. These soils support little vegetation and are most suitable for extensive (migrant) pastoral activities. At the foothills, on the contrary, highly fertile luvisols can be found. In the large open plains in the upper and middle catchment cambisols – further away from the streams - and vertisols – closer to the streams – alternate.

Young soils formed on volcanic ashes, such as alisols and nitisols, occur in pockets around the extinct volcanoes of Mount Moroto and Mount Napak. Alisols are highly acid, which makes them

unsuitable for many types of crop production. Nitisols are to a lesser extent characterized by this acidity, and in combination with their high fertility, better apt for crop production. The lower parts of Lokere Catchment are characterized by fluvial depositions and soils, such as arenosols and plinthosols, which developed in areas of seasonal and permanent waterlogging and are used by the local population, the Teso, for paddy rice cultivation.

Vegetation Cover

Land in Lokere Catchment is currently covered approximately by equal shares of forest and woodlands, grasslands and shrublands, and croplands. Extensive wetland systems are present in Lower Lokere. Most lands are communally owned, except in the town centres of Moroto and Katakwi, and the lands in Lower Lokere where individuals possess title deeds. Approximately 1/3 of Lokere Catchment has a protected status and is either under the management of the National Forest Authority (NFA) or the Uganda Wildlife Authority (UWA).

Water Resources

In the upstream parts of Lokere rivers react quickly to rainfall, are characterized by large variations in low and peak flow, and contain large volumes of sand and silt due to soil erosion. Downstream, in the wetland areas, there is always water. The wetlands absorb water during the rainy season and release water slowly in the dry season.

Groundwater is concentrated in fractured rock and in a top-layer of loose material covering solid rock and in the riverbeds and floodplains. Chemical groundwater quality is in general good, although around Mount Moroto and Mount Napak locally high fluoride levels are found. Microbiological contamination, on the contrary, is a major concern, also in deep groundwater wells due to poor design, construction, operation and maintenance of the infrastructure. Safe water coverage in Lokere Catchment is low, and varies between 29% in Kaabong and 72% in Soroti.

Current total water use for domestic, livestock and irrigation purposes equals 6 Mm^3/year. To cover the water demand, however, 1.3 Mm^3/year of extra potable water needs to be supplied for domestic use, 14 Mm^3 for livestock watering and 87 Mm^3 for irrigation. Apart from these productive uses, estimates indicate that a so-called environmental flow of 238 Mm^3/year has to remain untouched to safeguard the adequate functioning of natural systems.

The water resources analysis shows that;

- There is sufficient water available in the catchment to fulfill the demand, even during dry years, but water needs to be stored during the rainy season for use in dry periods.
- Wetland areas are very important to mitigate droughts and floods, and
- Areas used for crop production have a negative impact on water availability, mainly due to poor farming practices.

Settlements

Settlements in Lokere Catchment are scattered with concentrations around productive agricultural areas, trading centres, and water sources. The upstream and middle parts of the catchment are

mainly inhabited by pastoralists and agro-pastoralists; the downstream parts by crop farmers. Cattle, goats and sheep are grazed in open grasslands, wetlands, shrub lands, forests and agricultural lands after crops have been harvested.

Livelihood Activities

Livestock rearing is complemented with rain fed crop production of mainly sorghum, millet and maize, and flood-irrigated paddy rice. Mining (mainly marble around Moroto) is another important economic activity. Around Moroto marble mining permits are held by large companies from outside the catchment. Sand mining from rivers is small-scale and mainly by communities. Charcoal production for sale to Soroti, Mbale and Kampala is also an additional source of income. The population is poor. Recent studies indicate that nearly 80% of the population lives below the poverty line (WFP, 2015).

Sanitation

Access to improved sanitation facilities is lowest in Karamoja sub region at 25% compared to the national average of 77 %. Karamoja sub region had the lowest rate of latrine coverage at 12.2% compared to the national average of 68% .There is progress towards eradication of open defecation but none of the districts has attained the status of Open Defecation Free environment. According to the UNICEF Annual Report (2013), open defecation has been eradicated in 200 communities. The use of hand washing facilities is lowest in Karamoja sub region (at 8%) compared to the national average of 33%.

Education

The Karamoja sub region has the lowest level of education attainment with the highest number of the population without education (58.1% females and 45% males) compared to the national average (12.9 males and 19.9% females); Completion of primary education stands at 1.4% and 6.7% for females and males respectively, compared with the national average of 6.5% and 7.3 % for females and males respectively.

Health

Whereas the child mortality indicators at national level have greatly improved since 1995, it has not happened in Karamoja sub region. Infant Mortality Ratio reduced from 86 deaths per 1000 live births in 1995 to 54 in 2011 and further to 45 in 2013 but the Karamoja Sub region still ranks highest at 87 death per 1000 births. Under Five Mortality Ratio also reduced from 156 deaths per 1000 live births to 90 in 2011 and further to 69 but the Karamoja sub region still has the highest ratio of 153 death per 1000 live births

According to the Uganda Demographic and Health Survey (2011), the Karamoja sub region has the lowest nutritional status of children under 5 according to three Anthrometric indices- Height for Age (stunting); Weight for Height (wasting), and Weight for Age (Underweight) as indicated in the table below:

3.0 PROJECT ALTERNATIVES

One of the objectives of the Environmental and Social Impact Assessment (ESIA) is to also provide a description of any other alternatives which are being considered. Alternatives are, "different means of meeting the general purpose and requirements of the activity" which includes alternatives to:

(a) The property on which or location where it is proposed to undertake the activity;

(b) The type of activity to be undertaken;

(c) The design or layout of the activity;

(d) The technology to be used in the activity; and

(e) The operational aspects of the activity.

There are two types of alternatives - Fundamental Alternatives and Incremental Alternatives.

3.1 Fundamental Alternatives

Fundamental alternatives are developments that are totally different from the proposed project and usually involve a different type of development on the proposed project area, or a different location for the proposed drought resilient adaptation actions

3.1.1. A different Type of development

Since the major objective of the project proponents that is, the Directorate of Rural hydraulics in Djibouti, Ministry of Environment and Forestry, Directorate of Climate change in Kenya, the Ministry of Water Resources, Irrigation and Electricity in Sudan the Ministry Water and Environment in Uganda, with technical assistance from Global water partnership Eastern Africa the Executing entity and OSS the implementing Entity, is to increase the resilience of smallholder farmers and pastoralists to climate change risks mainly those related to drought, through the establishment of appropriate early warning systems and implementation of drought adaptation actions in the IGAD region, the fundamental alternative of a development other than to support drought resilient adaptation actions for smallholder farmers and pastoralists in the target countries is therefore not viable in this case, and as a result, no other project type is being considered. The 'no-go' alternative is therefore not an option.

3.1.2 Different locations

The proposed project areas targeted by Djibouti, Sudan, Kenya and Uganda were selected after careful consideration and basing on the following criteria:

- In terms of the environmental conditions, the sites experience high rainfall variability with increasing frequency and intensity of drought occurrences and high environmental degradation (focusing on vegetation and soil degradation as well as degradation and deterioration of water resources such as streams and rivers).

- Communities inhabiting such sites are also food insecure characterized by recurrent famine and a shortage of food. There is high dependence on the rain-fed agriculture especially high dependence of farmers and pastoralists on crop and livestock farming.
- Socially, there are many vulnerable members among the smallholder farmers and pastoralists especially women, children, youth, disabled and elderly by gender. Low-income levels of the population/high poverty levels in such sites therein are known and reported.
- Economically, smallholder farmers and pastoralists have limited options in terms of the potential alternative sources of livelihoods and /or income

This resulted in the selection of Bieidley in Ali Sabieh region as well as, Wadi Gobaad, and Hanle sector in Dikhil region in Djibouti, Kitui and Samburu counties in Kenya, White Nile State in Sudan and Rupa Sub County in Lokere Catchment, Karamoja region in Uganda. As a result, there are no alternative sites being considered for the proposed development.

3.2 Incremental Alternatives

Incremental alternatives are modifications or variations to the designs of the proposed drought residence adaptation actions that provide different options to reduce or minimize environmental impacts. There are several incremental alternatives that can be considered, including:

- The design or layout of the activity;
- The technology to be used in the activity, and;
- The operational aspects of the activity.

Option 1: Design / Layout Alternatives

The Project development team considered the designs / layout of the proposed drought resilient adaptation actions in order to reduce their potential environmental and social impacts in the on the environment and communities in the target areas. The team proposes that in depth examination of the design and layout of sub-projects be undertaken during detailed Environmental and social impact assessments before these projects are undertaken especially in respect to; Positioning, Size, layout and location of the water harvesting, storage and delivery infrastructure.

Option 2: Scheduling Alternatives

It is intended that the implementation of the adaptation actions including construction and renovation of the proposed weather stations, water harvesting, storage and delivery infrastructure and other associated activities will commence as soon as possible once all relevant approvals have been obtained.

Option 3: Operational footprint

The proposed adaptation actions especially involving the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of weather stations will be undertaken on farms as well as other designated places with potential ecological

footprint. Options on how to keep this to a minimum shall be explored extensively during the detailed EIA studies.

Option 4: The timing and duration of the construction works

The timing and duration of the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of weather stations is likely to have a number of implications especially on the livelihoods and the wellbeing of the communities given the excavations, noise by machines and dust and fumes. Alternatives to enable mitigation of this have been considered and will further be considered during detailed individual sub- project ESIA studies. The climatic seasonality, especially peak rainfall seasons, not only delay operations but also to some degree aggravates the footprint of the earthworks and related construction activities.

Option 5: Location of workers camp (s)

The construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of old weather stations will involve a large workforce of both skilled and unskilled labour with some of them requiring camp accommodation services. Various campsite locations shall be considered and the most suitable ones selected. Alternative accommodation facilities within the project areas shall be considered to minimize the operational footprint and associated risks and costs.

Option 6: Sourcing of supplies

Although some of the inputs required for the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of old weather stations are of a highly technical nature and will therefore have to be sourced from outside the project area, it is important that some supplies if locally available including labour and raw materials are sourced locally. This shall be critically examined.

Option 7: Waste Management

Waste products will be generated by the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of old weather stations activities however minimal, based on the various process inputs. The best waste prevention (Cleaner production) and management practices have been explored.

Option 8: Seasonality of the Construction activities

There is a possibility that the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of old weather stations activities could coincide with the most sensitive breeding cycles of some of invertebrates (in case of fish and other aquatic organisms) in the wetlands, rivers / local streams or the peak farming season. This has been looked into so as to come up with the best alternatives.

Option 9: Compensation of Project affected Persons

Some communities particularly those that live within the proposed areas where the construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation

of old weather stations is to take place may make losses especially in terms of some crops during the excavations and site clearing. Methods by which this could be kept to a minimum have been looked into.

Option 10: Decommissioning

This refers to the end of life of the project. This will largely apply to the location of the workers base camps. It is important that the necessary site restoration and rehabilitation measures are implemented as part of sound environmental management. A number of options have been explored.

3.3 The "No Go" Alternative

The option of doing nothing will mean that the vulnerability of smallholder farmers and pastoralists to climate change risks mainly those related to drought in the IGAD region, will remain the same and no adaptation actions shall be undertaken. From the foregoing, this will not be considered further.

4.0 POLICY, LEGAL AND REGULATORY FRAMEWORKS

The policy, legal and regulatory frameworks for the four Countries as well as relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

Djibouti

Djibouti's Environmental Legislation and Decrees as well as o relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

Table 1: Environmental Legislation and Decrees

Environmental Legislation and Decrees	Purpose	Relevance to the Project
Environmental Code, Law No. 51/AN/09/6L Chapter VII: Mechanisms of Integration of the Environment	This outlines the required contents of an ESIA. The ESIA must include, at a minimum: Analysis of the baseline environmental conditions of the project site, Project description, Environmental impacts of the project and the measures to eliminate, reduce, or compensate for adverse impacts on the environment and public health, Estimated cost to implement the measures, Environmental management plan and Results of a public hearing.	This shall be relevant especially when developing ESIAs for sub-projects.
Decree No. 2001-029/PR/MHUEAT, Environmental Impact Assessment Procedure	This demands that proponents for projects likely to have negative environment and and Social impacts undertake an ESIA study including the environmental and social management plan and Submit to the Ministry for the Environment for review prior to granting an Environmental permit by the Ministry. The Decree also requires that the ESIA and ESMP be prepared in French. .	This is applicable to some of the Sub-projects under this project
Environmental Code, Law No. 51/AN/09/6e	The Environmental Code defines the national policy for environmental protection and management. It defines requirements for protection of the following resources: • Water resources (Articles 16 to 26) • Soils and geologic resources (Articles 27 to 32) • Air and atmosphere (Articles 33 to 44) • Human settlements (Articles 45 to 51) • Hazardous materials management (Articles 71 to 73) • Waste disposal and management (Articles 75 to 88) as	All these are relevant to the drought resilience adaptation actions to be supported by the project

	well as prohibiting noise or vibration that is harmful to human health or an excessive nuisance (Article 74).	
Land and Marine Protected Areas, Law No. 45/AN/04/5L	Protected areas in Djibouti include: Day Forest, Mabla Forest and Lakes Abbé and Assal	The project by design advocates for proper management of these resources to increase community resilience
Protection of Biodiversity, Decree No. 2004-0065/PR/MHUEAT	The decree defines animal and plant species that are endemic or endangered within Djibouti. The hunting, capture, trade, export, or import of endemic or endangered animal species is prohibited.	This enhances resilience of species and ecosystems.
Environmental Code Article 29 and Decree No. 2003-0212/PRE/MHUEAT	Article 29 of the Environmental Code prohibits discharge of toxic or hazardous substances in the soil or subsoil.	This will be applicable especially during construction of water harvesting, storage and delivery infrastructure as well as construction of new and renovation of old weather stations
Integrated Coastal Zone Management Plan	The ICZM provides a framework for coordinating the actions of public authorities and socio-economic actors who are involved in the management and use of coastal and marine areas. The main goals of the ICZM include: • Improvement of water resource management • Control of economic development in the coastal zone • Management of urbanization • Improvement of waste management and fight against pollution • Preservation of ecosystems and species	The project activities shall contribute to the objectives of the plan.

Kenya

The implementation of the strengthening drought resilience for small holder farmers and pastoralists in the IGAD region Project in regard to environment and social issues shall be guided by the Country specific policy, legal and Institutional frameworks and other international acceptable policies standards and guidelines.

Table 2: Policy and Legal Framework- Kenya

Policies	Purpose of the Policy	Relevance to the Project
Kenya Environment Policy, 2013	Proposes a broad range of measures and actions responding to key environmental issues and challenges.	It seeks to provide the framework for an integrated approach to planning and sustainable management of natural resources in the country.
National Agricultural Research System Policy	Establishes a national institutional framework that captures the complementarities of the diverse actors engaged in agricultural research and development aims at addressing these shortcomings.	integrating public funded research with research product delivery; mainstreaming social, human and environmental concerns
Vision 2030	A national long-term development blueprint to create a globally competitive and prosperous nation with a high quality of life by 2030, that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment.	To reduce drought vulnerability and enhance adaptation to climate change, to provide drought and climate information to facilitate concerted actions by relevant stakeholders, to protect the livelihoods of vulnerable households during drought crises, to ensure coordinated action by government and other stakeholders and to develop and apply knowledge management approaches that generate evidence for decision-making and practice.
The National Disaster Risk Management Policy	The Policy aims to increase and sustain resilience of vulnerable communities to hazards through diversification of their livelihoods and coping mechanisms.	The Policy will go a long way in preserving life and minimizing suffering by providing sufficient and timely early warning information on potential hazards and droughts that may result to disasters. It will also aim at alleviating suffering by providing timely and appropriate response mechanisms for disaster victims.
Policy Framework on Nomadic Education in Kenya, 2015	The policy aims to coordinate education programmes in these regions and mobilize additional to support investment in education in these regions.	Provide for protection of the environment and institutional arrangements in ASAL, which are so essential to economic productive systems and way of life in ASAL areas across the country and promote sustainable development

Legal Framework

Laws	Purpose of the Law	Relevance to the Project
The Constitution of Kenya, 2010.	This is the Supreme law of the Republic of Kenya and binds all persons and all State organs at both levels of government	The Constitution under Article 42 guarantees every person a right to a clean and healthy environment
The Environment Management and Coordination Act, Cap 387.	EMCA is the principle legislation on all matters environment and creates the National Environment Management Authority (NEMA)	EMCA establishes the EIA rules for the preparation of the mandatory EIA reports Establishes the requirement for an annual environmental Audit for projects
The Climate Change Act, No 11 of 2016	The principal Kenyan legislation on for the development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.	
The Land Act, 2012	An Act of Parliament to give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes	Provides for the different land tenure and management of land in areas the projects are implemented.
The Forest and Conservation Act, No. 34 of 2016	The Legislation that applies to all forests on public, community and private lands	The Act provides for licensing for Licenses/permits in relation to forest resources.
The County Governments Act, 2012	The Act gives effect to the objects and principles of devolution as set out in Articles 174 and 175 of the Constitution.	The Act provides for governance, transfer of functions and powers from one level of government to another and the procedure for County assemblies.
The intergovernmental relations Act, No. 4 of 2012	The Act establishes a framework for consultation and cooperation between the national and county governments and amongst county governments; The Act provides a framework for consultation and co-operation amongst county governments;	The Act establish institutional structures and mechanisms for intergovernmental relations.
Agriculture Fisheries and Food Authority Act, 2013	The Act provides for the regulation and promotion of agriculture	The Act Establishes the Agriculture, Fisheries and Food Authority, to make provision for the respective roles of the national and county governments in agriculture excluding livestock

