



ADAPTATION FUND

AFB/PPRC.37/Inf.4
16 March 2026

Adaptation Fund Board
Project and Programme Review Committee
Thirty-seventh Meeting
Bonn, Germany, 7-8 April 2026

PROPOSAL FOR TANZANIA (1)



ADAPTATION FUND

**ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW
OF PROJECT/PROGRAMME PROPOSAL**

PROJECT/PROGRAMME CATEGORY: Regular Size Full Proposal

Country/Region: Tanzania

Project Title: Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga communities - KARAHADA

Thematic Focal Area: Water management, agriculture, ecosystem restoration

Implementing Entity: National Environmental Management Council (NEMC)

Executing Entities: Tanzania Environmental Protection Organization (TAEPO) & Karatu District Council

AF Project ID: AF00000255

IE Project ID:

Requested Financing from Adaptation Fund (US Dollars):

Reviewer and contact person: Lystra Fletcher-Paul

Co-reviewer(s):

IE Contact Person:

Technical Summary

The Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga communities (KARAHADA) aims to implement activities that enable climate-resilient livelihoods in climate-change-affected areas. This will be done through the five components below:

Component 1: Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang’ola in Karatu District (USD 534,463).

Component 2: Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang’ola and Endamaghang Wards in Karatu District (USD 945,893)

Component 3: Improving climate change resilience of forests and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang’ola in Karatu District (USD 128,569).

Component 4: Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang’ola in Karatu District (USD 165,320).

Component 5: Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang’ola to design and implement climate adaptation interventions and improve level of understanding of climate change related issues (USD 344,400).

Requested financing overview:

Project/Programme Execution Cost: USD 201,271

	<p>Total Project/Programme Cost: USD 2,118,645 Implementing Fee: USD 180,084 Financing Requested: USD 2,500,000</p> <p>The initial technical review raised several issues, such as the lack of a theory of change, adaptation rationale for some components, compliance with the Environmental and Social Policy and Gender Policy of the Fund, duplication of project, the consultative process, alignment with AF's results framework and issues with the budgetas is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.</p> <p>The second technical review raises several issues, such as ESMP completion, properly addressing USPs, Budget and risk management issues, compliance with the Environmental and Social Policy and Gender Policy of the Fund, cost-effectiveness and sustainability issues among others as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.</p> <p>The third technical review finds that several issues raised in the second technical review still have not been addressed, such as properly addressing USPs, compliance with Environmental and Gender Policy of the fund, sustainability issues, budget issues, alignment with AF Strategic Framework, among others, as discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.</p>
Date:	25 February 2026

Review Criteria	Questions	First Technical Review Comments 31 October, 2025	Second Technical Review Comments 13 January 2026	Third Technical Review Comments 25 February 2026
Country Eligibility	1. Is the country party to the Kyoto Protocol and/or the Paris Agreement?	Yes	-	-
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes Droughts and floods are already evident across almost all sectors of the economy, leading to significant economic costs, loss of life, property damage, and other human capital losses.	-	-

Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	<p>Yes</p> <p>As per the Endorsement letter dated August 08, 2025</p>	-	-
	2. Does the length of the proposal amount to no more than One hundred (100) pages for the fully-developed project document, and one hundred (100) pages for its annexes?	<p>Yes</p> <p>Proposal is 97 pages and the annexes are 61 pages</p> <p>General Note: Kindly correct minimal grammatical errors included as appropriate. Please ensure that the titles in the document are numbered correctly. Kindly also ensure that the annexes are referenced correctly in the text.</p> <p>CR1: Please update the timelines presented in the calendar section on page 15 of the proposal.</p>	<p>CR1: Not Cleared</p> <p>Thank you for the revised document. However, it seems the IE has used or changed the wrong template or altered the template for FP. There is mention of CN in the first page (<i>i.e.: This concept has been submitted before</i>) of the proposal. Also, the layout and formatting are not well done. Please resubmit the FP using the Fund's template which can be found here : https://www.adaptation-fund.org/document/template-for-fully-developed-single-country-proposal/</p>	<p>General Note: There are some duplications in the titles of some of the sections in the Table of Contents. Please delete where appropriate. The project could also benefit from a final proof reading.</p> <p>CR1: Cleared</p> <p>The document has been realigned with the latest version of the AF proposal format of November 2025.</p>

		<p>CAR1: Please delete the extra column inserted in the Project Components and Financing table. Activities are not to be included in the table.</p>	<p>CAR1: Not Cleared Thank you for the revised document and deletion of the extra column. However, the FP in clean and track-changes versions are not the same. There are some missing elements in the track-changes version. Kindly correct it and resubmit both versions using same information.</p>	<p>CAR1: Not Cleared There are still some discrepancies between the clean version and revised (track-changes) versions.</p> <p>CAR6 (NEW):</p> <ol style="list-style-type: none"> 1. Please present the budget in the Project/Programme Components and Financing at the output level by including additional rows in grant amount column and placing the total for each output e.g Output 1.1 with its corresponding amount. 2. Please update the project calendar with a more realistic timeline as the next board is October 2026 and the proposal will not be presented as an agenda item at the upcoming board (April).
	<p>3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?</p>	<p>Yes.</p> <p>However, further clarification is needed.</p> <p>To address drought the project intends to introduce alternative livelihoods, invest in water infrastructure, improve on the management of forests, and reduce the impact of climate on health.</p>		