The Crops Act, No. 16 of2013	An Act of Parliament to accelerate the growth and development of agriculture in general, enhance productivity and incomes of farmers and the rural population, improve investment climate and efficiency of agribusiness and develop agricultural crops as export crops that will augment the foreign exchange earnings	The Act provides for promotion of subsistence crops for smallholder farms and promote the farming of drought resistant crops
Science and Technology Act	Establishes the key building blocks of the national agricultural research system (NARS), namely: the Kenya Agricultural Research Institute (KARI), the Kenya Forestry Research Institute (KEFRI), the Kenya Marine Fisheries Research Institute (KMFRI) and the Kenya Industrial Research Institute (KIRDI).	Provides for a systematic rationalization, integration and alignment of the various research programs with national goals on providing drought resilience led research.
National Drought Management Authority Act	AN ACT of Parliament establishing the National Drought Management Authority, to provide for the membership, powers and functions of the Authority and for connected purposes	To provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management

Institutional Framework

Institution	Mandate	Relevance to the Project
National Environment Management Authority (NEMA)	To exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment.	Accept and review project reports articulating the effects on the environment in respect to project under the project Approve and issue Environmental Impact Assessment (EIA) Licenses to projects identify projects and programs for which environmental audit or environmental monitoring must be conducted All its activities are guided by the Environment Management and Coordination Act 2015
Kenya Forest Service (KFS)	manage water catchment areas in relation to soil and water conservation, carbon sequestration and other environmental services in collaboration with relevant stakeholders; conserve, protect and manage all public forests receive and consider applications for licenses or permits in relation to forest resources	Management of water catchment areas in areas the project are to be implemented Issuance of permits/licenses for forest resources
The Council of Governors	COG provides a mechanism for consultation amongst County Governments, share information on performance of the counties in execution of their functions, facilitate capacity building for Governors, and consider reports from other intergovernmental forums on national and county interests amongst other functions	The COG provides a forum for consultation amongst County governments.
the Climate Change Directorate (CCD)	CCD provides coordination adherence to the country's international obligations including associated reporting requirements. CCD provides analytical support and technical assistance on climate change to the various sector ministries, agencies and county governments; establishing and managing a national registry for appropriate mitigation actions by public and private entities; serving as the national knowledge and information management centre for climate change; optimizing opportunities to mobilize climate finance; and coordinating the response to international obligations, such as reporting requirements	Render advice and technical support, where possible, in natural resources management and environmental protection Provision of technical assistance on climate change programmes based on needs identified by national and county governments agencies Collaboration with relevant institutions on promoting innovation, research & development and technology transfer on climate change Promotion of public participation, awareness, sensitization and capacity building on the relevant programmes
Kenya Meteorological Department	Provision of meteorological and climatological services to agriculture, forestry, water resources management, civil aviation and the private	The KMD provides metrological service for the areas the project will be implemented for best

	sector including industry, commerce and public utilities for the better exploitation and utilization of natural resources for national development	exploitation and utilization of natural resources for resilience to drought and the use of EWS
Kenya Forest Research Institute (KEFRI)	A state corporation established in 1986 and mandated to undertake research in forestry and allied natural resources	Research theme focusing on development of technologies for: rehabilitation and sustainable management of natural forests and woodlands including water towers, wetland and riparian ecosystems; integration of high value trees on farms mitigation and adaptation to climate change & drought; development and promotion of efficient technologies for processing and utilization of scarce forest resources
National Drought Management Authority	To provide for overall coordination over all matters relating to drought management including implementation of policies and programmes relating to drought management	To respond and coordinate all matters relating to drought management develop, in consultation with stakeholders, an efficient, drought early warning system and operate the system
Food and Agriculture Authority	To promote best practices in and regulate the processes in agricultural processes To advise the national government and the county governments on agricultural and aquatic levies for purposes of planning, enhancing harmony and equity in the sector	To promote the best practices for agriculture and enhance drought mitigation measures
Kenya Agricultural and Livestock Research Organization	Aimed at restructuring agricultural and livestock research into a dynamic, innovative, responsive and well-coordinated system driven by a common vision and goal. It emphasizes to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology in Kenya	Its main purpose is to promote, streamline, co-ordinate and regulate research in crops, livestock, genetic resources and biotechnology

SUDAN

In Sudan the Nation Water Policy is the overarching of all different sectors policies. Some of the main legal and regulatory frameworks as well as relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

Table 3: Policy and Legal Framework -Sudan

Policy	Purpose of the Policy	Relevance to the Project
Sudan Water Policy 2007	Overarching all sectors policies. National water resources utilization, protection and management.	All intervention have to comply with the national water policy.

Legal Framework

Laws	Purpose of the Policy	Relevance to the Project
Environment Act 1901	Including regulations for irrigation, energy, health, and industry and insects protection.	
Environmental Health Act 2009	To preserve environmental health including provision and preparation of public drainage and drain rain water and sewage water.	
Environment and Natural Resources Protection Act 2017	Deforestation prevention … etc.	
Water Resources Act 1995	Water allocation and licensing.	
Relevant state Acts		

Institutional Framework

Institution	Mandate	Relevance to the Project
Ministry of Water Resources, Irrigation and Electricity.	The ministry has comprises many directorates with different mandates; these are: - Nile waters and large dams affairs; - Projects; - Strategic plan and Consultancy; - Irrigation operations; - Dams Implementation Unit; - Sudan Meteorological Authority; - The Hydraulic research center; Mandates: - Monitoring of water resources; - Implementing researches in related topics to water sector; - Approval of water - Management of irrigation water; - … etc.	- Approval of proposed water projects; - Water licensing; - Implementation of water harvesting projects; - Design and organizing capacity building programs; -
Ministry of Environment, Natural Resources and Physical Development	- Environment management and protection	
High Council for Environment and Natural Resources	Coordination and	Endorsement of proposed interventions …
State ministry of production and Economic Resources – White Nile State.	New reform. It comprises irrigation, agriculture, livestock and fisheries.	- Inputs to EWS - Participation in CB, programs. -
State ministry of Health and Social Affairs – White Nile State.	Managing heath and social issues.	- Monitoring Standards - Participate in the community oriented intervention … etc.
State ministry of Education and Guidance – White Nile State.	New reform. It comprises education, culture, tourism, youth, public media.	- Gender mainstreaming -
State Ministry of Finance, Economic and Manpower - White Nile State.		- Facilitate in employment

Uganda

Uganda's policy, legal and regulatory frameworks for the four Countries as well as relevant international conventions, treaties, policies and guidelines that will guide the management of environment and social issues for the DRESS-EA Project are summarized below-

Table 4: Policy and Legal Framework –Uganda

Policy	Mandate	Relevance to the Project
The National Environment Management Policy	The NEMP sets out the overall policy goals, objectives and principles for environmental management in Uganda. Its overall goal is sustainable social and economic development, which maintains and enhances environmental quality and resource productivity to meet the needs of present generations without compromising the ability of the future generations to meet their own needs.	The project promotes sustainable management of resources.
The National Water Policy 1999	The policy advocates for the management and development of water resources in Uganda in an integrated and sustainable manner so as to secure and provide water of adequate quality and quantity for all social and economic needs for present and future generations with the full participation of all stakeholders.	This Project is planned to ensure provision of adequate water needs for domestic use, irrigation and livestock in the target communities.
The National Land Use Policy	The overall policy goal is to achieve sustainable and equitable socio-economic development through optimal land management and utilization in Uganda.	The policy recognizes amongst others, the need for the protection and sustainable use of land resources through conducting environmental assessments and implementation of measures outlined in such assessment studies.
National Policy for the Conservation and Management of Wetland Resources, 1995	The Policy has established principles by which wetlands resources can be optimally used and their productivity maintained in the future and end existing unsustainable exploitative practices in wetlands. All proposed modifications and restorations on wetlands shall be subject to an ESIA, the result of which shall determine whether such restoration or modification shall proceed and if so to what extent.	This ESMF provides for measures for controlling degradation of wetlands and controlling their siltation in line with NEMA and AF policies
The National HIV/AIDS Policy, 2004	The policy applies to all current and prospective employees and workers, including applicants for work, within the public and private sectors. It also applies to all aspects of work, both formal and informal.	The project will have to mainstream HIV/AIDS interventions into its plans, sub- Projects and activities
The National Cultural	The National Culture Policy, 2006 complements, promotes, and strengthens the overall development goals of the country. Its specific	This ESMF outlines Chance Finds Procedures to ensure protection and conservation of any PCRs that will be

Policy	Mandate	Relevance to the Project
Policy, 2006	objectives include amongst others, the need to promote and strengthen Uganda's diverse cultural identities and to conserve, protect, and promote Uganda's tangible and intangible cultural heritage.	encountered during project implementation
The Occupational Health And Safety Policy	This policy will be especially relevant for Occupational Health and Safety (OHS) of the workers and the public in the implementation of the project components. It focus on safety and wellbeing of workers in the different work environments	These are all important considerations in the project implementation and operations especially during the construction, operation and maintenance of water infrastructure

Legal Framework

Legislation		Relevance to the Project
The Constitution of the Republic of Uganda, 1995	The right to a clean and healthy environment is enshrined in Article 39 of the Constitution of Uganda, 1995 as well as integration of people in the development process. In particular, the Constitution guarantees: gender balance and fair representation of marginalized groups in development process; protection of the aged; the right to development; access to clean and safe water; basic medical services; and access to education.	The project contributes most of these goals.
The National Environment Act, Cap 153	Section 20 of this Act obliges every developer to undertake an environmental assessment for projects listed in the Third Schedule of the Act.	This ESMF has been prepared mainly to guide the implementers of the DRESS-EA project to fulfill this obligation and ensure that all project interventions are done within the law
The Land Act, Cap 227	The Act and the Constitution of the Republic of Uganda vest land ownership in Uganda in the hands of Ugandans and guide matters of land acquisition for development project through compensation which has to be fair, timely and adequate.	DRESS-EA project investments will be done for the people on their lands with their consent and no compensation will be involved. Land is considered as part of community contribution.
The Occupational Safety and Health Act, 2006	The Act provides for the prevention and protection of persons at all workplaces from injuries, diseases, death and damage to property. The key provision of this Act is safety and welfare of workers.	ESMF provides for safety gear for workers during implementation of project activities especially for water infrastructure works among other subprojects

Legislation		Relevance to the Project
The Employment Act, 2006	This Act spells out general principles regarding forced labor, discrimination in employment, sexual harassment and provisions to settle grievances. It further provides that, a child under the age of twelve years shall not be employed in any business, undertaking or workplace.	The project implementers will not engage any child workers at the project sites at any one time during the project lifecycle.
National Forestry And Tree Planting Act, 2003	The National Forestry and Tree Planting Act 2003 is the main law that regulates and controls forest management in Uganda by ensuring forest conservation, sustainable use and enhancement of the productive capacity of forests, to provide for the promotion of tree planting and through the creation of forest reserves in which human activities are strictly controlled.	Specifically, the Act will provide guidance for afforestation and other tree nursery subprojects under Project.
Historical Monument Act, 1967	The Act provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. Section 10(2) requires that any person who discovers any such object takes such measures as may be reasonable for its protection.	The project will undertake the Chance Finds Procedures in addressing possible encounters of any archaeological resources during project implementation

Regulatory Framework

Regulations	Relevance to the Project
The Environmental Impact Regulations S.I. No. 13/1998	Provides for preparation of project briefs ; Provides for conducting Environmental impact studies in accordance with the terms of reference developed by the developer in consultation with NEMA and the lead agency
Conduct and Certification of Environmental Practitioners Regulations, 2003	Provides guidance on conduct and Registration and certification of EIA practitioners.
The Water	Provides for sustainable management

Regulations	Relevance to the Project
Resources Regulations, S.I. No. 33/1998	Provides for the protection of water sources.
The Water (Waste Discharge) Regulations, S.I. No. 32/1998	Specifies what quality is acceptable in terms of effluent released into rivers. Water pollution prevention Provides for effluent discharge in aquatic and sewerage system standards
Wetlands, River Banks and Lake Shores Management) Regulations, S.I., No. 3 /2000	Provides for protection of Wetlands, River Banks and Lakeshore Zones

4.1 Other international institutions policies, Guidelines operational safeguards and Standards relevant to the project.

4.1.1 Environmental and Social Policy of the Adaptation Fund (Approved In November 2013; Revised in March 2016)

The Environmental and Social Policy of the adaptation fund emphasizes the need to ensure that projects/programmes supported by the Fund do not unnecessarily harm the environment, public health or vulnerable communities. All implementing entities are required to have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design, adopt measures to avoid or where avoidance is impossible to minimize or mitigate those risks during implementation, monitor and report on the status of those measures during and at the end of implementation as well as ensure adequate opportunities for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by the Fund.

4.1.2 Environmental and Social Principles of the Adaptation Fund

To ensure that all projects/programmes supported by the Fund comply with its environmental and social requirements the fund formulated 15 Environmental and Social Principles and all the projects are designed and implemented to meet these principles. However it is recognized that depending on the nature and scale of a project/programme all of the principles may not be relevant to every project/programme. These and their relevance to the project are discussed below:

Table 5: Summary of Environmental and social principles of the Adaptation Fund and how they relate to the Project

Environmental and social principles	Details	Comments
Compliance with the Law	Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	Yes. The project complies with both domestic and international laws and policies as reviewed in Table 1 above Any possible deviations from the law shall be mitigated as per the ESMP
Access and Equity	Projects/programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. Projects/programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups.	Yes. In general the project promotes fair and equitable access to benefits of the project. Some activities of the project, such as the livelihood target the most vulnerable community groups including youth and women.
Marginalized and Vulnerable Groups	Projects/programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	No project activities are anticipated to negatively impact marginalized and Vulnerable Groups. Some activities, especially income generation activities are actually targeting vulnerable groups especially youth and Women. All efforts shall be made to ensure that special interest groups are represented at all stages of the project implementation. Any possible negative impacts on these groups of people shall be mitigated
Human Rights	Projects/programmes supported by the Fund shall respect and where applicable promote international human rights.	No activities are anticipated to violet established international human rights. Project objectives promote basic human rights for equitable access to service and water for domestic use and irrigation and capacity building as well as access to information.
Gender Equality and Women's	Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to participate as per the Fund gender	All project activities have been screened and analysed in order to take gender aspects into consideration An in depth gender analysis of the involvement of men and women in the

Environmental and social principles	Details	Comments
Empowerment	policy (refer to Annex 4 for details); (b) receive comparable social and economic benefits; (b) receive comparable social and economic benefits; and (c) do not suffer disproportionate adverse effects during the development process	in project activities will be undertaken in the initial project phase The project by design promotes equal participation in decision-making processes and project activities with more emphasis on vulnerable groups in some cases.
Core Labour Rights	Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labor Organization.	The project respects the labour standards as identified by ILO as well as domestic laws
Indigenous Peoples	The Fund shall not support projects/programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	The Project promotes the respect the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples. There are a number of tribes in the target project area but there is no tribe classified as indigenous peoples.
Involuntary Resettlement	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation.	The project will not be involved in resettlement activity of communities. The project will closely monitor the targeting of the project beneficiaries, to ensure that any issues arising are promptly handled.
Protection of Natural Habitats	The Fund shall not support projects/programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities	One of the key activities of the project shall be the restoration of degraded ecosystems/catchments while encouraging the Conservation of existing ones including Natural habitats Environmental assessments shall also ensure that activities detrimental to biological diversity are avoided while any negative impacts shall be mitigated
Conservation of Biological Diversity.	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the	

Environmental and social principles	Details	Comments
	introduction of known invasive species	
Climate Change	Projects/programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	The project does not only increase the adaptation capacity of the local communities and the resilience of the ecosystems, but also reduces greenhouse gas emissions through the introduction of improved stoves and reforestation initiatives
Pollution Prevention and Resource Efficiency	Projects/programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants	The project will contribute to energy efficiency (e.g. introduction of cooking stoves), efficient use of water, prevention of water pollution, monitoring water quality.
Public Health	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health.	The project will not have negative impacts on public health. On the contrary the project will contribute to improve health conditions of the communities by reducing smoke out of traditional cooking stoves, improving living environment through restoration activities as well as providing clean water.
Physical and Cultural Heritage	Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	The project will not have any activity related to affecting physical and cultural heritages. Their protection/conservation will rather be promoted by the project. In case anything comes up it will be handled as per the guidelines provided in the Historical Monument Act, 1967
Lands and Soil Conservation	Projects/programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	Soil conservation, reduction of land degradation through supporting terraces, afforestation and catchment management is a core objective of component 3 of the project.