		<p>CAR2: Please provide a theory of change that clearly articulates the logical pathway from project inputs and activities to the intended long-term outcomes, including the underlying assumptions about how introducing new livelihood options will lead to improved community resilience and well-being. Kindly consider a Theory of Change (and its diagram) structure that use the form of “IF’ ‘THEN’” statements. This would clearly state how the project activities would lead to substantial tangible outcomes.</p> <p>CR2: The project will introduce crop and livestock production for a community that are described as hunters and gatherers. How will the project address potential resistance to dietary changes when introducing crop and livestock production to communities with established hunting and gathering traditions, and what measures will ensure cultural acceptability of new food systems?</p> <p>CR3: Given the shift from traditional subsistence practices to market-oriented livelihoods like rabbit keeping and jewellery making, what specific measures will address market access risks including demand uncertainty, transportation barriers, pricing challenges, and the communities' limited experience with commercial activities?</p>	<p>CAR2: Cleared as per revised Theory of Change in figure 1.</p> <p>CR2: Not cleared Thank for the explanation and information addressing CR2. However, we are not able to find the revised text in the track changes version. Kindly address in both versions and resubmit.</p> <p>CR3: Not Cleared Thank you for the explanation provided in the review sheet. However, please address the followings:</p>	<p>-</p> <p>CR2: Cleared The revised text now incorporates the requested information in both the clean (pp 13 – 14) and track-changes versions (pp 23 – 24) of the proposal.</p> <p>CR3: Not Cleared 1. Cleared The explanation and information provided in the review sheet have now been incorporated</p>
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			<ol style="list-style-type: none"> 1- Please reflect the explanation and information share din the review sheet in the main document (FP) and in particular the track changes version which currently does not have any update on this matter. 2- While the explanation provided is sound, please reflect the proposed measures in the activities and outputs. Some of the mitigation measures can be addressed with set of new activities. 3- How the proposed off-take agreements will be developed and which partners are targeted? 	<p>into the main document (FP) and clearly reflected in the track-changes version. (See pp 27 – 29)</p> <ol style="list-style-type: none"> 2. Not cleared. Although the proposed mitigation measures have been translated into revised activities and outputs, including the addition of new activities where relevant, it is recommended that the Outcomes, Outputs and Activities be numbered in a logical sequence so that they are easily identified and linked with the relevant Component. Thus Outcome 1 of Component 1 is numbered Outcome 1.1 and the Outputs under Component 1, Outcome 1 would be Output 1.1.1 and the Activities 1.1.1, 1, 1.1.1.2 etc. In this way it will also be easier to see the alignment of the various tables. 3. Cleared: Details on the development of the proposed offtake agreements, including the targeted partners and engagement approach, have been added in the narrative under output 5 of Component 1 (pp 28 – 29)
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	<p>CR4: Please list the estimated number of trees to be planted under activity 3.1.3.</p> <p>CR5: Kindly indicate explicitly how the project supports one or more of the Adaptation Fund Strategic Objectives. Currently, the document is not clear about this alignment.</p> <p>CR6: The background information to justify the climate change context and proposed actions are outdated. Please revise the document (Part I) with recent data to support the climate risks, in particular annual rainfall and temperature data (currently up to 2018, ref table 1 and 2) as well as any available projections.</p> <p>CR7: The proposed interventions under component 2, output 1 (At least 10 boreholes drilled in Hadzabe) need further justification</p>	<p>CR4: Not cleared There is a discrepancy between the clean version of FP which mentions 10,000 trees to be planted while the track version indicated that “At least 1500,000 trees will be planted”. Also, please clarify the figure of 30,000-40,000 which is listed under benefit.</p> <p>CR5: Not cleared Thank you for the revised section under the clean version. However, there is no such reference in the track changes version.</p> <p>CR6: Cleared as revised document Part I with recent data.</p> <p>CR7: Not cleared</p>	<p>CR4: Not cleared The discrepancy has not been corrected. The figures for the number of trees to be planted (30,000-40,000) are <u>not</u> consistent across both the clean and track-changes versions of the FP. The revised track change version has 10,000 trees (page 36) while the clean version has 30,000 to 40, 000 trees (Please refer to pages 21 and 23 of the clean versions of FP)</p> <p>CR5: Cleared The revised section has now been incorporated and clearly highlighted in both track-changes and clean versions of the FP</p> <p>-</p> <p>CR7: Cleared</p>
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		<p>of its impact on existing climate risks, in particular how it will impact the availability of water in the future considering the climate context mentioned above. Kindly explain how this is reflected in the identification of risks to comply with the ESP and avoid maladaptation for the vulnerable communities. Please provide information regarding any studies that may exist on borehole drilling in the area.</p> <p>CR8: Under Output 2: Please identify the alternative sources of energy as well as what will be utilized in making the briquettes. Additionally, please make the adaptation case by strengthening the adaptation rationale for cook stoves proposed.</p> <p>CR9: Please rationalize the following sentence under Output 3 at page 20 “ These activities ...” Currently reads as if the NEAP 2020 is promoting the degradation listed in (a) and 9d) just above.</p> <p>CR10: Output 4 page 21 indicated that 8 community centers will be built. Please clarify if any studies have been done that address design as well as cost of those 8 community centers.</p>	<p>Thank you for the justification and relevant information in the review sheet. However, there is no such reference in the revised documents (both versions). Kindly reflect the changes in the main document and not only in the review sheet.</p> <p>CR8: Cleared as per revised document under output 2.</p> <p>CR9: Cleared as per revised text under outputs 3 that clarifies the objective of National Environmental Action Plan (NEAP) 2020.</p> <p>CR10: Not cleared. Considering the explanation provided in the review sheet, the proposed 8 community centers should be categorized as USPs as per AF policies on USP. Please clarify how the implementation of this activity</p>	<p>The justification and relevant information provided in the review sheet have now been incorporated into the main document and are reflected in both the clean (pp 18 – 20) and track-changes versions (pp 30 – 31).</p> <p>-</p> <p>-</p> <p>CR10: Cleared The proposed eight community centers have been categorized as USPs. The narrative on how the activity</p>
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		<p>CAR3: Please clarify the status of the proposed intervention area of Karatu district estimated at about 35,399 hectares. In addition, it is stated that the government has set aside a total of 600 hectares under outcomes 1 but the legal status of the area is not clear. Please justify the compliance of the proposed areas with AF ESP in particular in relations to land tenure and any impact on vulnerable communities and indigenous people.</p>	<p>will be conducted if the design and estimates are still rough and only full design be conducted during implementation.</p> <p>CAR3: Cleared as per revised document under Part I and Part II of the concept note under the sections on land tenure, safeguards, and Indigenous Peoples.</p>	<p>will be implemented through a phased approach has also been clarified. (See page 38 of the revised track change version FP)</p> <p>-</p>
	<p>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 and Gender Policy of the Fund?</p>	<p>Unsure</p> <p>The project targets the vulnerable communities, however information on distribution at household and individual level is limited.</p> <p>CAR4:</p> <ol style="list-style-type: none"> 1. Kindly list the number of direct and estimated indirect beneficiaries of the project disaggregated by gender. 2. Please ensure that the gender analysis follows the Gender Policy requirements. Please see the 'guidance document for implementing entities on compliance with the 	<p>CAR4: Cleared as per revised document with number of beneficiaries (page 35) and revised gender analysis.</p>	<p>-</p>

		<p>Adaptation Fund gender policy' for the gender analysis checklist for a full proposal https://www.adaptation-fund.org/wp-content/uploads/2017/03/AF_GenderGuidanceDocument_Final_15Aug-2022_clean_16Aug-clean-1.pdf</p> <p>CR11: On the economic, social and environmental benefits please:</p> <ol style="list-style-type: none"> 1. Quantify the economic, social and environmental benefits of the project. 2. Please include measurable targets where possible. 3. Kindly as provide the benefits provided by the project/programme to women,youth and people with disabilities groups. <p>CR12: Under output 1, a total of 1500 beehives are proposed to benefit 10 beekeeping groups of about 20 members each. Please clarify how this distribution is done to avoid any equity issues taking onto account the need to support vulnerable groups and avoid exacerbated negative impacts on marginalized and vulnerable groups. Please elaborate further on</p>	<p>CR11: Cleared as per revised document (page 35) with indicative figures for economic, social and environmental benefits.</p> <p>CR12: Not cleared Thank you for the rational for beehive distribution and selection criteria. However, 1- Please reflect these changes and amendments in the</p>	<p>-</p> <p>CR12: Cleared The rationale for beehive distribution and selection</p>
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		<p>the selection criteria of the proposed beneficiary groups.</p> <p>CR13: The selection of beneficiaries under output 3 (10 poultry groups and 10 rabbit groups of 25 members each) is also very unclear. Please elaborate further and ensure compliance with AF ESP and gender policy.</p> <p>CR14: Under component 3, the document states that “For many years, ecological systems in Karatu have been impaired by a combination of both human induced and climate change related drivers”. While the proposed interventions seem adequate to restore the ecological systems, it is not clear how the approaches neither the size of the proposed actions will lead to long term restoration of ecosystems for the benefit of vulnerable communities. Please strengthen the document and provide further clarification on the scenarios for ecosystem restoration based on the proposed approaches</p>	<p>main document (both versions).</p> <p>2- Kindly confirm that the proposed approach has been discussed during stakeholders’ consultation and included as part of the proposal ESP and gender assessment. If so, please reflect it in the document.</p> <p>CR13: Not cleared While the explanation provided in the review sheet is sound, there is no such criteria mentioned in the main document nor the ESP annexes. Kindly clarify and update the project document and ESP annexes as necessary.</p> <p>CR14: Not cleared While the explanation provided in the review sheet is sound, there is no such approach described in the document. Kindly reflect the answer in the main document.</p>	<p>criteria have been included in the revised document (page 44).</p> <p>The approach was discussed during stakeholder consultations as part of ESP and Gender Assessment (see pages 64 to 66)</p> <p>CR13: Not cleared</p> <p>Criteria for selection of beneficiaries are clearly stated in the main document is clear (See page 27) but not in the ESP Annexes. In addition, Table 4 in Section 4.0 of Annex 4 does not include the relevant information for the project, instead it simply provides guidance on what information should be included in the table. Please complete the table using the relevant information for the Project.</p>
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		<p>and activities, including restoration activities of hills, observed bare land, mountainous and woodland systems.</p> <p>CR15: While the document recognizes that past negative practices have severely degraded the ecosystems (ref output 1), it is not clear how the project aims to address the past and ongoing negative impacts. Please clarify how the project will address the community's unsustainable livelihood practices and strategies and how it will lead to long term changes.</p>	<p>CR15: Cleared As per revised document (page 33) with a proposed approach to address past and ongoing negative impacts.</p>	
	<p>5. Is the project / programme cost effective?</p>	<p>Yes.</p> <p>However, further information is needed.</p> <p>The cost effectiveness of the project is mainly through the project management and operation costs that will be reduced by 25 – 40% through the use of local governments administrative facilities. The project also estimates cost ratios of 27:1500 for concrete actions under the first three components through the use of a localised approach to adaptation as opposed to a top-down approach.</p> <p>However very little of the project approach is quantified and while some description of failed</p>		

		<p>approaches has been given. Aside from the project management, not much is given on alternative interventions to demonstrate why the interventions being undertaken is the most cost-effective approach.</p> <p>CR16: Please include a clear description of alternative options to the proposed measures, to allow for a good assessment of the project/programme cost effectiveness.</p> <p>CR17: Kindly include comparison to other possible interventions that could have taken place to help adapt and build resilience in the same sector, geographic region, and/or community; with quantitative estimates where feasible and useful.</p>	<p>CR16: Cleared As per revised document (pages 41-43) with proposed alternative options and measures.</p> <p>CR17: Not cleared Thank you for the justification and explanation. However, please reflect the information provided in the main document and not only in the review sheet.</p>	<p>-</p> <p>CR17: Cleared See pages 50 – 52 of revised document with Track changes</p>
	<p>6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?</p>	<p>Yes.</p> <p>The proposal has outlined the national strategies including the NDC and the NAPA and lists the relevant SDGs to be strengthened through the project intervention. A detailed table is included in table 3 on Annex 4.</p>	<p>-</p>	<p>-</p>

	<p>7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?</p>	<p>Yes, but further clarification is needed.</p> <p>Part II section E of the project proposal is summarised and generally states that the relevant national technical standards and guidelines will be followed. However, table 1 on Annex 4 has a list of the national policies, legislation and strategies which implementation of this ESMP.</p> <p>CAR5: Considering the proposed intervention in the water sector (borehole and water related infrastructure), please revise the section E to include national technical standards applicable for the water related interventions.</p>	<p>CAR5: Cleared as per revised Section E (pages 46-47).</p>	-
	<p>8. Is there duplication of project / programme with other funding sources?</p>	<p>Unsure.</p> <p>Part II F lists a few projects that the project is learning from and building synergies with. However, while the projects states lack of duplication, some larger national projects that could provide knowledge sharing, synergies, and inform scale up are not listed.</p> <p>CR18: Please clarify how the project will build synergies with the following projects</p> <ol style="list-style-type: none"> 1. Tanzania Agriculture Climate Adaptation Technology Deployment Programme (TACATDP) USD 200 million by GCF-CRDB Bank Plc. Kindly 	<p>CR18: Cleared as per revised document Section F.</p>	-

		<p>include the learning and synergies with this intervention that focuses on building agricultural resilience particularly with the KARAHADA project activities that seeks to establish and strengthen agricultural enterprises in the three wards.</p> <ol style="list-style-type: none"> 2. USD 24M- GCF-UNHCR funded project. Building climate resilience in the landscapes of Kigoma region, Tanzania. Kindly state the learnings and synergies with this project that focuses on village-based ecosystem-based adaptation with component 3 of the KARAHADA project. 3. USD 2.6M World bank Funded project on Promoting Community Led Nature-based Solutions to Climate Change Adaptation in the Usangu Catchment Project with synergies formed on the reforestation and Expanding Access to Safely Managed Water, Sanitation, and Hygiene Services. 4. USD 9M-UNMTPF Systematic Observation Financing Facility (SOFF)- Tanzania and synergies with component 4 KARAHADA project 		
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		<p>5. USD 227M World Bank Funded, the Scaling-Up Locally Led Climate Action Program (SCALE)- that also has activities such as community-based and demand-driven activities, such as ecotourism, agroforestry, beekeeping, handicraft making, establishment of community conservation banks, fodder production, reforestation, setting up water-efficient irrigation systems and alternative energy sources</p> <p>6. The Agricultural Sector Development Programme phase two (ASDP II)- how will project activities build on, compliment and learn from this nation-wide initiative.</p> <p>CAR6: Kindly name all the specific relevant projects and list all the linkages and synergies with all relevant potentially overlapping projects / programmes, including areas of overlap and complementarity, drawing lessons from the initiatives during the project design, learning from their problems/mistakes, and establishing a framework for coordination during implementation. Please consider using a table format for this section.</p>		-
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			<p>CAR6: Cleared as per revised document and table included on pages 48-49.</p>	
	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p>Yes, but further clarification is needed.</p> <p>Some of the activities in component 5 is on dissemination of lessons learned.</p> <p>CAR7: Please strengthen how the project will capture and disseminate lessons as part of the KM in particular in relation to new practices introduced under components 1 and 3.</p>	<p>CAR7: Not cleared. While the explanation provided is acceptable, please address the followings:</p> <ol style="list-style-type: none"> 1- There is no reference to bottom-supposed approach in the revised document (both versions) in particular the details provided in the review sheet. 2- The proposed KM approach is not reflected in the project activities nor a budget associated with it. Kindly clarify. 	<p>CAR7: Not Cleared. Please clarify “bottom-supposed” approach. Additionally, the details referred to in the review sheet were not included in this document neither is the KM approach reflected in the project activities. Please address.</p>