4.1.3 Environmental and Social Policy of Sahara and Sahel Observatory (OSS) of 2016

As a policy OSS does not support projects/programmes that unnecessarily harm the environment, vulnerable communities or women or contribute to poverty, social inequality or gender discrimination.

To carry out its Policy, OSS ensures that all its supported projects/programmes:

a. Have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design
b. Adopt measures to avoid or where avoidance is impossible to minimize or mitigate or manage those risks during implementation
c. Monitor the status of those measures during and at the end of implementation.
d. Assure that adequate opportunities are provided for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by OSS.

In addition all projects/programmes supported by OSS shall be designed and implemented to meet the following ten Environmental and Social Performance Standards (PSs). It is recognized that depending on the nature and scale of a project/programme all of the PSs may not be relevant to every project/programme. These Performance Standards are also in line with the international best practices for assessment of environmental and social risks e.g. those of the International Finance Corporation (IFC), Adaptation Fund, etc. These include;

- PS1: Assessment and management of environmental and social risks and impacts
- PS2: Labour and working conditions
- PS3: Resource efficiency and pollution prevention
- PS4: Community health, safety and security
- PS5: Land acquisition and involuntary resettlement
- PS6: Biodiversity Conservation and sustainable management of living natural resources
- PS7: Indigenous peoples
- PS8: Cultural heritage
- PS9: Gender Equity and Women's Empowerment
- PS10: Access and Equity and protection of Human Rights

5.0 STAKEHOLDER ENGAGEMENT/PUBLIC CONSULTATION

5.1 Approach to the Consultations

In order to ensure that key interests of the public and key stakeholders at different levels are addressed and incorporated into the design and implementation of the DRESS-EA project, stakeholder consultations were carried out in all the four countries as part of the ESMF development process.

The responsible country level executing Agencies together with GWPEA conducted rapid stakeholder consultations at various levels to solicit data and information on the current issues at National, regional and project site levels as well as the Environmental and social issues likely to be

associated with the design and implementation of the DRESS-EA project and associated sub-projects in the selected project sites across the four countries.

The key stakeholders consulted included:

Country	Stakeholders Consulted
Djibouti	• Water Management Committees for the management of hydraulic structures. • Local Steering Committee (CPL). • Regional Steering Committee (RPC). Composed of several members of the local steering committee, breeders, representatives of women, representatives of young people, elected regional. They meet each year. • National Steering Committee (CPN). it is composed of representatives of several ministries, representatives of donors, members of Regional Councils, representatives of MAPE-RH, and a representative of the University of Djibouti.
Kenya	• Government agency representatives including county level officials, NGOs, CBOs • Government agency representatives including county level officials, Local Government, Private Sector, NGOs, CBOs and community members.
Sudan	• Government institutions and departments including Ministry of Water Resources, Irrigation & Electricity, Sudan Meteorological Authority, High Council for Environment and Natural Resources, Dams Implementation Unit, Water Resources Technical Organ, Federal Ministry of Agriculture & Forests, the Ministry of Finance and Economic, Groundwater & Wadis Directorate, Water Niles & Dams Affairs Directorate … etc. • Non-Government Organizations e.g. Al Sugya Charity organization … etc • Representatives of farmers and pastoralists from the five administrative units of El Salam locality, • CBOs and the target beneficiary communities e.g , Sudanese General Women Union.
Uganda	• Government institutions and departments including especially those that will be invoved in the implementation of the Project in the four countries Department of disaster preparedness office of the Prime Minister, the Ministry of Finance Planning and Economic Development, the Ministry of Water and Environment (MWE), the National Environmental Management Authority (NEMA), the Uganda National Meteorological Authority (UNMA), Directorate of Environment Affairs, MWE, Directorate of Water Resources Management, MWE, Climate Change Department, MWE, and Policy and Planning Department, MWE • Non-Government Organizations, UWASNET, IUCN and Environmental Alert among others • Kyoga Water Management Zones where Lokere catchment the proposed project area is located • Political leaders and Staff of Natural resources and production departments of

	Kaabong, Moroto, Kotido, Napakand and Nakapiripirit Districts • Rupa sub-county political leaders and technical staff • Catchment and sub-catchment management committees in Lokere catchment • CBOs and the target beneficiary communities

5.2 Methodology and Identification of key stakeholders

Stakeholder consultations were interactive in nature and targeted at different levels: National, district, sub-county and communities and included the relevant representatives in each. The consultations will be conducted through among others;

- Key Informant Interviews
- Direct Interviews with Project Affected Persons
- Workshops and Meetings
- Public Hearings (Barazas)
- Advertisements' in the print and electronic media
- Focus Group Discussions and
- Internet

Below is a summary of key issues generated during consultations. Consultations were undertaken through the use of key informant interviews and focus group discussions and community meetings.

5.3 Summary of consultation findings

Based on the consultation findings, it is clear that the DRESS-EA is supported by stakeholders especially where project investments will have a positive impact on improving social and public welfare and addressing environmental concerns, primarily those related to enhancement of early warning systems and the capacity of stakeholders to manage drought risks due to Climate Change effects, promotion of Drought and Climate Change adaptation actions including water infrastructure, improved crop production and pasture management as well as Knowledge management and awareness creation.

Table 6: A summary of the key issues identified during consultations with stakeholders are summarized below:

Main issues	Causes	Impact
Low safe water coverage	• Low groundwater potential and over abstraction of groundwater • Many boreholes are non-functional due to poor site selection, design, operation and maintenance • Microbiologic contamination is a major concern due to poor sanitation and sharing of water points with livestock	• Shortages of safe water supply for domestic use • High incidence of waterborne diseases
Food insecurity	• Dependency on pastoralism and subsistence farming	• Overexploitation of natural

Main issues	Causes	Impact
	• Traditional low-input farming practices • High incidence of pests and diseases • Barely production surplus for the market • High poverty (up to 80%) and low income levels • The region has the lowest education rates in Uganda, only 6% of women and 12% of men are literate • Limited access to basic services	resources • Encroachment into wetlands and forests
Shortage of water and pasture	• Demand for water and pasture is high and further increasing • Loss of traditional migration patterns and management systems due to sedentarisation • Shortages are aggravated by the influx of cattle from the Turkana (Kenya) and Topoth (South Sudan) • Existing valley tanks and valley dams do not cover livestock demand • Opening of new lands for cultivation leads to loss of grazing lands • Land grabbing is on the rise	• Rise in pressure on and conflicts over resources between different groups of herders, and between farmers and pastoralists, particularly in around Moroto and Soroti towns, and in the wetlands of Napak • Limited resources to cope with hazards
Low agricultural productivity	• High variability of precipitation • Limited investment in soil and water conservation techniques • Limited use of improved crop production techniques • Poor agricultural practices undermine soil fertility and water retention capacity • Poor access to agricultural inputs	• Low income • High vulnerability to disasters
Vulnerability to natural disasters (floods and droughts)	• Population growth • Encroachment into wetlands and floodplains • Shortage of water storage capacity (natural and infrastructure**)**	• Regular crop failure • Reduced water availability • Loss of lives and propriety
Pressure on resources in and around urban areas	• Sedentarization and migration towards rural and urban growth centres • Move towards crop production to the detriment of	• Increased dependence on alcohol, economic losses increasing powerless- ness • Loss of traditional natural

Main issues	Causes	Impact
	traditional pastoralism • Changing livelihoods and lifestyles, and cultural practices • Population growth	resources • management systems • Land degradation around urban areas
Environmental issues	• Trees are cut for commercial charcoal production for urban centres, such as Soroti, Mbale and Kampala • Uncontrolled bush burning • Access to energy within the region is mostly limited to wood and charcoal, which results in tree cutting • Increased human pressure on the land • The power of responsible institutions for natural resources management has eroded over time leading to overexploitation of resources • Insecure land tenure due to communally owned lands discourages farmers from investing in conservation techniques • Encroachment into woodlands, forests and wetlands • Vegetation clearance during construction of harvesting and storage infrastructure • Inadequate popularization of policies and low enforcement of laws and by-laws due to limited capacity of institutions, understaffing of local governments, and limited budget for the environment sector • Low levels of awareness concerning environmental conservation • Limited feeling of ownership amongst water users because of their limited involvement in decision making • Abandoned borrow pits which accumulate stagnant water and thus form breeding effectively deal with issues of resettlement. • The district has, Natural Resources, environment and community development officers who can monitor compliance to environment and social issues but the environment office does not have adequate facilitation to monitor compliance. • Lack of capacity greatly affects compliance because	• Environmental Degradation • Soil erosion • Increased frequency of floods and droughts • Drying up of springs

Main issues	Causes	Impact
	the district does not have resources for effectively monitoring environment and social safeguards for the project. • Water, air and noise pollution due to use of machinery • Soil erosion, habitat destruction and loss of biodiversity • Over abstraction of water may damage the ecosystem	
Social issues	• Accidents which are likely to occur during the construction of the project. • Labour camps during the construction process. This would lead to other associated problems such as social disorders e.g. prostitution,	• Injuries and spread of diseases
Concerns regarding natural disasters	• Flooding from the construction of dams • Effects of drought	• Destruction of property • Conflicts over water resource use among the communities
Capacity gaps	• Capacity gaps in undertaking the project activities • Lack of skills and resources to maintain the water infrastructure	• Failure to achieve the desired project outputs • Failure of water infrastructure

6.0 ASSESSMENT METHODOLOGY

In all the four countries projects that are likely to have negative Environment and social impacts are required to undertake an Environmental and social impact assessments. Possible sub-projects under the DRESS-EA project that fall under this category may include but not limited to the following:

- Equipping and upgrading weather stations including observation and monitoring infrastructure
- Equipping /upgrading of selected weather stations,
- Construction/renovation and equipping of EW information centers
- Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
- Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),protection of water wells and springs)
- Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
- Restoration of degraded water catchments
- Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dry land agroforestry),
- Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells

These shall be subjected to standard processes and procedures including the following steps:

6.1 Screening process

The screening process is designed to be a partial assessment (Project Brief) or require a full ESIA process. The nature, type and determine which projects are exempt, require location of the project are described in the environmental screening form with a preliminary indication of potential socio-economic and biophysical impacts (number of people/ communities affected, sensitive habitats, threatened species, etc). Based on the screening exercise, the Authority responsible makes a decision on whether an ESIA is required or not. In the event that an ESIA is not required, the proponent is still obliged to describe methods and procedures for proper environmental management, including health and safety management.

6.2 Screening form

A standardized Project Brief is submitted by a developer using a Screening Form. The form requires that the developer submit information on the proposed project/activity and inter-alia, on the following:

a. Developer;
b. Contact address;
c. Location and size of the site/facility;

d. Project design, activities-during & after, inputs required (utilities and raw materials);
e. Products and by-products (finished products and wastes);
f. Methods of waste disposal;
g. Anticipated environmental and social impacts (number of people/communities likely to be affected, sensitive habitats, vulnerable groups and species etc).
h. Proposed mitigation actions responsible institutions, and budget estimates.

The main issues that are considered in making environmental and social impact assessment, include:

a. Ecological considerations, which encompass biological diversity, sustainable use, and ecosystem maintenance;
b. Social considerations, including employment, social cohesion & disruption, culture, human health, communication and local economy;
c. Landscape impacts; and
d. Land use impacts.

General information is required at this first stage. If in-depth analysis has already been done, results should be indicated on the screening form. If however, only preliminary analysis/surveys have been done, this will in general suffice for the screening form.

Where the developer needs assistance to complete the screening form, a lead sectoral department concerned staff or a consultant can be enlisted for help. Upon completion by the developer, the form is submitted to the lead department or the Authority. If the form has been completed correctly, the lead department forwards the form to the Authority for consideration. The Authority determines the follow- up actions required in consultation with the lead department. If necessary, the Authority, the lead department, and/or a designated working group may visit the proposed project site to clarify details or complete the information required.

6.3 Project Classification

Based on information obtained from the screening form, a systematic review of the information is completed by the Authority to determine whether an ESIA needs to be conducted or not. Evaluation criteria have been established which provides a general guide for determining whether or not a full ESIA is required. This ensures a fair and consistent review of all proposed projects at this screening stage, based on the information provided by the project proponent. As a result of this screening, the project is classified in the following manner.

Class A Projects

Under this category, full ESIA will be required. Comprehensive and meaningful stakeholder consultations, including a public hearing (disclosure) are required for Category A projects.

Class B Projects

Projects placed under this category, will require partial ESIA to be conducted before their implementation. Such projects under this category are considered not to have adverse environmental and social impacts compared to Category A. Their impacts are readily mitigated, site

specific and reversible. Typically, the Authority requires preparation of a Comprehensive ESMP as part of the Project Brief (Screening Document).

Projects under Class C Types

These basically require no ESIA before their implementation. A project may be categorized as Class C if it is determined that the proposed project will have no significant or adverse impact on the environment.

Consultations during the ESIA Process

The Authority, upon receiving a Project Brief (screening checklist/ ESMP) consults the lead sectoral department. It invites public comments on statements of project intent submitted to it especially from those most likely to be affected by a proposed project. It is only subsequent to these two consultations that the Authority is required to invite interested organs of the State to comment on both the statement and the comments to follow. A public enquiry/hearing is the final form of consultation.

6.4 Phase II –the EIA study phase

In the event that the Authority determines that a full ESIA study be undertaken, the study will be undertaken, the following steps are followed:

6.4.1 Scoping

Scoping is an important component in EIA process. It determines the extent and approach of the EIA at an early stage in the planning process. If screening determines that a partial environmental assessment (CLASS B) or a full EIA (CLASS A) is required for a particular project, terms of reference (ToR) need to be developed for these studies. For CLASS A projects, a scoping exercise will be carried out in order to identify issues and prepare the ToR for a full EIA Study. However, for CLASS B projects, ToR can be inferred directly from the information provided in the project brief; therefore, a scoping exercise will not normally be required for the review.

6.4.2 Terms of Reference for an EIA

The main output of the scoping exercise is to prepare the Terms of Reference (ToR). Taking into account findings from project scoping, the developer shall prepare ToR and submit to relevant Lead Agencies for review and approval before the EIS study is conducted. The reviews ensure that the assessment will be conducted in an agreed-upon and focused manner. Based on the tasks specified in the ToR, the developer shall then source and hire an experienced and multi-disciplinary team of EIA Practitioners and other relevant experts to undertake the different tasks specified in the ToR.

6.4.3 Conducting Environmental Impact Study

Once the ToR are approved by the relevant Agency, the next step in the EIA process is to carry out a detailed study of the key impacts according to the scoping report and ToR. Stakeholder involvement and consultation is an important part of the EIA process. The consultant should identify key stakeholders (key groups and institutions, environmental agencies, NGOs, representatives of the public and others, including those groups potentially affected by the environmental impacts of the

project. Stakeholder consultations should be by notifying the public, soliciting their and experts' comments, holding public and community meetings, and asking specific individuals for their input.

6.4.4 Reporting

An EIA study culminates in the preparation of an EIA report. The Environmental Management Plan is part of the information to be included in the EIA report. Presentation depends largely on the importance of the various issues in the EIS. Where no significant natural resource issues arise, the EIS may simply refer to them in a general chapter on other environmental effects or information. Where natural resources issues are significant they should be addressed to the extent necessary in the main body of the EIS, although larger EIS may have separate volumes containing detailed information about specific issues.

7.0 IMPACT ANALYSIS AND PROPOSED MITIGATION MEASURES

The proposed DRESS-EA subprojects are not likely to result in significant adverse environmental or social impacts if carefully managed as their main objective is to empower local communities to undertake Drought and Climate Change adaptation actions including water harvesting and storage infrastructure, irrigation systems, improved crop production and pasture management, income generating activities as well as Knowledge management and awareness creation.

However, if not carefully designed and implemented, these types of subprojects can lead to negative environmental and social impacts, particularly those which entail investments in infrastructure development and new construction (e.g. Water storage and harvesting infrastructure and irrigation systems). Furthermore, weak or inadequate capacity for designing, managing and monitoring subprojects can lead to poor design and implementation and exacerbate adverse impacts.

Thus, it is important to identify potential risks early in subproject preparation and design, both in terms of the Project's overall design and of the specific investment activities. Impacts can be divided into negative environmental and social impacts and these depend specifically on the size and nature of the subproject and the environmental and social sensitivities associated with the location of the subproject.

7.1 Methodology for assessing impacts

Potential and apparent impacts have been identified based on proposed activities to be undertaken and more detailed specialist studies shall be conducted before implementation of the sub-projects that require full ESIA on site through a consultative process with key stakeholders.

The methodology described below shall be used analyze impacts and come up with possible mitigation measures in consultation with key stakeholders. Within this Impact identification phase, the project in general is evaluated against the possibility of resulting into a stated impact on Ecology, Social considerations, landscape or Land use.