	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Yes, but further information is needed.</p> <p>Two lists of 21 and 17 stakeholders are included in Annex 3, however the list is not disaggregated by gender. It is however stated that gendered consultations were held. Meetings with national stakeholders were had with national level consultation were representatives from Government Ministries and Agencies, Academia and researchers but the details of how many stakeholders or which ministries and agencies or academic institutions is not included.</p> <p>A grievance mechanism is included PART IIIC that addresses the safeguards in place. The project utilised existing grievance mechanism in the government system.</p> <p>CAR8: Kindly ensure that:</p> <ol style="list-style-type: none"> 1. All the stakeholders involved in the consultation process are identified. For the stakeholders at the target site, kindly include a list of how many men and women participated in the consultations. 2. A description of the consultation techniques (tailored specifically per target group) is also included in the report. 	<p>CAR8: Cleared as per revised document (annex on stakeholders' consultation).</p>	<p>-</p>
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		<p>3. Given that this proposal was last submitted in 2022, please present more recent consultation information as priorities etc since 2022 could have changed for the community.</p> <p>CR19: Please include in PART II H, if the consultation process included discussion on the safeguard process and if so, what the outcomes were.</p> <p>The proposal suggests a change in the way of life of hunters and gatherers into farming and other income generating activities, the results of the consultations however do not state if they are willing to adapt this change.</p> <p>CR20: Please include the information on willingness to change from traditional cultural norms by hunters and gathers if it was discussed during the stakeholder consultation. If not discussed, please present information on how the project plans to address this from a sustainability standpoint.</p>	<p>CR19: Cleared as per revised document PART II</p> <p>CR20: Cleared as per revised document PART II-H.</p>	<p>-</p> <p>-</p>

	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>Yes.</p> <p>The proposal in PART II I, shows how each project/program activities are relevant in addressing its adaptation taken solely, without additional funding from other donors, they will help achieve these objectives. However, the explanation on component 4 linking investment in health systems to climate is weak.</p> <p>CR21: Kindly revise this section to better link the climate extremes described in the background to health. The explanation given on the health sector investment sounds like a “business-as-usual” in health care service development and should be justified in the context of achieving the adaptation goals of the project.</p> <p>The proposal further states that <i>‘have limited access to health service because of their livelihood style of moving from one place to another in search of water and food’.</i></p>	<p>CR21: Cleared as per revised section PART II-I on climate-related health risks</p>	<p>-</p>

		<p>CR22: Kindly clarify, how does providing health insurance address this? Will the condition of insurance include that they abandon their indigenous way of life to access?</p>	<p>CR22: Not cleared. The CR22 requested the IE to justify how the proposed health insurance address the adaptation issues identified and protects the indigenous way of life. The proposed responses (not included in the main document) limits the response only to behavior change and not highlight how the insurance will address the adaptation reasoning. Kindly strengthen the document to address the adaptation issues targeted by this measure.</p>	<p>CR22: Cleared The explanation given on Page 69 of the Track change version of the revised document provides sufficient justification for the health insurance from the perspective of climate adaptation.</p>
	<p>12. Is the project / program aligned with AF's results framework?</p>	<p>No. CAR9: The alignment table provided in part III.F must be revised in accordance with the guidance provided in Annex 5 of the OPG (refer to the example on p.16). More specifically: - <u>Upper section of the table:</u> i) enter the Project Objective in the "Project Objective(s)" column; ii) add the corresponding Project Objective Indicator(s) in the "Project Objective Indicator(s)" column; iii) for each</p>	<p>CAR9: Not Cleared. Please consult the updated template to complete this section accurately. https://www.adaptation-fund.org/wp-content/uploads/2025/11/Alignment-with-Adaptation-Fund-Results-Framework-</p>	<p>CAR9: Not Cleared Although Table 12 (pp 101 – 104) has been revised, there are still some areas which need to be adjusted. They are as follows: 1. The total in the upper and lower parts of the table must be aligned with the total activity cost in the</p>

		<p>Project Objective indicator, select only the most appropriate SRF Fund Outcome and enter it in the "Fund Outcome" column; iv) select only the most relevant SRF Fund Outcome Indicator for each Fund Outcome and enter it in the "Fund Outcome Indicator" column; and v) input the grant amount for each SRF Fund Outcome in the column "Grant Amount (USD)", ensuring that the total equals the project activity cost, i.e. USD 2,118,234;</p> <p>- <u>Lower section of the table</u>: i) list the five project outcomes listed in the project results framework in the "Project Outcome(s)" column, along with their respective outcome-level indicators in the "Project Outcome Indicator(s)" column; ii) for each indicator, select only the most relevant corresponding SRF Fund Output and enter it in the "Fund Output" column; iii) choose only the most relevant SRF Fund Output Indicator for each Fund Output selected and enter it in the "Fund Output Indicator" column; and iv) input the grant amount for each SRF Fund Output selected in the "Grant Amount (USD)" column, again ensuring that the total equals the project activity cost of USD 2,118,234.</p> <p>Lastly, for consistency, please ensure that all the Fund Outcomes associated with the listed Fund outputs in the lower section of the</p>	<p>Template-and-guidance-Nov-2025.docx</p>	<p>detailed budget and the Project Components table (USD 2,118,645).</p> <ol style="list-style-type: none"> 2. The Objective and Outcomes in the table must be aligned with the Outcomes in the Project Components Table. 3. The Fund Outputs in the upper part of the Alignment Table must align with the Outcomes in the upper part of the table. For Outcome 4, AF Fund Output 2.1 and Indicators 2.1.1. and 2.1.2 were used but there is no mention Fund Outcome 2 in the upper part of the table. Outcome 2 is also not mentioned in Part III F (d) which lists Fund Outcomes 6, 4, 5 and 3 as the relevant AF Fund Outcomes. Please revise the table in accordance with the guidance provided in the following link: https://www.adaptation-fund.org/wp-content/uploads/2025/11/Alignment-with-Adaptation-Fund-Results-Framework-Template-and-guidance-Nov-2025.docx
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		<p>table are reflected in the upper section of the table.</p> <p>CAR10: Kindly align table 12 with the correct outcomes and outcome indicators (each indicator should have a corresponding outcome), do not modify the table and kindly do not create your own AF indicators. Please ensure that the budget is identified by each associated AF output/indicator on its own. Ensure that budget totals of output indicators are not lumped together. Please see https://www.adaptation-fund.org/wp-content/uploads/2019/10/Adaptation-Fund-Strategic-Results-Framework-Amended-in-March-2019-2.pdf</p> <p>CR23: Please re-write the 'Project objective indicators(s)' to ensure that they are complete.</p>	<p>CAR10: Not Cleared. Please consult the updated template to complete this section accurately. https://www.adaptation-fund.org/wp-content/uploads/2025/11/Alignment-with-Adaptation-Fund-Results-Framework-Template-and-guidance-Nov-2025.docx</p> <p>CR23: Cleared as per revised text under The Project Objective Indicators.</p>	<p>CAR10: Not cleared (see comments above)</p> <p>-</p>
	<p>4. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p>Unsure.</p> <p>However, more information is required.</p> <p>The proposal lists the bottom-up approach as justification of community ownership and therefore</p>	<p>CR24: Not cleared</p> <p>1. Cleared as per revised text for allocation of beehives under activity 1.1.2</p>	<p>CR24: Not cleared</p> <p>-</p> <p>2. Not cleared</p>