The anticipated probability of causation of impact is rated as:

- Not possible (No)
- May impact
- Likely to impact
- Will Impact

Table 7: Impact Screening based on anticipated activities

Recommended considerations	Will the Project Directly or indirectly impact on?	No	May	Is likely	Will impact	Activities/stage of project implementations
Ecological						
Biological diversity	Gene pool of domesticated plants and animals e.g. monoculture as opposed to wild types					
	Number, diversity, breeding habits, etc. of wild animals and vegetation					
Sustainable use	Soil fertility					
	Breeding populations of fish and game or wild animals.					
	Natural regeneration of woodland and sustainable yield					
	Wetland resource degradation or wise use of wetlands					
Ecosystem maintenance	Food chains					
	Nutrient cycles					
	Aquifer recharge, water run-off rates etc					
	Aerial extent of habitats.					
	Fragile ecosystems					
Social considerations	Generation or reduction of employment in the area					
	Social cohesion or disruption					
	Effect on human health					
	Immigration or emigration.					
	Communication roads opened up, closed, re-routed.					
	Local economy					
	Culture and objects of cultural value.					

Landscape	Views opened up or closed					
	Visual impacts (features, removal of vegetation, etc.)					
	Compatibility with surrounding area					
Land uses	Current land uses and land use potentials in the project areas.					
	Possibility of multiple use					
	Surrounding land uses and land use potentials					.

7.2.1 Criteria for rating Impact Significance

Impacts likely to occur at different phases are categorically defined as High, Medium or Low and these have been determined based on the spatial extent of the impact, persistence of the impact, Probability that the impact will occur and the Intensity of the impact. The Table below summarizes the methodology for rating significance of an impact.

The following impact Rating Criteria was adapted:

High level Impacts

- Causing severe alterations of natural properties, functions or processes, which are of – long term duration and large spatial extent, or – long-term duration and medium spatial extent, or – medium-term duration and large spatial extent.
- Notable alterations of natural properties, functions or processes, which are of long term duration and large spatial extent.

Medium level Impacts

- Causing notable alterations of natural properties, functions or processes, which are of – medium term duration and medium spatial extent, or – long-term duration and local spatial extent.
- Notable alterations of natural properties, functions or processes, which are of short term duration and medium spatial extent.

Low level Impacts

- Negligible alterations of natural properties, functions or processes of – short term duration and localized, or – short term duration and medium spatial extent, or – medium term duration and localized.
- Notable alterations of natural properties, functions or processes, which are of short term duration and localized.

Table 8: Methodology for rating Significance of an Impact

Intensity	Severe	Severe alteration of natural properties, functions, processes	High
	Notable	Notable alteration of natural properties, functions, processes	Medium
	Negligible	Negligible alteration of natural properties, functions, processes	Low
Persistence	Long term	Continuously or regularly (once per day) over project life, permanent or irreversible effects (including aftermath effects)	High
	Medium term	Several years (< 5) of duration, (including aftermath effects) reversible, periodic events (several times per year)	Medium
	Short-term	Less than one year or restricted to construction stage, reversible	Low
Spatial extent	Large Extent	Effects beyond project site and nearby areas beyond 1,000 m distance of origin	High
	Medium Extent	Within the project site and nearby areas within 1,000 m distance of origin	Medium
	Localized	Within the area of the project site within 100 m distance of origin	Low
Probability	Definite	Highly probable (> 80%) or will definitely occur	High
	Possible	Fair chance of occurrence	Medium
	Unlikely	Little or no chance of occurring (< 20%)	Low

7.3 Project Positive Environmental and Social Impacts

Below is a summary of likely positive environment and social (direct and indirect) impacts of the Project that will contribute to other benefits of the Project:

a) Provision of timely early warning information to farmers –The rehabilitated or newly constructed weather stations will enable collection, analysis and dissemination of early warning information to farmers to enable them plan their activities properly

b) Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks as well as deep and shallow wells, will make safe water for communities improving their health as well as reducing or eliminating prevailing agriculturalist/pastoralist conflicts-Mitigation of tension/conflict over water: as scarcity of water is one of the sources of conflict in the beneficiary communities

c) Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems), protection of water wells and springs) will increase the amount of water available for agricultural and livestock production. This will enable the small scale farmers to increases their production, realize more benefits and increase their drought and climate change adaptive capacity.
d) Creation of short-term employment opportunities: use of appropriate labor-intensive during construction of of weather stations and water harvesting, storage and delivery infrastructure will provide direct income to the households;
e) Investments in river banks restoration will protect the rivers from siltation and sedimentation from run-off;
f) The contour and stone bands will help in checking erosion on hilly areas and this will lead to improved productivity in these areas;
g) Afforestation programmes will have a multiplicity of social, economic and environmental benefits in terms of contribution to carbon sequestration, supply of firewood and source of income at household and local government levels;
h) The activities of the program will help to identify and to implement the necessary measures or the protection of biodiversity areas thus conserving the wealth of the species at the local and national level. Also, these investments will contribute to combating desertification; enhancing reforestation, soil restoration and the implementation of national conservation activities
i) Enhance women participation in household and socio-economic activities through sustainable water supply which will create more time for them to engage in other income generating activities
j) Capacity building and training in drought adaptation actions for the community, and resulting enhancement of organizational, financial and technical capacities of communities in the catchment.

7.4 Project negative environmental and social impacts

The implementation of the proposed DRESS-EA Project is anticipated to have a number of negative environmental and social impacts both direct and indirect. These may include but are not limited to the following.

a) Loss of vegetation and disturbance of floral and faunal communities – The program activities are likely to destroy vegetation with subsequent loss of trees, shrubs and grasses from the areas highlighted for infrastructure sub-projects. This is likely to cause loss of habitat and disturbance to faunal communities in the affected sites.
b) Increased soil erosion –Increased vegetation clearance and soil erosion is likely to occur in the vicinity of program sites during the construction of the water harvesting, storage and delivery infrastructure
c) Increased siltation of the aquatic habitats- Some of the excavated sediments from the sub-project sites and the construction spoils emanating from excess excavated material and construction debris are likely to increase siltation of the nearby aquatic habitats associated with nearby rivers& streams wetlands and other sensitive ecological zones.
d) Increased noise levels- Noise levels are likely to increase in the program area during the construction of the water infrastructure due to the use of heavy machinery in construction activities and operations at the quarries, borrow pits and crushing plants.

e) Increased accidents and occupational hazards- mainly due construction activities for the water harvesting, storage and delivery systems that will involve use of machinery and transportation of materials. This is likely to result in a higher risk of accidents and occupational hazards occurring in the area of operation.
f) Dust pollution– Program activities have the potential to generate high levels of dust in the program area especially where construction is taking place. In addition, activities taking place in the quarries, borrow pits and crushing plant sites have great potential to generate high quantities of dust thus creating a hostile environment and a health hazard to the workers and the affected local community
g) Ponding- The program activities may lead to creation of stagnant water bodies in quarries, borrow pits and depressions created during the construction works. The resultant stagnant water bodies are likely to be suitable habitats for the breeding of mosquitoes and snails that are disease vectors for malaria and bilharzias respectively.
h) Gaseous emissions- Pollution through gaseous emissions in the program area will emanate from exhaust pipes for vehicles and machinery used in the construction works.
i) Strain on social services -*Influx of workers for construction activities may put pressure on social services in the areas though temporarily including hospitals, housing among others*
j) Increased incidences of diseases- The influx of workers with specialized skills to work on the infrastructure projects is likely to increase the incidences of diseases in the program area especially sexually transmitted diseases including HIV/AIDS among the program workers and local communities.
k) Use of agro-chemicals may result in soil and water contamination.
l) Potential conflicts over water use especially amongst pastoral and host communities can arise especially where those with large herds tend to dominate the small herd owners;
m) Maintenance of some of the infrastructures such as dams will generate dredge materials whose disposal can pose environmental and public health challenges;
n) Generation of cut to spoil materials whose transportation and disposal will require proper management as well as other solid waste during construction and operation of the planned facilities;
o) Abstraction of substantial quantities of water from the water bodies especially for irrigation can bring about hydrological impacts on the main water bodies.

7.5 Enhancement and Mitigation Measures

In order to avoid or minimize negative impacts associated with activities to be undertaken the Project, mitigation measures must be implemented as well as enhancement measures for positive impacts. These measures must be included as part of each subproject ESMP and will be budgeted for in the Technical Specifications of each subproject. A set of monitoring indicators will be used to verify compliance with local and international standards and to identify corrective actions. The proposed enhancement measures for positive impacts and mitigation measures for negative impacts anticipated from the implementation of the DRESS-EA project are summarized in the project ESMP below:

7.6 Risks and impacts in compliance with the AF ESP

Checklist of environmental and social principles	Potential impacts and risks	Mitigation measures
Conformity with the law	Unidentified activities or sub-projects particularly Income Generating Activities (IGAs) undertaken in the component 3 may require a specific EIA depending on the size and the location of the implementation to comply with national standards and laws.	- Risk screening of unidentified activities; - E&S impact assessment; - Consultation process; - Environmental and social management plan (ESMP) establishment describing, for each unidentified activity risk of negative environmental and social impacts, the process, how, at which stage and by whom during project implementation these risks will be addressed; - Monitoring Indicators identification; - Evaluation and monitoring process; - Obtaining certificates of conformity.
Access and Equity	Project beneficiaries will be in general rural people (pastoralists and smallholder farmers) who have difficulties to access to the decision-making process, this may limit their opportunities to benefit from projects outcomes. There is a risk that all members of the beneficiary groups or community are not involved in the preparation and the implementation of their subproject.	- Consultation workshops; - Close monitoring of the project beneficiaries to assure equal access of men; women, youth and the most vulnerable; - Grievance mechanism.
Marginalized and vulnerable groups	Insufficient knowledge and access/use of technological devices such as mobile phones or lack of good cellular connectivity specially required in component 2 on Early Warning System design and implementation.	- To avoid the exclusion of marginalized and vulnerable communities in order to disseminate and broadcast the warning messages in case of natural disaster, local radio channels and traditional practices such as speakers, maps and sirens will be implemented to reach them.
	Risk of reducing or prohibiting, because of the project, the access of certain populations to the resources on which they depend (pastures, water, fruit trees, crops, fishing grounds, forest, public services)	- Organize consultation meetings with local administrative and customary authorities and steering committees representing communities and indicate that any sub-projects limiting access to resources or sources of income will not be funded. All activities implementation must be decided in common with consultation of all concerned communities; - Grievance mechanism
Human rights	The project activities do not generate risks related to human rights.	- The project activities do not generate risks related to human rights so there are no mitigation measures to plan.
Gender Equity and Women's empowerment	The cultural and social norms of the project region lead to a greater role for women to question male dominance and claim their role in decision-making. So, there is a risk that women will not benefit equitably from the proposed adaptation measures and the capacity building interventions due to men leadership.	- - Ensure the presence of women and young people in workshops and trainings; - -Communication and sensitization of the population on the gender issue to ensure gender parity in income-generating activities; - Grievance mechanism.

Core Labor Rights	Increase in accidents and occupational hazards during the project preparation and implementation.	- Sensitize workers and populations to the risks related to the undertaken activities; - Design and implement safety measures and emergency plans to contain accidents risks and ensure the application of safety standards by companies (equipment, signs, training, etc.) ; - Provide workers with protective clothing (nose and mouth masks, ear muffs, overalls, industrial boots and gloves) and helmets as applicable
	Risk of late or unpaid salaries or remuneration non-compliant with the countries labor legislations and laws. Risk of Children's labor. Risk of Remuneration inequity between men and women.	- Salaries in line with regional practices and defined with national entities; - Close follow-up and monitoring of the worksites by the national executing entities including schedules, activities progress, respect of the labor and safety rights of workers and conformity with national labor codes.
Indigenous People	The project activities will generate the same risks on Indigenous people as the risks on all project communities. There will be no major risk on their assets, resources, culture, land and rights. The main risks that could raise are related to the ways they use water resource, transhumance routes, livestock management, agricultural practice etc.	- Involvement of indigenous people representatives at all project stages (development, implementation, monitoring and decision-making process) - Detailed analysis will be carried out by local and national agencies to understand the traditional use of natural resources especially regarding to water and land use.
Involuntary Resettlement	The construction of appropriate and innovative water harvesting and storage infrastructure as well as mini-irrigation and water delivery systems will occupy spaces and may affect private lands or related activities. The project is also expected as a potential impact related to rest areas management for transhumant that will occupy spaces	- The review process for these activities will include criteria that stipulate no resettlements. The project will opt for state-owned lands and if needs be, compensation measures will be arranged for used private lands owners.
Protection of natural habitats	The presence of labor and construction equipment, if this is necessary for carrying out the works or activities planned by the project, could have an impact on the fauna and flora of certain intervention sites. The implementation of solar-pumped boreholes, water harvesting and storage infrastructure (e.g simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, etc) can result in the vegetation and wildlife habitats destabilization in the implantation site. There is a possibility of indirect risks related to the Transhumance corridors which will open up different migratory patterns. There is a herds' incursion in protected areas risk which will create tensions with farmers living around, protected area managers and other pastoralists. Mobile herders may go in search of refuge and living resources through poaching, threatened wildlife species trade, illegal exploitation of other wildlife or minerals.	- Follow-up of the implementation of all activities related to the protection and management of ecosystems and natural habitats; - Establishment of E&S Impact Assessment Studies; - Policies and laws to protect natural habitats will be screened with the stakeholders to ensure that the critical habitats are legally protected; - Sensitization sessions to local populations on good environmental practices and the protection of natural habitats. - A follow-up of the project activities implementation will particularly include the monitoring of transhumant pastoralists' number and herd sizes, grazing destinations (including protected area) and distribution of habitat types in order to provide inputs for decision making, solving tensions and natural habitats protection.

Biodiversity conservation	Vegetation Clearance for water harvesting and storage sites construction	- Follow-up and monitor the implementation of all activities related to the protection and management of ecosystems; - Minimize vegetation clearance as Low as Reasonably Practical (ALARP); - Avoid cutting large trees with a diameter >20cm; - Pre-survey the proposed construction site areas to avoid sensitive habitats that have high diversity of indigenous plants; - Promote planning for activities of biodiversity conservation such as Compensatory reforestation; - Promote awareness sessions, capacity building and peer learning to strengthen the efficient management of natural resources, including aquatic species, animals and forests.
Climate change	A potential change of the land use due to the field clearing to construct innovative water harvesting and storage infrastructure (e.g. simplified water tanks, water jars, sunken dams, micro-dams, etc) the may generate the risk of the sequestration decrease.	- Promote reforestation to offset these used lands
Pollution prevention and resource efficiency	Potential contamination of water reservoir through introduction of impurities, wastewater and solid waste.	- Conduct regular water quality monitoring and maintenance of the water supply system as well as ensure the monitoring of water quality by chemical analysis; - Awareness improvement on water Resource management and conservation through consultation workshops; - Separate the infrastructures for human and animal use and provide a specific installation for the watering of livestock near the tanks.
	Increase in dust levels	- Limit levels of dust through good practice such as watering of access routes, construction sites, and other disturbed sites; - Cover lorries transporting construction materials
	Vandalism of water pipelines infrastructure, Wastage of water and leakages at consumer points	- Creation of awareness on water Resource management and conservation through Consultation workshops; - Creation and Implementation of a Social Engagement Plan – SEP;
	Over abstraction of water	- Irrigation system installed and fully monitored - Irrigation schedule controlled
	Air pollution by gas emissions from machinery during field work or consultants and various stakeholders' vehicles during workshops and field visits.	- Reduce gaseous emissions by selection of appropriate machinery and regular servicing of vehicles; - Incite to use a good quality fuel meeting the standards.
	Generation of waste related to the presence of the workers, construction engines, and equipment, etc. during the execution of the project different activities.	- Recycling wastes/ recycling and composting could be an USP; - Waste management plans for construction sites.
Public Health	Increased incidences of diseases (such as HIV/AIDS, Malaria and Bilharzia)	- Raise awareness and support mechanisms to prevent and control spread of HIV/AIDS among the program workers and local communities. - Implement disease awareness and management programme for Malaria and Bilharzia
	Noise and odor nuisance	- Selection of appropriate machinery and regular servicing of machinery and vehicles. - Use and ensure the application of security measures by companies such as ear plugs and ear muffs among workers when noise levels exceed 80 dBA for 8 hours and limit the hours of exposure of workers. - Apply a noise mitigation policy for all operations in accordance with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution)

	Increase in dust levels	- Provide workers with appropriate dust protective gear including masks and overalls.
	Risk of persons safety in maintaining the tanks or dams (in particular risk of fall of man or cattle)	- Ensure security at the reservoirs especially at the dams' area by providing adequate protective equipment (e.g protective mesh).
	Risks of health problems due to tank water low quality or the proliferation of insects near the water points Risk of disease transmission by the transhumant pastoralists and/or their herd.	- Do not collect the first runoff that is often heavily loaded or provide a decanter for tanks to improve the water quality; - Train communities that tank water is not consumed by the population without adequate treatment (after boiling or treatment); - Provide family sanitary kits (filters and disinfectants) - Veterinary support in order to prevent livestock and transhumant herd related disease transmission.
Physical and Cultural Heritage	Possibility of physical heritage damage related to unidentified sub-projects.	- Participatory workshops to identify areas of physical and cultural significance to prevent activities/ subprojects implementation and negative impacts.
Soil and land conservation	Risk of increased soil erosion	- Where applicable install specific measures to combat erosion (dry rock, gabions, stone bunds) - Plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found appropriate.
	There is a minimal risk of soil compaction by the machinery during construction or maintenance.	- Promote the deteriorate lands restoration through sustainable techniques such as reforestation and agroforestry; - Raise the local population awareness to strengthen the effective management of soil and land; - A close follow-up and monitoring of the implementation of all activities related to the soil and land conservation.
	Possibilities of land degradation as a result of agricultural activities	- Adopt conservation agriculture practices

7.7 Consultative process

1. The consultative process initially started with meetings and discussions at the Global Water Partnership Eastern Africa (GWPEA), a regional organization covering over 9 countries in the region Uganda, Kenya, Egypt, Eritrea, Somalia, Ethiopia, Sudan, Rwanda, and Burundi offices at Nile Basin Initiative Offices in Uganda. Earlier consultative meetings were held on 15th – 16th December 2016, Golf Course Hotel in Kampala and 4th – 9th July 2017 at the Common Wealth Resort, Munyonyo, Kampala, Uganda. It was agreed then at this meeting with stakeholders drawn from the focal countries to prepare a pre-concept note for submission to Sahara and Sahel Observatory (OSS) for review and consideration as a Regional Implementing Entity of the Adaptation Fund.
2. Later at the regional level, following the approval of the DRESS-EA pre-concept by the Adaptation Fund, further consultations, with countries representatives were made on March 15th – 16th 2018, in Entebbe, Uganda. The consultative meeting was also drawn from the GWPEA as well as from the OSS, in addition to countries. The workshop aimed at:

   - Informing partners and beneficiary populations about the project scope and objectives;

   - Listening to participants' expectations and needs to take them into consideration in the project activities design.