		<p>sustainability. Project implementation is to be done by local govern elaborate over ownership of the infrastructure and equipment purchased is unclear.</p> <p>CR24: Please clarify the following:</p> <ol style="list-style-type: none"> 1. The proposal states that <i>'no beehives will be purchased for communities, rather experts and necessary workshop tools and equipment will be purchased and community members will be equipped with practical knowledge on modern beehives and honey processing techniques, including maintenance and operations'</i>; However, Activity 1.1.2 states <i>'Provision of at least 1500 modern beehives and related equipment.'</i> Who are the beehives to be allocated to if not the communities? 2. The proposal further states that the project is to be implemented by district institutions and village government structures kindly clarify the ownership of the boreholes to be drilled through the project. 3. Who will be responsible for the maintenance of the 	<ol style="list-style-type: none"> 2. Not cleared. While the IE confirmed that the ownership of the proposed boreholes, the sustainability approach is still unclear and subject to discussion. Please elaborate a clear sustainability plan and in particular an O&M with proposed tariff option (payers, management committee and decision making). 3. Cleared as per proposed maintenance plan in line with Village Natural Resource Committees (VNRCs) 	<p>The financial aspects of the O&M have not been adequately explained. Please provide more details on the financial sustainability related to O & M of equipment and infrastructure</p> <p>-</p>
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		<p>trees to be planted post-project?</p> <p>CR25: Kindly include the sustainability plan for the 600 persons who are to receive health insurance.</p> <p>CAR11: Kindly classify the narrative in PART II J into economic, social, environmental, institutional, and financial sustainability.</p>	<p>CR25: Not cleared. While the proposed subsidized premium is noted, it is not clear how the long-term sustainability will be ensured once the project implementation ends. Kindly clarify how the Health Fund (CHF/TIBA Kwa Kadi) will be managed and funded by households after the project.</p> <p>CAR11: Cleared as per revised document Part II.J.</p>	<p>CAR25: Not cleared Long-term sustainability of how the Health Fund would be managed and funded after the project has not been explained in the project proposal. Please clarify.</p>
	<p>5. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Unsure.</p> <p>The project is identified as Category B and a summary table (6) has been included but modified from the template which makes it a bit harder to follow the logic of what the proposal is trying to convey.</p> <p>CAR12: Please use the table as issued in the template given for the proposal do not modify the table. Please see https://www.adaptation-fund.org/wp-</p>	<p>CAR12: Not Cleared The table 6 is still not using the standard format. Kindly check the standard table in</p>	<p>CAR12: Not Cleared Table 6 (pp 57 – 59) in the revised track change proposal is presented in the standard</p>

		<p>content/uploads/2024/08/LLA-Single-Country-Funding-Application-Template_Fully-developed-1.docx</p> <p>CR26: In Table (6), on the of the environmental and social impacts and risks</p> <ol style="list-style-type: none"> 1. Kindly leave a check mark in the second column 'No further assessment required for compliance' if no further assessment and leave blank if an assessment is to be conducted. 2. In the third column on 'Potential impacts and risks – further assessment and management required for compliance' For each risk categorized as low, medium, or high, please provide a brief justification (1-2 sentences) explaining the risk and its potential impacts, followed by a description of the proposed mitigation measures. <p>CAR13: Please include a summary narrative of the environmental assessment in PART II K of that includes the category of the project, the gender-specific cultural and/or legal context in which the project/programme will operate.</p>	<p>the template downloadable here (section K) : https://www.adaptation-fund.org/document/template-for-fully-developed-single-country-proposal/</p> <p>CR26: Not cleared Kindly address CAR12 and use the correct template.</p> <p>CAR13: Not cleared Kindly address CAR12 and CR26 prior to addressing CAR13.</p>	<p>format. However, the equivalent table in the Clean version is different. Please ensure the correct clean version of the proposal is used. Please address.</p> <p>CR26: Not Cleared.</p> <ol style="list-style-type: none"> 1. ESPs 1, 4 and 6 will always require further assessment, please uncheck those. 2. At column 3 Please include the risk level, low, medium, high for each ESP. 3. Please include the risk mitigation factor for each ESP also at column 3.