3. Similarly, following endorsement of the DRESS-EA Concept Note by the Adaptation Fund and the approval of the Project Formulation Grant to help developing this full proposal a continuous participatory approach was deployed and spearheaded by the OSS and

Global Water Partnership Eastern Africa (GWPEA). In fact, according to the AF requirements and in order to ensure the project ownership and success during its execution a series of consultations, meetings and field visits have been conducted.

National and Local Consultations

4. More comprehensive consultations were undertaken at both national and regional levels. The national consultative meetings were held in each of the four countries (Djibouti 10th – 12th February 2019; Kenya 19th – 22nd February 2019, Sudan 2nd to 4th March 2019 and Uganda 11th – 13th March 2019). The Regional consultative meeting was held in Uganda on 15th March 2019 where all countries representatives took part.

Figure 1:

Consultations at the Directorate of Rural Hydraulics in Djibouti on February 11th 2019 and 12th February 2019 respectively.

5. The main purpose of these public consultation sessions was to seek the beneficiaries' points of view and to collect information for a better design of the project with a focus on involving vulnerable groups, ethnic/indigenous groups, farmers, fishermen, women, and youth. This participatory approach aimed at (i) the project appropriation by the beneficiaries during preparation and planning stage; (ii) learning about the concerns of all stakeholders, including vulnerable groups (women, youth, children, heads of localities etc.) in the design and implementation of the project; (iii) exchanging views on the financing and sustainability of the project; (iv) informing the participants about the project's related risks and mitigation measures, and (v) the project grievance mechanism and the contact person and authority at local level.
6. For a better ownership of the project outcomes, national consultative meetings were organized with the local authorities and local government representatives aiming also at:

i. Providing information to key stakeholders on the Adaptation Fund and the Full proposal development processes;
ii. Facilitating the integration of inputs by key stakeholders and triangulating the information collected from stakeholders and literature.
iii. Concretizing on gathering final opinion on the target sites in each country and to clarify on the DRESS-EA project activities
iv. Creating awareness about the project to wider stakeholder membership, seek endorsement from the focal country authorities, seek acceptability and consent among the likely beneficiary populations and
v. Understanding the needs and expectations of the various parties in order to aid smooth project implementation in the region.

7. Since the presence of indigenous people in the four countries project sites and in accordance with the Adaptation fund requirements, during the project preparation the Free, Prior and Informed Consent (FPIC) procedures has been applied. The FPIC aims to avoid to the maximum possible the extent of adverse impacts on indigenous peoples. Consultation of stakeholders on the project interventions was done in the targeted countries i.e. Djibouti, Kenya, Sudan and Uganda. Moreover, these consultations were held in the localities where the project interventions are earmarked. This provided an

opportunity for the stakeholders to, provide additional input by freely airing out their views and opinions. In addition, after the stakeholder consultations in the community localities, the community leaders accented to the consultation process through signing a consent letters (annexed to the consultative reports attached to the proposal).

8. Indeed, and regarding the Involvement of the Indigenous people in the project consultative process, all the workshops meetings and filed visits organized during project preparation representatives from the ethnic groups took part to these meetings. The main objective of this procedure is to ensure that all beneficiaries are well informed about the project activities, impacts, proposed mitigation measures and the grievance mechanism. The exchanges have also concerned the appropriate mitigation measures and alternatives to project design to minimize impacts and appropriate compensation that will be determined with the full and effective participation of affected indigenous peoples, including indigenous women, youth, the elderly and disabled people.
9. Concretely and according to the FPIC procedure, during the national consultations, field level visits to the localities where the project will be implemented were made, to provide vital information for preparing the Environmental and Social Management Plan Framework (ESMP). The ESMP is also attached to this proposal. Details of the proceedings of consultations, letters of consent endorsed by the representatives of local communities and indigenous people, discussions and lists of the people consulted are indicated in a single report attached to the present proposal.
10. The consultation process used several methodologies. These included key informant interviews, focused group discussions and reconnaissance surveys. Individual meetings were held with representatives of the countries from the EE and telephone calls to stakeholders who we're not available for the meetings.
11. The consultation workshops were structured around the following points:

-Involvement and improvement of the local populations' and indigenous people living conditions;
-Key stakeholders, their roles, responsibilities, and contribution during the project implementation;
-Strengthening the project management structures;
-Reinforcement of awareness and communication activities among the various stakeholders;
-Role of women and young people in the project implementation;
-Environmental and Social and Gender risks and mitigation measures;
-Grievance mechanism and communication channels;

12. During the local consultative workshops attended by communities' members and representatives including, women, youth and elders, from several ethnic groups (vulnerable and indigenous people) discussions were structured around the following points:

-Introduction of the project objective and activities as well as its expected outcomes that will directly benefit to the population;
-Collection of populations views and opinions regarding the several activities planned;
-Description of the project risks and the expected impacts and their relevant mitigation measures;
-Role of women and youth in the project implementation;
-Description of the Environmental and Social and Gender risks and mitigation measures;
-Grievance mechanism and communication channels;

13. After the several exchanges on the above-mentioned points the consultant with the support of the local government representative proceeded with the explanation of the consent procedures. They presented the content of the consent letter and the scope of the commitment that will result. It is also important to highlight the fact that the consultancies have been conducted in local language so that everyone who was attending has the same opportunity of understanding and expressing his objection is any. Finally, and as a proof of their involvement and approval of the project, letters of consent have been signed and delivered by the communities' representatives (Cf. annexe XXX).

Regional Consultation

14. Care was taken to ensure participation and collaboration of all key stakeholders right from the pre-concept stage, concept level, up to full proposal stage and will be followed till the implementation stage. Among the key stakeholders that were consulted during the consultative meetings in the respective countries and final regional workshop held in Entebbe, were government officials from the Directorate of Rural Hydraulics for Djibouti, the Ministry of Environment and Forestry for Kenya, Ministry of Water Resources, Irrigation and Electricity for Sudan and the Ministry of Water and Environment for Uganda as well as officials from OSS and those at lower government levels. The national and regional workshop essentially allowed the participation of other stakeholders including non-governmental organizations (NGOs), the private sector, development partners, research/academics as well as farmers and pastoralists. This approach was intended to create ownership by the various stakeholders and ensure sustainability of project interventions by creating institutionalized systems. This is also expected to establish a mechanism for scaling-up similar approaches and interventions in the future once the project is approved and funded. The regional consultative workshop was held on 15th March 2019. The regional workshop aimed at sharing the results of the local and national consultative meetings, harmonize positions and integrate inputs from country representatives in an open and transparent manner and answer the remain questions to ably submit the proposal to the Adaptation Fund. The proceedings are also indicated in the consultative report attached to the proposal and the main outcomes are as follow:

- Updated proposal;
- Project implementation arrangement validated;
- Specific Grievance Mechanism approved;
- Project priority intervention areas validated;
- Understanding the project's aspirations and the measures to be implemented to redress the effects of drought in the region harmonized;
- New activities and specific intervention areas incorporated;
- Integration of activity ideas, recommendations and comments from stakeholders into the draft proposal.

Figure 2: Consultative meeting in progress and a group photo after the meeting in Kitui Kenya on 22nd February 2019

Figure 3: Consultative meeting in Sudan in Kosti, ElSalam and at the Ministry Headquarters on 3rd and 4th March 2019 respectively

Figure 4: Community members of Rupa S/c and their representatives and OSS signing the letter of consent to participate in DRESS-*EA project, Uganda on 13th March 2019.*

Figure 5 :
Presentations from OSS and Djibouti respectively during the regional consultative workshop in Entebbe, Uganda on March 15th, 2019.

15. The process of consultations at the regional level with the different stakeholders at this stage has mainly focused on the project nature and its specific role in enhancing the resilience of the most vulnerable communities. During the consultative process activities and adaptation measures to be included in the project, defined key stakeholders, their roles, responsibilities, and contributions during project implementation were discussed; identified project management structures and issues of sustainability and ownership, especially by communities and local government. Others have included recognition of the role of women and youth in the implementation of the project, coordinating and collaborating with other existing projects, identification of priority problems/issues and possible solutions, identification of risks and/or possible conflicts and resolution mechanisms as well as projects/initiatives for possible synergies.
16. Finally, the participatory and consultative process as described above will not only be applied during project preparation but will also constitute a project approach during implementation until closure. All the project components include specific consultation workshops and meetings that will ensure the activities ownership and the achievement of the expected outcomes.
17. In a more specific way and as part of the consultation process to be put in place during project implementation, it is important to take into account the seasonality of the activities of the socio-professional groups. Indeed, the transhumant breeders, the

gatherers, the farmers depend largely on their activities' seasonality. In fact, this challenge will be mainly faced when dealing with transhumant. The project consultations and population-based activities will consider this issue and plan the execution according to all these aspects.

Gender Consideration

18. In addition to all identified beneficiaries and the targeted populations at the local and national level, vulnerable groups and gender considerations were taken care of in compliance with the Environmental and Social Policy of the Adaptation Fund. The project consultation process was overall inclusive and appropriately considered gender as a key issue towards planned interventions. To ensure effective implementation of the project components, detailed information was deliberately collected from populations/community categories including men and women and ensuring representation of the elderly, disabled, children, youth and socio-economically disadvantaged groups.
19. Among the Gender-sensitive tools, gender analysis was used to collect the data. The Gender Analysis tool creates a "gender looking-glass" through which the community can be examined. The consulting team made deliberate efforts to interact with the various groups of men and women (different social-cultural groups, age, and locations) in addition to the end users at the community level who are the most vulnerable. In order to allow an effective gender mainstreaming into decision making, the project proposes to ensure the following:

i) Gender equality and women empowerment by significantly involving women and using appropriate gender tools such as gender mapping and analysis during planning, implementation, monitoring, and evaluation of the project.

ii) The project will also ensure that women play an adequate part in the four components of the project i.e. early warning, capacity building, drought adaptation actions and knowledge management by deliberately targeting 40% of the beneficiaries/participants being women. Relevant benefits expected by women and their roles will be emphasized, and the information presented and transmitted to the women in this regard will be made accessible despite the challenges they face. In order to ensure gender mainstreaming and responsiveness from the project design step to the implementation phase, the project aims to reach 50% of women among the beneficiaries. It is also important to ensure that at least 40% of women are involved and actively participate in the various activities under the 4 components of the project. For instance, in capacity building meetings or workshops, management committees such as the water management committees, drought management information sharing platforms, developing and formulating by-laws and ordinances for groundwater sources management in communities within the four selected countries, women should constitute at least 40% of each target group. At every stage of providing inputs such as for early warning devices, soil and water conservation, climate-smart agricultural practices, range, and livestock management 50% of the women will be the sole beneficiaries.

iii) Examples of the specific activities in which 50% women participation will be targeted include.

- Supporting or equipping project beneficiaries (pastoralist, farmers and extension agents) to access EW information
- Holding inter-ministerial and sectoral meetings for data sharing
- Support national, regional and local EW information sharing Forums (including farmers and pastoralist associations)
- Supporting regular stakeholder EW information feedback platforms for farmers and pastoralists
- Holding quarterly stakeholder meetings on EW information utilization for national and sub-national stakeholders

- Popularization and Dissemination of the reviewed DMPs for use by the farmers and pastoralists
- Supporting formulation of bye-laws and ordinances at sub-national and lower political units. The support required is facilitating the organization of a workshop for formulating as well as deliberating on the specific bye-laws.
- Undertaking exchange visits and learning tours for cross-learning in areas with successful drought management innovations including groundwater management initiatives
- Facilitating community training workshops for farmers and pastoralists in drought risk management and adaptation measures utilizing the farmer field school approach
- Supporting farmers and pastoral groups to establish learning centers for innovative Climate Smart agricultural extension services. In this activity farmers and pastoralists will be provided with inputs
- Supporting protection of water wells and springs to ensure quality, quantity and efficient water use by providing inputs, for instance, live markers around the wells.
- Training the established water management committees to protect water wells and springs to ensure quality, quantity and efficient water use
- Supporting farmers and pastoralists to prepare high-value silage and hay for livestock during dry spells.
- Training communities in preparing high-value silage and hay for livestock to increase production of livestock products.
- Training in preparation of nutritious silage and hay is a function of its exposure to appropriate weather condition, methods of collection of materials from the field, using optimum temperatures for curing.

iv) The involvement of women in the activities that bring them to the forefront of making constructive and impactful decisions. The project design integrates gender considerations in the regional context and will involve gender-sensitive approaches as a way of ensuring active participation. For example, using women representatives at the various existing levels will add value and strengthen the consultation and decision-making process. Mainly, this is because women representatives are already in leadership positions and have the experience to share from past or on-going interventions.

v) Specific gender responsive consultations on Income Generating Activities (IGAs) will also be deliberately emphasized for women. These are growing of sisal and *Aloe vera*, art crafts, pottery, poultry, energy saving stoves and briquettes making. It is well known that women manage homes daily with numerous domestic chores. Therefore, consulting and eventually promoting IGAs that stay home women and mothers can engage in will be a vital innovative gender responsive consideration in the proposed project. Also, under Activity 4.1.2.4: on developing Strategies to empower women and other vulnerable groups in drought management initiatives, through a study will provide adequate information regarding gender considerations even beyond the lifespan of the project.

8.0 Environment and social Management Plan (ESMP)

The management of Environment and social impacts during project implementation of the DRESS-EA Project shall be guided by an Environment and social management plan **(ESMP)** that is also in compliance with the Adaptation Fund's ESP as well as Adaptation Fund's Environmental and Social Principles. This ESMP describes the impacts of the proposed activities including.

- Equipping and upgrading weather stations including observation and monitoring infrastructure

- Equipping /upgrading of selected weather stations,
- Construction/renovation and equipping of EW information centers
- Construction of appropriate, innovative water harvesting and storage infrastructure (e.g. Simplified water tanks, water jars, sunken dams, micro-dams, sand dams, water pans, valley dams, rock water harvesting, roadside water harvesting facilities, water ponds, and locally dug underground tanks, deep and shallow wells, Contour Stone Bunds and Stone Lines for water and soils conservation)
- Construction of mini-irrigation and water delivery systems (e.g. Gravity flow scheme, micro-irrigation systems, check dams, drip irrigation borehole irrigation, and solar powered irrigation systems),protection of water wells and springs)
- Promotion of soil and water conservation measures (e.g. Terraces, contours, conservation/minimum tillage, pit gardening, Zai pits and home gardening)
- Restoration of degraded water catchments
- Promotion of fast growing and drought resistant crop and agrosilvopastoral systems (dry land agroforestry),
- Promotion of hydroponic systems for growing nutritious fast growing cereals for livestock (animal feeds, preparation of high-value silage and hay for livestock during dry spells.

These were identified during the initial screening process and on site field assessments and consultations during the development of the Environmental and social management Frameworks (ESMFS) for the Project in the four target countries. The Environmental and Social Management Frameworks have been approved by the respective Environmental Management Authorities of the four countries.