		<p>The ESI assessment report has very limited information on the potential risks posed by the project. Most of the narrative focuses on existing national and international standards, policies laws and framework.</p> <p>CR27: In the environmental and social impact assessment report please include</p> <ol style="list-style-type: none"> 1. The estimated number of direct and indirect beneficiaries; 2. (i)All potential direct, indirect, transboundary, and cumulative impacts that could result from the proposed project/programme; (ii) identify possible measures to avoid, minimize, manage or mitigate environmental and social impacts of the proposed project/programme 3. Clarification how often the ESMP is to be conducted as in table 10 it is only budgeted for in the first quarter of the project alongside the baseline assessment; Please include it in the ESMP management plan, including (a) a timeline for the implementation of the ESMP activities and (b) which part of the 	<p>CR27: Not cleared The section K is still not addressing the CR27 in consolidated manner. Kindly update this section and start an ESIA and not with ESMP directly. In addition, kindly use the standard AF format for screening 15 principles and identify potential risks. Please address all aspects of CR27 and indicate in the response sheet where exactly these have been addressed.</p>	<p>CAR13: Not Cleared The correct template was used and information requested in CR26 included. A summary narrative of the environmental assessment , including the category of the project was provided in PART II K (pp 73 – 74). However, Table 4 in Annex 4 simply states the guidance notes for completion of the table. Please delete Table 4 in Annex 4.</p> <p>CR27: Not cleared The estimated number of direct and indirect beneficiaries has been provided. Potential impacts, including indirect, transboundary and cumulative impacts which could result from the proposed project were identified (See pp 73 – 75 of the Revised Track Changes version of the proposal). The timeline for implementation of the ESMP activities has been provided in</p>
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		<p>implementation budget will be used for the identified activities, and (c) a monitoring and evaluation plan (d) if adaptive management has been taken into consideration.</p> <ol style="list-style-type: none"> 4. Clear monitoring and evaluation arrangements for ESP compliance, that includes arrangements to monitor (during implementation) for unanticipated environmental and social risks. 5. A costed gender action plan in the gender assessment. <p>CAR14: Please include a budget for the implementation of the ESMP.</p> <p>CAR15: The proposal suggests that multiple interventions are yet to be defined (location and size), in particular for borehole and beehives as well as other small-scale infrastructures (rainwater harvesting reservoir). Kindly confirm if the project will be using USP approaches and provide further justification on the inability to identify the activities at this stage.</p>	<p>CAR14: Not cleared The ESMP budget table 7 looks unrealistic; for example, a total of \$3,000 for gender actions plan implementation is rather unrealistic. Kindly clarify and correct.</p> <p>CAR15: Not cleared</p>	<p>the ESP Management Plan (pp 72 – 73) and the budget in Table 7 However, Section K starts with the ESMP and not the ESIA as was recommended in CR27. Please address. 1. Please included costs GAP as required at fully developed pro</p> <p>CAR14: Not cleared Notes on the gender action plan not provided to substantiate the size of the budget</p> <p>CAR15: Not cleared</p>
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		<p>Please address the USPs, either by providing the required justification and ESMP, or by fully identifying the activities. Please consult the USP guidelines Guidance Document for Project/Programme with Unidentified Sub-Projects</p>	<p>While the proposal confirms the use of USPs, the ESP annex does not specify the compliance with AF ESP and gender policy during implementation. Kindly clarify and address it. The proposed USP Screening Procedure is rather vague and does not specify the alignment with AF ESP and gender policies. For example, would the proposed USPs be assessed and screening by a technical committee? What would be the mitigation measures in case of category A USPs? Kindly include a comprehensive framework for assessing and screening USPs as per AF ESP and gender policies.</p> <p>CAR1 (NEW): The grievance mechanism presented in the proposal needs to be elaborated to indicate how the nationally established protocol will adequately be addressed within the project context. The section only mentions that the Coordinator will direct complainants to write a letter. Please clarify the mechanism to be put in place for individuals who may not be able to present a letter. What</p>	<p>Requested information not provided in the revised project proposal</p> <p>CAR1 (NEW):Not cleared The grievance mechanism has not been further elaborated according to the points raised. Please address the issues related other approaches available for individuals who may not be able to present a letter and other approaches available</p>
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			other approaches are available ?	
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes.	-	-
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	Yes. CR28: Please ensure that all the amounts included in all the financial tables are correctly punctuated for correct values, kindly also ensure all the figures are rounded up to a whole number.	CR 28: Not Cleared. Please amend table to comply with cost categories as per https://www.adaptation-fund.org/generic/costs-and-fees/ .	CR28: Cleared All amounts are correctly punctuated and rounded up to a whole number The totals in some of the tables are not consistent. For example, in the AF Alignment Table (Table 12 on pp 101 – 104) the Total Activity Cost is given as USD 2,118,234 while in the Project Component Table and the Detailed budget the Total Activity Cost is USD 2,118,645. Please ensure consistency of the totals in all tables
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	Yes. However, amendments are required. CR29: Kindly Table 15: Executing fee Breakdown, almost all the totals do not add up to the figures indicated in the table.	CR29: Not cleared. Please amend table to comply with cost categories as per https://www.adaptation-fund.org/generic/costs-and-fees/ .	CR29: Not cleared The totals in Table 15 add up to USD 200,070 which is not the figure in the Project Components Table.. Please amend the table to comply with cost categories and ensure that the totals add up. CAR5 NEW: The Total Programme/Project Cost in the Project Components and

				Financing section of the Track Change version of the FP (page 11) is incorrect. The Total Activity Cost is presented. Total Project/Programme Cost = Total Activity Cost + Project/Programme Execution Cost.
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	<p>No.</p> <p>Accreditation Expiration Date: 13 October 2022 Accreditation status: In Re-accreditation Process Please be advised that the findings of the AFB Secretariat's review of the funding proposal(s) do not reflect, indicate, or prejudice the outcome of the reaccreditation process currently underway. The Implementing Entity (IE) shall acknowledge that the funding proposal will not be approved by the Board if the IE's accreditation has expired, and reaccreditation has not been achieved at the time of the Board's decision. Notwithstanding this potential risk, the IE has elected to proceed with the development of the funding proposal.</p>	<p>No.</p> <p>Accreditation Expiration Date: 13 October 2022 Accreditation status: In Re-accreditation Process Please be advised that the findings of the AFB Secretariat's review of the funding proposal(s) do not reflect, indicate, or prejudice the outcome of the reaccreditation process currently underway. The Implementing Entity (IE) shall acknowledge that the funding proposal will not be approved by the Board if the IE's accreditation has expired, and reaccreditation has not been achieved at the time of the Board's decision. Notwithstanding this potential risk, the IE has elected to proceed with the development of the funding proposal.</p>	-
Implementation	1. Is there adequate arrangement for	Yes.	CR30: Not Cleared.	CR30: Cleared

Arrangements	project / programme management, in compliance with the Gender Policy of the Fund?	<p>An organisational chart and a table of roles and responsibilities is included. The implementation is not inclusive of gender-responsive element. At figure 8 please include flow of funds as well as flow of information and add relational lines for AF as well as NEMA.</p> <p>CR30: Please clarify if the implementation arrangements include any gender expertise to ensure the gendered components of the projects are adequately met.</p>	Please also see CR27 sub-bullet 5.	Please refer to Figure 8 of the track change version of FP. The chart includes a Gender and Special Inclusion Specialist to ensure gendered components of the project are adequately met.
	2. Are there measures for financial and project/programme risk management?	<p>Yes.</p> <p>Table 8 includes the financial risks and areas of mitigation.</p>	CAR4 (NEW): At table 8, please indicate responsibility for the mitigation measures outlined.	CAR4 (NEW): Not cleared Responsibility for mitigation measures are not indicated
	3. Are there measures in place for the management of environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	<p>Unsure.</p> <p>Responsibilities for the implementation of the ESMP is indicated in the report. However, the ESMP does not include a management plan, please see (CR27 and CAR 14).</p>	CAR3 (NEW) : Please address the ESMP gaps as indicated in CR27 and CAR14 above as well as CAR1 (NEW).	CAR3 (NEW): Not Cleared ESMP gaps as indicated in CR27 and CAR14 above as well as CAR1 (NEW). are not addressed.
	4. Is a budget on the Implementing Entity Management Fee use included?	<p>Yes. However, amendments are required.</p> <p>Budget breakdown is included in table 16 and included allowance and M&E visits. However, please note amendments needed to IE fees included complete IE fees breakdown See CR28 above.</p>	CAR2 (NEW): The detailed budget is presented in a disjointed manner on a per component basis with 1 table component. The notes to the budget do not form part of the detailed budget but are annexed to the main proposal document. Please present the detailed budget as one table with all the	CAR2: Cleared The detailed budget is presented in a single table with an added notes column. Please refer to Table 13 of the Track change version FP (pp 105 – 115)