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

AF Environment and Social Principles	Environmental /or Social issue	Potential impacts/Risks	Mitigation measures	Monitoring indicators	Schedule	Responsibility for implementation	Responsibility for monitoring
Compliance with the law	Unidentified activities	These may require a specific EIA depending on the size and the location of the implementation to comply with national standards and laws.	Risk screening of unidentified activities; E&S impact assessment; Consultation process; Development of individual project Environmental and social management plan (ESMP) Evaluation and monitoring process; Certificates and permits of conformity obtained	No assessments done for sub-projects ESMPs developed Certificates and permits obtained	Before implementation of sub-projects or activities	Project staff NEE / Contractors	Line Ministry officials/supervising Consultant
Access and Equity	Decision making and involvement of all members	Project beneficiaries will be in general rural people (pastoralists and smallholder farmers)	- Consultation workshops; - Close monitoring of the project beneficiaries to assure	Monitoring Reports Functional	Entire project cycle (before, during and after project implementat	Project staff NEE, REE, RIE/Contractors	Line Ministry officials/supervising Consultant

		who might not be fully involved in the decision-making process, this may limit their opportunities to benefit from projects outcomes. There is a risk that all members of the beneficiary groups or community are not involved in the preparation and the implementation of their sub-projects	equal access of men; women, youth and the most vulnerable; - Grievance mechanism.	Grievance mechanism	ion)		
Marginalized and vulnerable groups	Technological knowledge and access	Insufficient knowledge and access/use of technological devices such as mobile phones or lack of good cellular connectivity specially required in component 2 on Early Warning System design and implementation.	Local radio channels and traditional practices such as speakers and sirens will be used to ensure messages reach every one	Percentage of target communities reached by early warning messages	During and after project implementation	Project staff NEE, REE/ departmental staff	Line Ministry officials/supervising Consultant

	Reduced access to resources for certain populations	Risk of reducing or prohibiting access because of the project, the access of certain populations to the resources on which they depend (pastures, water, fruit trees, crops, fishing grounds, forest, public services)	Organize consultation meetings with local administrative and customary authorities and steering committees representing communities and indicate that any sub-projects limiting access to resources or sources of income will not be funded. All activities implementation must be decided in common with consultation of all concerned communities; Grievance mechanism	No of complaints registered	Entire project cycle	Project staff NEE, REE, RIE/ departmental staff and Contractor	Line Ministry officials/supervising Consultant
Human rights	Human rights	The project activities do not generate risks related to human rights.					
Gender Equity and Women's empowerment	Equitable distribution of Project benefits	The cultural and social norms of the project regions tend to promote male dominance. So, there is a risk that women will not benefit equitably from the	Ensure the presence of women and young people in workshops and trainings; Communication and sensitization of the population on the gender	Activity reports Lists of project beneficiaries segregated by	Entire project cycle	Project staff NEE, REE, RIE/ departmental staff and Contractor	Line Ministry officials/supervising Consultant

		proposed adaptation measures and the capacity building interventions due to men leadership.	issue to ensure gender parity in all project activities including income-generating activities Grievance mechanism	gender			
Core Labour Rights	Employment and Development	Increasing employment opportunities	Giving priority to local workers	No of Local people employed by the Project and sub-jects	At the start of the project and sub-projects	Project staff NEE/Contractor	Line Ministry officials/supervising Consultant
	Occupational hazards	Increase in accidents and occupational hazards	Sensitize workers and populations to the risks related to the undertaken activities; Design and implement safety measures and emergency plans to contain accidents risks and ensure the application of safety standards by companies (equipment, signs, training, etc.) ; Provide workers with protective clothing (nose and mouth masks, ear	Safety plans in place No of recorded incidents	Project cycle	Project staff NEE, REE/Contractor	Line Ministry officials/supervising Consultant

			muffs, overalls, industrial boots and gloves) and helmets as applicable				
	Un paid or delayed payments	Risk of late or unpaid salaries or remuneration non-compliant with the countries labor legislations and laws.	Pay Salaries in line with regional practices and in line with national laws and standards	Payment schedules	Implementation and operation	Project staff NEE, REE, RIE/Contractor	Line Ministry officials/supervising Consultant
	Child labour	Risk of Children's labor.	Close follow-up and monitoring of the worksites by the national executing entities, to ensure conformity with national and international labor codes.	List of workers indicating their gender and age Site visit reports	Implementation and operation	Project staff NEE, REE, RIE/Contractor	Line Ministry officials/supervising Consultant
	Unequal pay	Risk of Remuneration inequity between men and women.	Close follow-up and monitoring of the worksites by the national executing entities including payment schedules, and ensuring conformity with national and international labor codes.	List of workers indicating their gender and age Payment schedules	Implementation and operation	Project staff NEE, REE, RIE/Contractor	Line Ministry officials/supervising Consultant
Indigenous People	Impacts	There will be no major risk on their assets, resources,	Involvement of indigenous people representatives at all	Detailed analysis	Implementation and	Project staff NEE, REE,	Line Ministry officials/supervi

		culture, land and rights. The main risks that could raise are related to the ways they use water resource, transhumance routes, livestock management, agricultural practice etc	project stages (development, implementation, monitoring and decision-making process) Detailed analysis will be carried out by local and national agencies to understand the traditional use of natural resources especially regarding to water and land use.	reports Activity Reports showing the involvement of the indigenous people where they exist	operation	RIE/Contractor	sing Consultant
Involuntary Resettlement	Land acquisition	The construction of water harvesting and storage infrastructure as well as mini-irrigation and water delivery systems will occupy spaces and may affect private lands or related activities. Limited acquisition and	The project will try as much as possible to use public or state-owned lands If land acquisition is inevitable, proper Compensation must be done.	No of acres acquired No of private land owners compensated	Before any construction of the sub-projects start	Responsible Ministries / RIE	Line Ministry officials/supervising Consultant

		Resettlement					
Biodiversity conservation and Protection of natural habitats	Wildlife and Vegetation	Clearing of sites for the construction of water infrastructure will affect wildlife habitats Presence of heavy equipment and people during construction may scare away wildlife in some sites Herds' incursion in protected areas create protected area managers and may result in illegal activities including Poaching and trade in threatened wildlife species trade and other forms of illegal exploitation of other wildlife resources	Follow-up and monitor the implementation of all activities related to the protection and management of ecosystems; Minimize vegetation clearance as Low as Reasonably Practical (ALARP); Avoid cutting large trees with a diameter >20cm; Pre-survey the proposed construction site areas to avoid sensitive habitats that have high diversity of indigenous plants; Promote planning for activities of biodiversity conservation such as Compensatory reforestation; Promote awareness	Number of interventions being undertaken No of incidences reported No of acres restored	During and after construction	Contractor / environmental authority / REE, RIE	Line Ministry officials/supervising Consultant Project staff

		.Destruction of breeding grounds for animals, birds and aquatic species Accidents for animals falling into newly created water bodies Attract birds and other animals near the water bodies	sessions, capacity building and peer learning to strengthen the efficient management of natural resources, including aquatic species, animals and forests. Follow-up of the implementation of all activities related to the protection and management of ecosystems and natural habitats; Establishment of E&S Impact Assessment Studies; Policies and laws to protect natural habitats will be screened with the stakeholders to ensure that the critical habitats are legally protected; Sensitization sessions to local populations on good environmental				

			practices and the protection of natural habitats. Monitoring of transhumant pastoralists' number and herd sizes, grazing destinations (including protected area) and distribution of habitat types in order to provide inputs for decision making, solving tensions and natural habitats protection. Fencing can reduce chances of animals drowning in the water infrastructure				
Climate change		A potential change of the land use due to the field clearing to construct water harvesting and storage infrastructure	Promote reforestation to offset these used lands	No of areas restored	During and after construction	REE, RIE / Contractor	Line Ministry officials/supervising Consultant

		may generate the risk of the sequestration decrease and micro-climates					
Pollution prevention and resource efficiency	Groundwater	Seepage of hazardous material.	Regular monitoring.	Water quality Parameters	Regularly	NEE, REE	
		The high infiltration in the right abutment.	Water quality should be regularly monitored at both the inlet and dam lake	Water quality Parameters	Regularly	Responsible Government department/water user committees (community based monitoring)	Line Ministry officials/supervising Consultant Project staff
	Surface Water	Debris will be carried with base flow downstream	Proper and regular disposal of generated solid waste should be undertaken	Water quality Parameters	During construction	NEE, REE	Line Ministry officials/supervising Consultant Project staff
		Eutrophication can reduce Water quality.	Algal growth control. Harvesting of overgrown algae by algae collection boats.	Water quality Parameters	Regularly	NEE, REE, Responsible Government department/water user committees	Line Ministry officials/supervising Consultant Project staff

	Soil and Sedimentation	Sedimentation accumulation will decrease the life time of the Water infrastructure	Manage and remove sedimentation by flushing out of the water infrastructure	Status of Water infrastructure	Regularly	NEE, REE, Responsible Government department/water user committees	Line Ministry officials/supervising Consultant Project staff
Public health	Traffic	Increase in the number of vehicles traveling to and from the construction sites	Scheduling trips to the construction sites. Securely pack construction materials. Prepare and abide by traffic management plan. Transportation of workers should be in vehicles equipped with proper seats not dump trucks.	Functional traffic management plan	Before any construction of the sub-projects start	NEE, Responsible Government department	Line Ministry officials/supervising Consultant Project staff
	Occupational Safety and Health	Possible injuries related to handling heavy machineries and during construction	Provide onsite medical services to workers. Prepare and train all staff on a health and Safety plan. Provide workers with protection equipment.	Safety plan in place Records of safety meetings and tracings	During construction of water infrastructure	NEE, Responsible Government department	Line Ministry officials/supervising Consultant Project staff

			Hold regular safety staff meetings and trainings				
		Spread of infectious diseases caused by hiring Foreign workers.	Assure health clearance for all workers in the Project and raise awareness on preventive measures including provision of condoms in areas with prevalence of HIV/AIDS	Awareness campaigns Display of IEC materials			Line Ministry officials/supervising Consultant Project staff
	Sanitation	Lack of sanitary facilities on site will cause health hazards	Provision of on-site sanitary facilities for construction workers	No of sanitary facilities constructed	During construction	NEE, Responsible Government department	Line Ministry officials/supervising Consultant Project staff
	Air quality	Increased levels of dust.	Apply dust abatement measures, such as: Covering material when transporting. Moistening the excavation area and material to be transported	No of measures in place and their frequency	During construction	NEE, Responsible Government department	Line Ministry officials/supervising Consultant Project staff
	Noise	Increased noise levels.	Abide by each Country specific recommended noise levels and time	No of complaints filed with the	During construction	NEE, Responsible Government	Line Ministry officials/supervi

			when it is most convenient to work	project Managers and the Local Authorities		department	sing Consultant Project staff
Physical and Cultural Heritage	Archeological Resources	Possibility of damaging archaeological sites	If any suspected archaeological findings were discovered during construction, Responsible Ministries/department is to be informed immediately	No of chance finds reported	When a chance find is made	NEE, REE, RIE	Line Ministry officials/supervising Consultant
Soil and land conservation	Soil	Contamination of soil with Machinery oil.	Removal of contaminated surface soil after Construction. Prepare and abide by a Spill Prevention & Management Plan.	No of incidences reported	During construction and mantainace	NEE, and Responsible Government department	
		Risk of increased soil erosion	Where applicable install specific measures to combat erosion (dry rock, gabions, stone bunds)	Area covered with Soil and water conservation measures	During construction and maintenance	NEE and Responsible Government department	Line Ministry officials/supervising Consultant

			Plant sediment binding grasses, shrubs and trees on the exposed slopes and other surfaces as found appropriate.				
		There is a minimal risk of soil compaction by the machinery during construction or maintenance.	Promote the deteriorate lands restoration through sustainable techniques such as reforestation and agroforestry; Raise the local population awareness to strengthen the effective management of soil and land; A close follow-up and monitoring of the implementation of all activities related to the soil and land conservation	Area covered with Soil and water conservation measures	During construction and maintenance	NEE and Responsible Government department	Line Ministry officials/supervising Consultant
		Possibilities of land degradation as a result of agricultural activities	Adopt conservation agriculture practices	Area covered with Soil and water conservation measures	During construction and maintenance	NEE and Responsible Government department	Line Ministry officials/supervising Consultant

Institutional arrangements for ESIA

Implementing Entity

The E&S committee of the OSS, the Implementing Entity, will be responsible for ensuring the implementation of the ESMP and the application of the methodology described here above.

Besides, for the USPs, this committee will be in charge of deciding whether ESIA studies are necessary or not when risks happen and this according to its Environmental and Social principles as well as those of the AF. Additionally, National Environmental Authorities may be involved to deliver conformity certificates (if applicable) and/or just for seeking opinion and comments.

Finally, OSS will ensure the effective implementation of the mitigation measures identified in the ESMP during its supervision missions. Nevertheless, it could organize specific assignments to assess the complaints submitted by local communities.

Regional Executing Entity (REE)

The regional monitoring of the project activities will be carried out by the GWP-EA. This REE will be responsible for the supervision of the National Executing Entities activities related to monitoring the ESMP at local level. On a quarterly basis, the REE will gather the reports from the National Executing Entities, who will rely on a bottom up feedback system based also on community inputs. In order to ensure a relevant monitoring regular field visits to inspect and verify on the one hand the efficiency of the mitigation measures and on the other hand to check the extent of the foreseen impacts.

Given that the project is regional, the impacts may also be regional and the limited competencies of the national entities could make the monitoring of these impacts inadequately implemented. The GWP-EA as REE will be responsible of taking this dimension into account in order to identify these impacts and ensure that each country makes the necessary follow-up. Also, the REE will take the measures to ensure that the regional dimension is taken into account in the assessment of the USPs if required. The implementation of these transboundary measures will be reviewed during the analyses of the quarterly reports sent by the national entities. If the monitoring is not adequately ensured, the GWP-EA will inform the national entities and the RIE to take the necessary measures in a concerted manner. In addition the REE and the RIE will carry out regular field missions for close monitoring of risks, impacts and mitigation measures, especially those with a regional connotation.

In this context, the involvement of all implementing and executing entities is necessary to ensure adequate monitoring of mitigation measures at the local, national and regional levels. Their involvement mainly necessary for monitoring the cross-border impacts that are the most difficult to follow. A half-yearly monitoring report will be developed by the REE and submitted to OSS as a RIE.

National Executing Entities (NEE)

The NEE will be responsible for coordinating and monitoring environmental and social indicators. The NEE will be also in charge of analyzing data, managing local information systems and supervising the baseline establishment at project starting phase. As regards to the unidentified sub-projects the NEE will be responsible for conducting the ESIA according to the national standards

and laws and will then work closely with local authorities to develop the relevant ESMPs for each intervention sites. Finally, the NEE will prepare quarterly based reports and submit them to the REE.

Local Communities

The ESIA monitoring will also include a community-based component. In fact, the project plans to carry out training and capacity building sessions for the benefit of local agents and communities, in data collection and monitoring.

During all the consultative workshops and meetings related to activities execution, capacity building and training the representatives of ethnic groups and indigenous people will be involved in an active way. They will be informed about the activity risks and will be involved in the implementation and monitoring of mitigation measures.

Environmental and Social Impact Assessment and Risk Management for Unidentified Sub-Projects

The ESIA of the project activities has been established to ensure that the potential impacts are identified, their significance is assessed, and appropriate mitigation measures are proposed to minimize or eliminate such impacts during a fair and visible time frame with the consideration of the investment which has to be taken. Nevertheless, the project includes a number of activities that have not yet been identified to the stage where effective ESP risks identification is possible (so called unidentified sub-projects USPs). These USP are related mainly to the IGA including agricultural or related field activities such as agroforestry, livestock farming that will not generate major negative impacts.

Given this, additional environmental and social impact assessment for each sub-project will be required and ensured by the REE. The screening system will ensure that each sub-project adheres to the environmental and social principles of the AF and of the OSS E&S Policies as well as national policies and procedures.

In fact, during project implementation and when the USPs will be clearly identified once the E&S and Gender screening will be conducted, a focus on the relevant national technical standard will be made. It is however important to note that the USPs will be only activities related to similar ones that are already known at this stage of project development. Most of the expected project' USPs will be dealing with agriculture activities such as breeding small ruminants, Medicinal and aromatic plants distillation, etc. Given this, the technical standards presented above and which are relevant with the project activities will be applied for the USPs if relevant and additional Standards could be identified and referred to if required according to the USP's specificities.

Furthermore, assessed sub-projects that may present significant environmental and social risks will not be implemented unless a comprehensive risk management plan is developed and where the impacts and risks are important, no sub-project or activity will be carried out without the approval of the relevant national authorities.

For each sub-project, ESIA will be carried out to predict and assess the potential environmental and social impacts and design appropriate mitigation, management and monitoring measures. The

process will be in compliance with national standards, AF and OSS Policies and will include the following steps:

Screening: a high-level analysis to determine whether a full ESIA is necessary or not. It is an important tool for predicting and understanding potential sub-project/activity impacts, as it can help determine whether the sub-project/activity will be a significant issue for the project or not;

Scoping: If a full ESIA is required, scoping establishes the studies that will be required as part of the ESIA process including the identification of data availability and gaps. It determines the appropriate spatial and temporal scopes for the assessment and suggests suitable survey and research methodologies;

Impact Prediction and Evaluation: is the heart of the ESIA and involves analyzing the impacts identified in the scoping to determine their nature, temporal and spatial scale, extent and effect. Impact analysis requires input from relevant experts, including ecologists, biologists, sociologists and economists. Once the potential impacts are fully understood, it is necessary to judge the significance of each impact, to determine whether it is acceptable, requires mitigation or is unacceptable. Consultations with local stakeholders is vital at this stage, and particular attention should be given to vulnerable and disadvantaged communities and risks arising from involuntary resettlement. Successfully identifying and addressing significant impacts at this stage can be key to obtaining both a formal and informal license to operate;

Mitigation: aims to eliminate or reduce negative sub-project/activity impacts through suggesting appropriate measures;

Social and Environmental Management plan (SEMP) and monitoring: Also called an Environmental Action Plan (EAP), it defines resources, roles and responsibilities required to manage sub-project/activity impacts and implement mitigation measures. The SEMP forms a link between the ESIA and the Social and Environmental Management System/entity. The central elements of a SEMP should include a detailed description of the activities planned to mitigate impacts, a time line and identification of resources to ensure the SEMP can be delivered, and a communication plan that indicates how progress in the implementation of the SEMP will be disclosed. The SEMP should also define monitoring requirements or indicators to determine whether mitigation is successful;

Evaluation: Also called The Environmental Impact Statement (EIS), is the physical report on the ESIA process and findings. The EIS should provide a clear review of potential impacts and how they have been/will be mitigated. The report often forms the basis of public consultation activities and is the document that is presented to regulatory authorities as the basis for decision making.

However, as part of AF quality assurance role, AF requires adherence to the ESP for Project activities implemented using funds channeled through AF accounts. So, all proposed Projects are required to be screened according to the 15 principles as given in the table below.

Table : Checklist for preliminary risk screening and project categorization according to the AF principles

Checklist of environmental and social principles	No additional assessment is required for conformity	Potential impacts and risks - additional assessment and management required for the conformity
Compliance with the law		
Access and Equity		
Marginalized and vulnerable groups		
Human rights		
Gender Equity and Women's empowerment		
Core Labour Rights		
Indigenous People		
Involuntary Resettlement		

Protection of natural habitats		
Biodiversity conservation		
Climate change		
Pollution prevention and resource efficiency		
Public health		
Physical and Cultural Heritage		
Soil and land conservation		

Besides, OSS, as the project implementation entity, is also provided of its specific E&S policies describing principles and procedures for the environmental, social and gender impacts screening/assessment during the preparation and implementation of projects.

In addition, the USPs environmental screening and potential ESIA should be in line with national laws and regulations as the activities will be executed at national level. If some of the USPs require detailed assessments the involvement of National authorities in charge of environment will be necessary.

OSS Environmental and Social Safeguard

Environmental and Social Safeguard of DRESS-EA project is ensured through OSS policies and procedures which are based on the International Finance Corporation (IFC) Environmental and Social sustainability Framework. This ensures that potential risks and impacts are iteratively identified, mitigated and monitored throughout the life-cycle of the Project. The Environment and Social risk management is completed through two main stages: 1- Preliminary Risk Screening with respect to the ten Performance Standards (PS) prescribed in OSS E&S policy that all projects should comply with. This phase is implemented during project preparation and leads to a categorization of the project according to its risk level.

In compliance with OSS Environmental and Social policy, a preliminary risk screening was conducted from the earliest stages of DRESS-EA project preparation. Pre-screening of the concept note and early drafts of the project document using OSS' procedure for risk and project categorization helped to ensure that social and environmental sustainability issues are considered and integrated into the project' design. 2- On-going Risk Screening of the project interventions during the implementation phase. Activity-wise risk management is governed by OSS' risk management procedure which is in line with the internationally recognized standards, and more specifically the ISO 31000:2009, Risk management — Principles and guidelines.

In addition to the preliminary and overall risk screening conducted at the preparation phase, operational procedures will be implemented to ensure a continuous screening of all project activities and interventions for the identification of arising risks and impacts. If these impacts or risks are determined significant, activity-wise environmental and social assessment will be conducted which, in turn, will lead to the identification of activity' specific environmental and social management measures that need to be incorporated into the project. Identification, treatment and monitoring of identified risk and mitigation measures for DRESS-EA project will be managed using a Risk Register. The process will be governed by the Risk Management Procedure of the AF and OSS.

Moreover, in monitoring of the mitigation measures, corrective actions identified to manage activities with significant Environmental and social impact will be monitored using operational rules set out in the monitoring and review procedure of OSS. In this respect, OSS will monitor and review the implementation of corrective action plans, which range from simple mitigation measures to detailed management plans with actions that can be measured quantitatively or qualitatively.

Then, once the ESIA is conducted, a detailed ESMP will be developed in each sub-project site and will include a mitigation and monitoring plans, institutional arrangements, with capacity building and associated costs. It will specify how, at what stage and by whom during project implementation for each sub-project risks of negative environmental and social impacts will be identified according to the 15 principles of the AF' ESP.

10. MONITORING AND ANNUAL REPORTS

10.1 Monitoring and Evaluation

Environmental and social monitoring will be mainstreamed in the overall Monitoring and Evaluation (M&E) system of the DRESS-EA Project. Environmental monitoring of sub-projects will be undertaken at different levels. EA In-house Environmental / Social Experts will be responsible for day-day supervision and monitoring of implementation of environmental and social safeguards and preparing routine Reports. Also

trained persons at lower local government levels will, depending on the scale or scope of the projects, undertake the monitoring exercises in sequences and frequencies stipulated in the Project Implementation Schedule including where appropriate a Maintenance Schedule. The regulatory Agencies in each country will mainly carry out "spot checks" to ensure that implementation of mitigation measures is done satisfactorily.
Supervision arrangements for the ESMP shall summarize key areas on which supervision will focus—critical risks to implementation of the ESMP, how such risks will be monitored during implementation and agreements reached with the key stakeholders including contractors.

Supervision of the ESMP, along with other aspects of the project, covers monitoring, evaluative review and reporting and is designed to**:**

- determine whether the project is being carried out in conformity with environmental and social safeguards and legal agreements;
- identify problems as they arise during implementation and recommend means to resolve them;
- recommend changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- Identify the key risks to project sustainability and recommend appropriate risk management strategies

It is vital that an appropriate environmental supervision plan is developed with clear objectives to ensure the successful implementation of this ESMP.

10.2 Annual Reviews and Periodic Audits

An independently commissioned environmental and social audit will be carried out periodically (between 12 – 36 months) depending on the level of implementation of the project and sub-projects. The audit team will report to NEMA, the MWE, GWPEA.OSS and the Adaptation Fund, who will lead the implementation of any corrective measures that are required. An audit is necessary to ensure (i) that the ESMF process is being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

10.2 TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION:
Capacity Building and Training

The goal of the DRESS-EA project is to the maximum extent possible utilize existing institutional structures and capacity within the EAs especially those departments that are responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources to implement the Project. In order to successfully implement the guidelines and recommendations in the ESMF, it is important to ensure that target groups and stakeholders who play a role in implementing the ESMF are provided with the appropriate and continuous Environmental and Social Safeguards capacity development.

11.1 Institutional Strengthening

Under the DRESS-EA implementation arrangements, a Focal Point for the overall ESMF Coordination shall be designated from the mainstream staff of EAs at Country level and will be responsible for coordinating activities of the project. Given the fact that mainstream staff are usually overstretched by many projects and their substantive roles, the project shall hire Environmental Specialists and a Social Development Specialist to undertake day to day coordination, management, implementation and supervision of ESMF requirements in each country. These Specialists shall be based at the Project Implementation Units at based at the respective Country EAs. Hence, the Environmental Coordinator and project Environment and Social Safeguards staff will

manage and monitor the implementation of the requirements of the ESMF and liaise with the Lower units staff and other stakeholders on environmental and social issues related to the DRESS-EA**.**

Therefore, a special initiative is needed to develop the capacity of the Government staff at National, regional and Lower units, NGOs and CBOs as well as communities to support implementation of the Project including social and environmental aspects.

However, capacities in the Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities are still low with regard to environmental and social management practices. Therefore, a special initiative is needed to develop the capacity of these key stakeholders to support implementation of the Project including social and environmental aspects.

a) Developing Capacity on the ESMF Process

The following institutions will need environmental training to ensure effective implementation of the ESMF:

- The main implementing agencies, - Governments staff, NGOs and CBOs as well as communities
- Professionals involved in the DRESS-EA at the EAs levels
- Global Water partnership Eastern Africa –staff involved in project implementation

It is recommended to organize, prior to the kick-off, a three-day workshop where the ESMF will be presented and discussed.

b) Developing Capacity in Environmental Screening

Environmental screening is also clearly a domain where capacity of future program implementers remains low and also needs to be built. This will target training of trainers, Technical staffs including, Social Scientists, Environmental officers, Forestry officers, Veterinary officer, Staff from meteorology, Engineers, and technicians as well as staff from construction supervision consultants and contractors,

It is recommended to organize, prior to the Project kick-off, a workshop where this ESMF will be presented and discussed. This workshop should also aim at reviewing and refining some aspects of the process, particularly the forms, toolkits and guidelines proposed in this ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the Project and sub-projects. Country level experts in Environmental and Social safeguards as well as Country level lead Agencies; with support from OSS Environmental and Social specialists. The training will try to address the following topics**:**

- Review of the Country level environmental policies, laws, regulatory and administrative frameworks
- Review of the Adaptation Fund and OSS Environment and social policies
- ESMP and environmental guidelines applicable to construction contractors,
- Environmental and social screening process (with one practical exercise on a real site)
- Assignment of environmental categories
- Carrying out of the environmental work as discussed in the ESMF
- Review and clearance of the screening results and separate ESIA reports,
- Preparation of terms of reference for carrying out ESIA/ESMPs
- How to monitor safeguard implementation
- Water quality management
- Waste management issues (safe disposal of domestic wastes, construction wastes etc.)
- Impacts and monitoring of groundwater and surface water

- Social impacts as per the ESMF,
- compensation for minor income/property loses),
- The benefits of public consultation,
- Areas of the DRESS-EA sub-projects where public consultation is required
- Public consultation process in view of the ESMF requirements,
- Case studies
- Discussion of, and amendments to, the environmental screening form.
- Awareness of the ESMF Process

9.0 GRIEVANCE MECHANISM

Project description

During project preparation, consultations and studies were carried out to take into account the needs of local populations and to prevent environmental and social risks that could be linked to the implementation of the planned activities.

In order to prevent and manage potential grievances that may arise during and after its implementation, the DRESS-EA project will make available a grievance mechanism. This mechanism provides an access point for individuals, communities and other relevant stakeholders to submit complaints. It will also record and process all complaints relating to the project's activities, results or impacts.

The proposed mechanism is intended to be rapid, effective, participatory and accessible to all stakeholders including the vulnerable and marginalized groups, to prevent or resolve conflicts through negotiation, dialogue, joint investigation, etc. It will handle complaints related to the compliance of the project activities and impacts with environmental and social safeguards and gender aspects as well as fiduciary and legal ones (grant agreements, contracts, etc.).

Given the location of the project's intervention areas far from the usual facilities and means of communication, the existence of the project's grievance mechanism was disseminated. Indeed, during the preparation phase of the project document during the various consultation meetings with the local authorities as well as with the populations, the emphasis was placed on two essential aspects, namely:

The environmental and social risks related to project implementation as well as the planned mitigation measures and their relevance;

The opportunity to speak out and complain about the project activities and its stakeholders if impacts are felt;

The exchanges with the local populations were all conducted in the presence of local authorities, village chiefs and tribal or ethnic group's chiefs with their strong involvement in all the discussions. This will allow communities to address these same persons in the event of any grievances.

As agreed during consultation with indigenous people, the project will put in place publicly advertised procedures, identifying the means for submitting grievances, setting out the length of time users can expect to wait for acknowledgment, response, and resolution of their grievances, descriptions of the transparency of the procedures, and the governing and decision-making structures.

The mechanism will be presented during the launching workshops and during the consultative public workshops and meetings at the local level to allow a large diffusion. The feature of this mechanism is that it will be built on those already existing at the national level and whose management is well apprehended by the population and the authorities.

Objectives

This mechanism aims at providing individuals or communities affected or likely to be affected by the project activities with accessible, timely, effective and culturally appropriate opportunities to submit their grievances in accordance with the planned commitments. It will identify and propose fair and appropriate solutions in response to the complaints raised.

Principles

The various stakeholders in charge of the grievance management must rigorously respect the fundamental principles of the complaint mechanism described in the table below.

Principles	Implementing measures	Indicators
Security and confidentiality	- Protect the anonymity of complainants if necessary, - Ensure the confidentiality in the event of sensitive complaints, - Limit the number of people with access to sensitive information	No retaliation for denunciations
Accessibility and context	- Widely disseminate the mechanism to target groups, overcoming barriers as linguistic, geographical, intellectual and other - Clearly explain the complaint procedures, - Diversify the possibilities for filling plaints, - Assist people with special access problems...	Variety of sources of complaints, Rate of eligible complaints
Predictability	- Respond promptly to all complainants, - Present a clear process, with deadlines for each step	Average processing time, Response rate
Impartiality	- Ensure the impartiality of those involved in investigations - Ensure that no person with a direct interest in the outcome of the investigation is involved in the handling of the complaint concerned	Challenges of members of the
Transparency	- Inform the parties concerned about the progress and results of the complaint processing	Management team

Specificities of DRESSEA Grievance Mechanism

The grievance mechanism put in place for the project is easy to use and takes into account the particularities of the beneficiary communities. Since the project is regional and some countries, such as Uganda and Kenya, already have operational mechanisms, it is important to take it into account in the framework of the project to ensure the ownership of these mechanisms by the countries. In addition to the language barrier, the particularities of certain peoples mean that the most appropriate communication channel is the local authority. These communities do not have the possibility to send the information back to the REE and the RIE and Adaptation Fund without going through the local authorities. For those who do not have a national mechanism (Sudan and Djibouti) they will use that of the project which will be based on the involvement of local authorities for the same reasons mentioned above. In addition, the project specific grievance mechanism will be communicated during all consultative workshops and meetings at all levels. This has been done during the national and regional consultative workshops at the full proposal development stage.

How it works

The proposed grievance mechanism for the project will involve the different institutional levels concerned. At the regional level, the project grievance mechanism will be coordinated by both the GWPEA as a Regional Executing Entity and the OSS as a Regional Implementing Entity through its Environmental and Social Committee.

At national level where the project will be executed, the project specific grievance mechanism will be mainly based on the countries existing mechanisms and communication channels in addition to some project specific components. The project specific grievance mechanism has been presented to the various stakeholders and will be again disseminated and shared since the project launch. This approach will ensure the ownership of this mechanism and the continuity of a process that in some countries is already operational (Uganda and Kenya) as well as the development of a project specific grievance mechanism.

At local level the project specific grievance mechanism will present different ways in which population including indigenous peoples, women, and youth can submit their grievances, and taking into account language barriers/limitations and the need for anonymity if a complainant fears retaliation or submission by an authorized representative or civil society organization.

As an implementing entity, the OSS will use its grievance mechanism to manage complaints that arise during the preparation, the execution and after the project completion. Affected communities or other stakeholders who will be affected by the project may file complaints directly to the OSS or through the GWPEA secretariat or through the national project management unit. They may also be sent to the Secretariat of the Adaptation Fund, if necessary. The full addresses of the three entities are listed below:

Sahara and Sahel Observatory Boulevard du Leader Yasser Arafat BP 31 Tunis Carthage 1080 Tunisia Tel: (+216) 71 206 633/634 Fax: (+216) 71 206 636 Email: doleances@oss.org.tn or boc@oss.org.tn	Global Water Partnership – East Africa Regional Secretariat POBOX 192 Entebbe, Uganda Tel : +256 (414) 321 424 /+256 (417) 705000 Email : info@gwpea.org	Adaptation Fund Board Secretariat Mail stop: MSN P-4-4-400 1818 H Street NW Washington DC 20433 USA Tel : 001-202-478-7347 Email : afbsec@adaptation-fund.org