			requisite parts, components, activities, and notes in the upper part. An excel template can be utilized <u>and then copied and pasted in the main project document once completed.</u>	
	5. Is an explanation and a breakdown of the execution costs included?	Yes. Budget breakdown is on table 15 but the totals do not add up, please see. CAR15: Final evaluation to be remove from EC costs. Also review as in the M&E Table 10,000 whereas presented 15,000	CAR15: Not cleared. Final evaluation is still included in the EC costs.	CAR15: Not cleared Final Evaluation has not been removed from EC costs as suggested. Please see Table 15 of the Track changes version FP. Also the totals of the table are incorrect. Please revise and use the correct totals.
	6. Is a detailed budget including budget notes included?	Yes. A detailed budget is included however, on the budget notes is the numbering of the rows. CAR16: Kindly use the notes column of the budget to add budget notes where relevant and remove the budget notes from the Annex.	See CAR 2 (NEW) above. CAR16: Not cleared.	CAR16: Cleared The notes column has been added to the detailed budget table. Table 13 of the Track change version FP (pp 105 – 115)
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the	Unsure. Table 10 has a 'Project monitoring and evaluation work plan and budget'. The 'baseline indicators' in table 11 does not have any gender disaggregated indicators, however, under 'means of verification' some gendered indicators are indicated, but the means of verification not		

	<p>Gender Policy of the Fund?</p>	<p>included. The M&E Plan does not address management of the environmental and social risks identified.</p> <p>CR31: Please ensure that the M&E plan:</p> <ol style="list-style-type: none"> 1. Is in compliance with the AF M&E guidelines and compliance with the Gender Policy see https://www.adaptation-fund.org/wp-content/uploads/2017/03/AF_GenderGuidanceDocument_Final_15Aug-2022_clean_16Aug-clean-1.pdf 2. Addresses management of the environmental and social risks identified. <p>CAR17: The document doesn't include information on gender disaggregated data for M&E. Please include gender disaggregated data, targets and indicators in the proposal, in particular for activities under output 1 and 2 under component 1 which is vague currently.</p> <p>CAR18: Please kindly include in the M&E section references to the mandatory Project Completion Summary, Mid-Term Review, and final audited financial statements prepared by an independent auditor or evaluation body (see https://www.adaptation-</p>	<p>CR31: Not cleared The review sheet does not address nor provide further reference in the main document</p> <p>CAR17: Not cleared The review sheet does not address nor provide further reference in the main document</p> <p>CAR18: Not cleared The review sheet does not address nor provide further reference in the main document</p>	<p>CR31: Not cleared The review sheet does not address nor provide further reference in the main document</p> <p>CAR17: Not cleared The review sheet does not address nor provide further reference in the main document</p> <p>CAR18: Not cleared The review sheet does not address nor provide further reference in the main document</p>
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		<p>fund.org/projects-programmes/project-performance/), ensuring that they are adequately budgeted in the proposal.</p> <p>CAR19: The proposed budget allocates a total of USD 25,000 for the Baseline data collection and Final Evaluation. This represents 1 % of the total project cost. Kindly revise these figures in all relevant sections of the proposal to ensure that evaluation costs (i.e., baseline data report, MTR and Final Evaluation) are between 2-5% of the total project cost, which is the recommended range for projects of this size (see table 3 in https://www.adaptation-fund.org/wp-content/uploads/2023/10/AFB.EFC_.32.7_Evaluation-Policy-Budget-Implication_clean.pdf).</p> <p>CAR20: Please ensure that, in compliance with Decision B.41/20, costs related to the baseline data report, MTR and the Final Evaluation are budgeted under the IE fee.</p> <p>CAR21: While the project includes an ESMP describing environmental and social risk management measures and a Grievance Mechanism, the M&E plan does not include any reference to ESMP and Grievance Mechanism monitoring during implementation. Please revise the M&E plan to ensure that</p>	<p>CAR19: Not cleared The review sheet does not address nor provide further reference in the main document.</p> <p>CAR20: Not cleared The review sheet does not address nor provide further reference in the main document.</p> <p>CAR21: Not cleared The review sheet does not address nor provide further</p>	<p>CAR19: Not cleared The review sheet does not address nor provide further reference in the main document.</p> <p>CAR20: Not cleared The review sheet does not address nor provide further reference in the main document.</p> <p>CAR21: Not cleared The review sheet does not address nor provide further</p>
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		<p>it addresses management of the environmental and social risks identified, and ensure that dedicated budgetary provisions are made in the detailed budget for implementation of the ESMP and GRM.</p> <p>CR32: Please revise the Project Calendar Expected dates included in Part 1 of the proposal to reflect realistic dates.</p>	<p>reference in the main document.</p> <p>CAR32: Not cleared The review sheet does not address nor provide further reference in the main document</p>	<p>reference in the main document.</p> <p>CAR32: Not cleared The review sheet does not address nor provide further reference in the main document</p>
	<p>8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?</p>	<p>No.</p> <p>A mid-term review is not included in the M&E framework;</p> <p>CAR22: Please include and budget for a mid-ten review in the M&E framework. Please also refer to CAR 18 and CAR 19 above.</p>	<p>CAR22: Not cleared The review sheet does not address nor provide further reference in the main document</p>	<p>CAR22: Not cleared The review sheet does not address nor provide further reference in the main document</p>
	<p>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?</p>	<p>No.</p> <p>CAR23: The project results framework should be revised as follows:</p> <p>i) Rename "Project Goal" to "Project Objective" to align with the terminology used by the Adaptation Fund, in line with the OECD definitions. The Project Objective describes the overall purpose of the project interventions, which</p>	<p>CAR23: Cleared as per revised document with information on Project Objective Indicators defined using AF core indicators and baseline indicators.</p>	<p>CAR23 (re-opened)_ The results framework identifies "Number of hectares of ecosystem restored and protected" however only one core indicator table is presented in the proposal for number of beneficiaries. Please add a second core indicator table to address</p>