National specificities for handling complaints

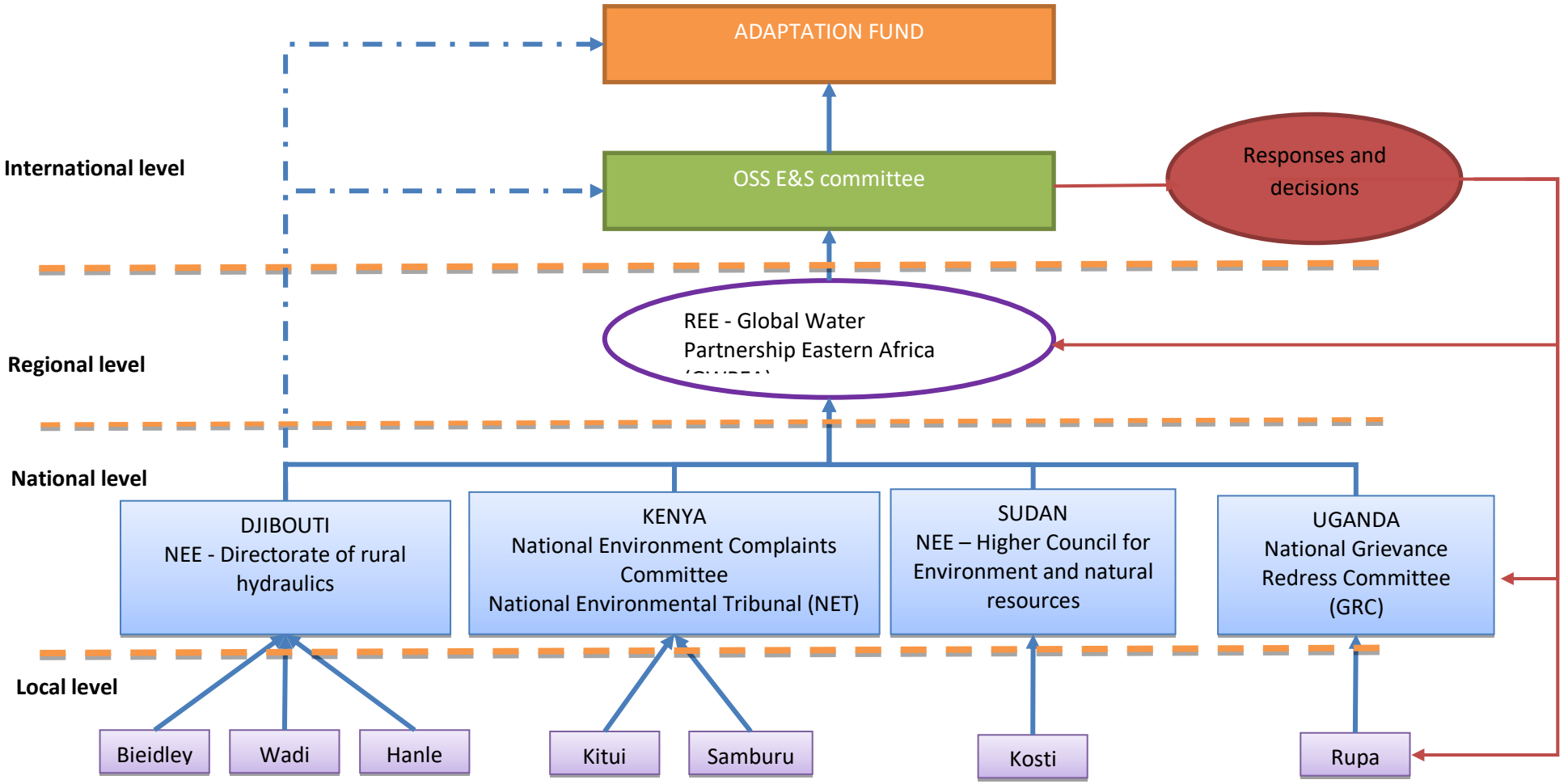
Grievances can be handled depending on the community in which the complainant emanates from. In **Djibouti** for instance, most members belong to different community groups such as savings and credit cooperatives. Errant members or members with grievances report their issues to the executive committee. The executive committee is composed of leaders including the Chairman, Secretary, Treasurer and other representatives. It is this structure that attends to specific grievances guided by the governing rules or Memoranda of understanding within the organization or cooperative structure. For members outside community groups or cooperatives, grievances are reported to the Elders' council that summons the conflicting parties to a meeting or session. It is during such a session that conflicts are resolved. Beyond the Elders' council, grievances are handled at local government structures that are linked directly to the Ministries and Directorates.

In **Kenya**, conflict resolution starts from the traditional leaders headed by the elders that listen and arbitrate between the grieving parties until an amicable solution is reached. For unresolved conflicts, the grieving parties can file their complaints to the Administrative Chief at the County Offices. Beyond this level complaints go the courts and can be determined by the Judges. Ministries also direct complaints to the courts once efforts to resolve conflicts have failed at the lower/community levels.

In **Sudan**, grievances are handled in accordance with the local government administrative structure.

In **Uganda**, generally, complaints are first reported to the local council (village level). Once the issues are not addressed or the grieving parties are not satisfied with the verdicts and advice, they proceed to local council two (parish level), then to local council three (LC III) at the Sub county level. Eventually to the district and then to the courts governed by Magistrates or Judges depending on the gravity of the conflict or case/grievance. However, specifically to the Karamoja region, there exists Elders' club /council with clan heads. These constitute the first line of filing, and handling grievances. Once such grievances are not handled at the Elders' level, they proceed to the lower local governments, LC I, LC II, LC III, district and courts accordingly.

Organizational framework



What to do

The project grievance mechanism will go through 5 main stages, as follows:

➢ Filing out a complaint: Anyone or communities affected by project activities can fill in their complaint or claim in several forms and in several ways. In accordance with the principle of accessibility and depending on the context, the method of filing complaints will be diversified.

i) At the national or regional level, complaints will be addressed directly to the OSS or to the adaptation fund via the contacts presented above and via social networks.

ii) At the local level, complaints can be addressed to local authorities (mayors, prefects, etc.) or customary authorities (village councilor, village chief, etc.), which will refer them to local technical services or local complaint management units. Complainants can also fill in their complaint directly with local complaint management units or NEEs. Contacts of local complaint management units and NEEs will be made public at the beginning of the project execution. The mechanism will use all possible means and channels (traditional and modern) to receive complaints or claims (anonymous or not). These will include, among others:

- Telephone call;
- School when children go there;
- Word of mouth, crier, and exchanges in local markets;
- Broadcasting through local and community radio stations;
- Self-referral to the Complaints Management Committee during supervision missions,
- Facts noted during meetings or a field visit...;
- Mail via complaint boxes in the localities concerned by the project;
- Social networks or the OSS website, if applicable.

➢ Receipt and registration of complaints: this is ensured by the NEEs which is responsible for receiving all complaints related to the project activities and impacts. Complaints received will be recorded upon receipt and the traceability procedure will be established. They are generally classified into 2 groups:

- Non-sensitive complaints related to the implementation process, including choices, methods, and results achieved, etc.;
- Sensitive complaints generally related to personal misconduct such as corruption, sexual abuse, discrimination, etc.;

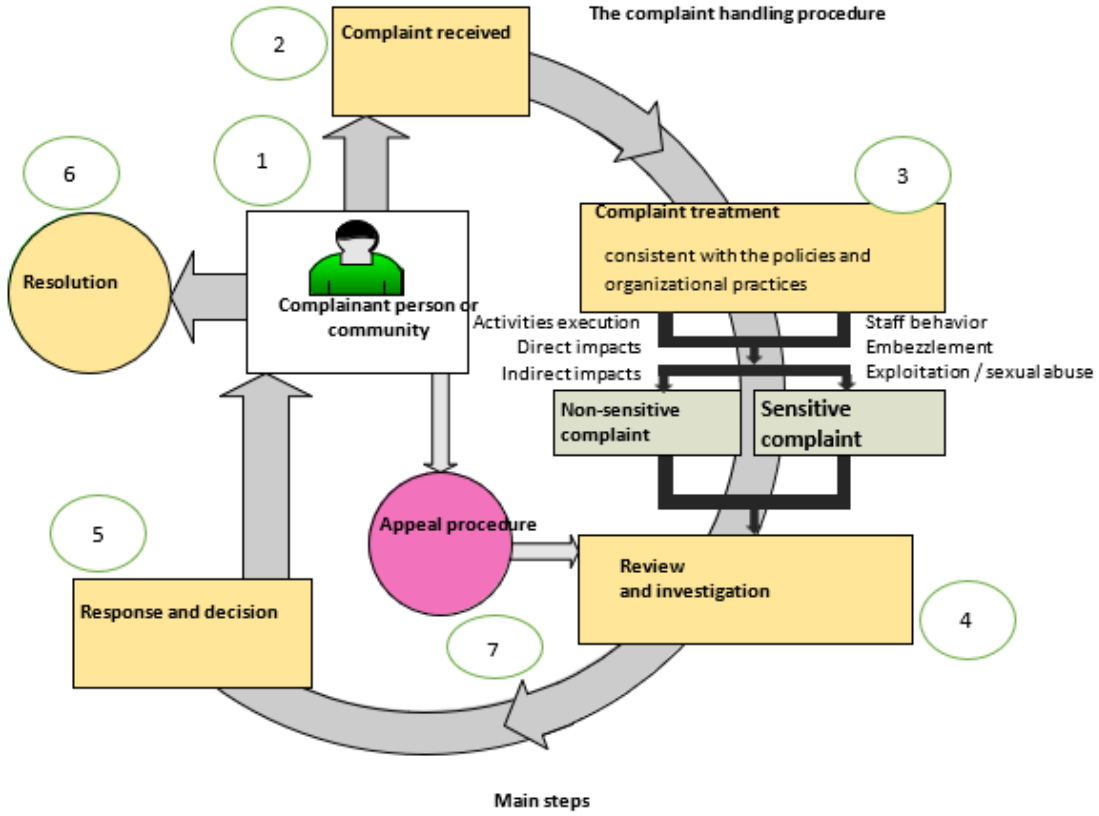
The NEEs will send an acknowledgment letter within a maximum of one week. In this letter, the recipient will be informed of the next steps and if necessary, he/she will be asked to provide clarifications or additional information for a better understanding of the problem.

➢ Complaint handling: involves verifying the eligibility of the complaint to the mechanism and ensuring that the complaint is related to the project's activities or commitments. The aim will be to establish the link between the facts denounced and the project's activities and impacts. The eligibility assessment will also determine whether the case should be dealt with under the Project specific grievance mechanism or referred to other mechanisms (whistleblowing, etc.).

In the case of unfounded complaints, due to a lack of necessary information or the result of rumors or malicious persons, which may harm the proper conduct of the project, it is essential to conduct the necessary investigations to preserve the project reputation. This task is the responsibility of the national and the regional management units.

In the case of well-founded complaints, two kind of responses can be applied:

direct response and action by the Complaints Management Committee to resolve the



complaint.

(i) broad and thorough audit is required, and joint investigations, dialogues, and negotiations could be conducted to reach a substantial resolution. This may involve extending the team to national and local services, as well as additional time. For sensitive cases, the CMC may use an investigation to reach an appropriate resolution based on expert advice.

Following the audit and investigations, a contextually appropriate explanatory letter is sent to the complainant. It should include the procedures to be followed by the NEEs to manage the complaint or propose the appropriate bodies to be contacted for cases that does not fall into the Project management unit's responsibilities.

If agreed with the complainant, the proposed responses are implemented by the Complaints Management Committee, the latter will monitor the whole process of the complaint treatments in all cases.

- Implementation of measures: if the CMC and the complainant agree to implement the proposed response, a plan will be developed involving all stakeholders. The CMC should document all discussions and choices available.
- Appeal procedure: If the measure proposed by the CMC does not satisfy the complainant, the latter may initiate the appeal procedure at the level of the OSS or a higher court (Adaptation Fund for example).
- Closing the grievance: The procedure will be closed if the mediation is satisfactory to the parties and leads to an agreement. It is necessary to track the number of complaints by the identity of the complainants, background, period, theme and final outcome. The satisfactory resolution and lessons learned should be documented.
- Publication of complaint result: all well-founded complaints will be made publically available by different communication means. The publication will include the type of complaint, its origin and impact, the treatment procedure and its results, including the complainant level of satisfaction.

10.0 MONITORING AND ANNUAL REPORTS

10.1 Monitoring and Evaluation

Environmental and social monitoring will be mainstreamed in the overall Monitoring and Evaluation (M&E) system of the DRESS-EA Project. Environmental monitoring of sub-projects will be undertaken at different levels. EA In-house Environmental / Social Experts will be responsible for day-day supervision and monitoring of implementation of environmental and social safeguards and preparing routine Reports. Also trained persons at lower local government levels will, depending on the scale or scope of the projects, undertake the monitoring exercises in sequences and frequencies stipulated in the Project Implementation Schedule including where appropriate a Maintenance Schedule. The regulatory Agencies in each country will mainly carry out "spot checks" to ensure that implementation of mitigation measures is done satisfactorily.

Supervision arrangements for the ESMP shall summarize key areas on which supervision will focus—critical risks to implementation of the ESMP, how such risks will be monitored during implementation and agreements reached with the key stakeholders including contractors.

Supervision of the ESMP, along with other aspects of the project, covers monitoring, evaluative review and reporting and is designed to**:**

- determine whether the project is being carried out in conformity with environmental and social safeguards and legal agreements;
- identify problems as they arise during implementation and recommend means to resolve them;
- recommend changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- Identify the key risks to project sustainability and recommend appropriate risk management strategies

It is vital that an appropriate environmental supervision plan is developed with clear objectives to ensure the successful implementation of this ESMP.

10.2 Annual Reviews and Periodic Audits

An independently commissioned environmental and social audit will be carried out periodically (between 12 – 36 months) depending on the level of implementation of the project and sub-projects. The audit team will report to NEMA, the MWE, GWPEA.OSS and the Adaptation Fund, who will lead the implementation of any corrective measures that are required. An audit is necessary to ensure (i) that the ESMF process is being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

k) TRAINING AND CAPACITY BUILDING TO ENABLE ESMF IMPLEMENTATION:

Capacity Building and Training

The goal of the DRESS-EA project is to the maximum extent possible utilize existing institutional structures and capacity within the EAs especially those departments that are responsible for environmental policy, regulation, coordination, inspection, supervision and monitoring of the environment and natural resources to implement the Project. In order to successfully implement the guidelines and recommendations in the ESMF, it is important to ensure that target groups and stakeholders who play a role in implementing the ESMF are provided with the appropriate and continuous Environmental and Social Safeguards capacity development.

11.1 Institutional Strengthening

Under the DRESS-EA implementation arrangements, a Focal Point for the overall ESMF Coordination shall be designated from the mainstream staff of EAs at Country level and will be responsible for coordinating activities of the project. Given the fact that mainstream staff are usually overstretched by many projects and their substantive roles, the project shall hire Environmental Specialists and a Social Development Specialist to undertake day to day coordination, management, implementation and supervision of ESMF requirements in each country. These Specialists shall be based at the Project Implementation Units at based at the respective Country EAs. Hence, the Environmental Coordinator and project Environment and Social Safeguards staff will manage and monitor the implementation of the requirements of the ESMF and liaise with the Lower units staff and other stakeholders on environmental and social issues related to the DRESS-EA**.**

Therefore, a special initiative is needed to develop the capacity of the Government staff at National, regional and Lower units, NGOs and CBOs as well as communities to support implementation of the Project including social and environmental aspects.

However, capacities in the Local Governments, catchment and Sub-Catchment management committees, NGOs and CBOs as well as communities are still low with regard to environmental and social management practices. Therefore, a special initiative is needed to develop the capacity of these key stakeholders to support implementation of the Project including social and environmental aspects.

a) Developing Capacity on the ESMF Process

The following institutions will need environmental training to ensure effective implementation of the ESMF:

- The main implementing agencies, - Governments staff, NGOs and CBOs as well as communities
- Professionals involved in the DRESS-EA at the EAs levels
- Global Water partnership Eastern Africa –staff involved in project implementation

It is recommended to organize, prior to the kick-off, a three-day workshop where the ESMF will be presented and discussed.

b) Developing Capacity in Environmental Screening

Environmental screening is also clearly a domain where capacity of future program implementers remains low and also needs to be built. This will target training of trainers, Technical staffs including, Social Scientists, Environmental officers, Forestry officers, Veterinary officer, Staff from meteorology, Engineers, and technicians as well as staff from construction supervision consultants and contractors,

It is recommended to organize, prior to the Project kick-off, a workshop where this ESMF will be presented and discussed. This workshop should also aim at reviewing and refining some aspects of the process, particularly the forms, toolkits and guidelines proposed in this ESMF, in view of their smooth implementation by the different parties involved in the process of implementing the Project and sub-projects. Country level experts in Environmental and Social safeguards as well as Country level lead Agencies; with support from OSS Environmental and Social specialists. The training will try to address the following topics**:**

- Review of the Country level environmental policies, laws, regulatory and administrative frameworks
- Review of the Adaptation Fund and OSS Environment and social policies
- ESMP and environmental guidelines applicable to construction contractors,
- Environmental and social screening process (with one practical exercise on a real site)
- Assignment of environmental categories
- Carrying out of the environmental work as discussed in the ESMF
- Review and clearance of the screening results and separate ESIA reports,
- Preparation of terms of reference for carrying out ESIA/ESMPs
- How to monitor safeguard implementation
- Water quality management
- Waste management issues (safe disposal of domestic wastes, construction wastes etc.)
- Impacts and monitoring of groundwater and surface water
- Social impacts as per the ESMF,

- compensation for minor income/property loses),
- The benefits of public consultation,
- Areas of the DRESS-EA sub-projects where public consultation is required
- Public consultation process in view of the ESMF requirements,
- Case studies
- Discussion of, and amendments to, the environmental screening form.
- Awareness of the ESMF Process

12.0 CONCLUSIONS AND RECOMMENDATIONS

This ESMF has been developed through a widely consultative process and basing on experiences and lessons learnt from similar projects. It will be helpful in addressing environmental and social issues that apply to or might be triggered by the planned project activities of the DRESS-EA Project. Adverse Impacts of the project will include, Increased incidences of diseases, Increased accidents and occupational hazards, Disturbance in socio-economic activities, Increased soil erosion, Increased siltation of the aquatic habitats, Disturbance of floral and faunal communities, Increased noise levels, Gaseous emissions among others.

Sub-Project-specific Environmental and Social Management Plans (ESMPs) should be developed in a manner that complies with the project ESMF, Adaptation Finds Environment and Social Policy and NEMA guidelines for assessing and managing environmental and social risks to address the above projected adverse impacts but also to enhance the positive benefits of this project.

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