		<p>includes the intended physical, financial, institutional, social, environmental, or other results that the project interventions are expected to achieve or to which it is expected to contribute.</p> <p>ii) Define associated Project Objective Indicator(s) which should capture the overall results that the project interventions are expected to achieve. AF core indicators may be considered to be used as objective indicators.</p> <p>iii) Given that the information currently included into both columns are indicators, the content of both columns "Baseline Indicators" and "Means of verification" should be merged into one single column that may be labeled "Indicators", while the "Means of verification" column should describe the means of verification for each indicator listed and the "Baseline indicators" one may be merged with the "Baseline levels" into a single "Baseline" column.</p> <p>iv) The "Project outcome indicator" column should be removed and its current content included in the "Indicators" column, at relevant level (i.e., outcome level).</p> <p>v) Once the above are done, please kindly ensure that all indicators listed are Specific, Measurable,</p>		"Natural assets protected or rehabilitated ".
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		<p>Achievable, Relevant and Time-Bound.</p> <p>vi) Ensure that a realistic number of indicators are included in the framework, as too many indicators may result in resources-intensive monitoring efforts during implementation to ensure adequate measurement and tracking of progress against each target.</p> <p>vii) Ensure that targets and baseline values are provided for each indicator listed in the framework</p> <p>viii) As raised in the separate CAR on core indicators table, all relevant indicators should disaggregate the direct and indirect beneficiaries by gender and youth (age 15-24).</p> <p>ix) Ensure that the project results framework captures the indicators and associated targets included in the Gender Action Plan, once developed.</p> <p>CAR24: For each AF Core Indicators relevant to the project interventions (i.e., "Number of beneficiaries" and "Natural Assets Protected or Rehabilitated"), please add in Part III.E the corresponding Core Indicators table(s) available on pp.10-14 of the document "Methodologies for reporting Adaptation Fund core impact</p>	<p>CAR24: Not Cleared No core indicator tables have been presented in the proposal. Please include the core indicator tables as per the templates available at</p>	
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		<p>indicators". Kindly ensure that "Baseline" and "Target at project approval" columns are duly completed in each table, and ensure that the figures provided in the tables align with those included in the project results framework. While filling out the "Number of beneficiaries" core indicator table, efforts should be made to disaggregate the direct and indirect beneficiaries by gender and youth (age 15-24).</p>	<p>Methodologies for reporting Adaptation Fund core impact indicators (For fully-developed proposals) (78 kB, DOC)</p>	<p>CAR24: Not Cleared</p> <p>Although a core indicator table has been presented in the proposal (See page43 of the Track Changes version of the FP), it only provides information on beneficiaries, but no information is provided on Assets Produced, Developed. Improved or Strengthened.</p>
	<p>10. Is a disbursement schedule with time-bound milestones included?</p>	<p>Yes, but further clarification needed.</p> <p>CAR25: The project implementation milestones information is outdated. Please revise the Table under Part I as well as the disbursement schedule (Table 17).</p>	<p>CAR25: Not Cleared. Please ensure that Table 17 complies with Disbursement Schedule Template.</p>	<p>CAR25: Not cleared. Although the referred table 17 (Now read as Table 13) has been revised accordingly as per template provided, the total disbursement does not coincide with the total budget of the project because of rounding. Please ensure that the totals are consistent throughout the proposal.</p>



ADAPTATION FUND

FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Karatu Climate Resilience and Adaptation Project for Hadzabe and Datoga Communities – KARAHADA

Country: Tanzania (United Republic of)

Thematic Focal Area: Water Management, Agriculture, Ecosystem Restoration

Type of Implementing Entity: National Implementing Entity

Implementing Entity: National Environment Management Council (NEMC)

Executing Entities: Tanzania Environmental Protection Organisation (TAEPO) & Karatu District Council

Amount of Financing Requested: 2,500,000 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes No

NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file, check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- This proposal has been submitted before, including at a different stage (concept, fully developed proposal)
- This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: 12/30/2025

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.



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<u>Component 2: Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (Gatherers and hunters) and Datoga (Blacksmith) at Baray and Endamaghan Wards</u> Error!	Bookmark not defined.
<u>Component 4: Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang’ola in Karatu District</u>	Error! Bookmark not defined.
<u>Component 5: Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang’ola to design and implement climate change adaptation intervention and improve level of understanding and awareness</u>	Error! Bookmark not defined.
<u>2.3 PART II B: Description how the project provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. (Refer to Annex 5).</u>	Error! Bookmark not defined.
<u>2.4 PART II C: Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.</u>	Error! Bookmark not defined.
<u>2.5 PART II D: Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.</u> Error! Bookmark not defined.	
<u>2.6 PART II E: Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc. and complies with the Environmental and Social Policy of the Adaptation Fund.</u>	Error! Bookmark not defined.
<u>2.7 PART II F: Describe if there is duplication of project with other funding sources, if any.</u> Error! Bookmark not defined.	
<u>2.8 PART II G: If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.</u>	Error! Bookmark not defined.

<u>2.9 PART H: Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.</u>	Error! Bookmark not defined.
<u>2.10 PART II I: Justification for funding requested, focusing on the full cost of adaptation</u>	Error! Bookmark not defined.
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<u>3.1 PART III A: Project Management Arrangements</u>	Error! Bookmark not defined.
<u>3.2 PART III B: Describe the measures for financial and project risk management</u>	Error! Bookmark not defined.
<u>3.3 PART III C: Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund</u>	Error! Bookmark not defined.
<u>3.4 PART III D: Description of the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund</u>	Error! Bookmark not defined.
<u>3.5 PART III E: Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.</u>	Error! Bookmark not defined.
<u>3.6 PART III F: Demonstrate how the project / programme aligns with the ResultsFramework of the Adaptation Fund.</u>	Error! Bookmark not defined.
<u>TOTAL: USD 2,118,234</u>	76
<u>TOTAL: USD 2,118,234</u>	77
<u>3.7 PART III G: Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs</u>	Error! Bookmark not defined.
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<u>COMPONENT 2: Climate-resilient rural water infrastructure</u>	Error! Bookmark not defined.
<u>COMPONENT 3: Forest & non-timber product resilience</u>	Error! Bookmark not defined.
<u>COMPONENT 4: Climate-resilient health systems</u>	Error! Bookmark not defined.
<u>COMPONENT 5: Capacity strengthening & climate knowledge</u>	Error! Bookmark not defined.
<u>BUDGET NOTES</u>	Error! Bookmark not defined.
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1.0. Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic, social, development and environmental context in which the project would operate.

1.1. Brief background on what the project aims to solve

The proposed project intends to address the climate change-induced impacts due to water scarcity and drought affecting the gatherers *and* hunters as vulnerable communities found along the salty Eyasi Lake catchment in the northern part of Tanzania. These vulnerable communities are already experiencing the impacts of climate change, including water scarcity, the primary driver of their vulnerability. The water scarcity causes drought, which severely affects the availability and sustainability of wild animals, plant roots, and wild fruits. The insufficient numbers of wild animals and fruits, which serve as staple food, result in famine for the hunters and gatherers. Some vulnerable communities have transformed and are now involved in crop production and livestock keeping. Most Hadzabe are hunter-gatherers who typically move in search of water and food. On the other hand, the Datoga, who are blacksmiths, do not farm or keep livestock, except for a few chickens kept by women. Therefore, the Hadzabe (hunters and gatherers) have limited livelihood options and limited capacity to adapt to climate change.

The gatherers and hunters depend on the Mang'ola River and shallow wells, some of which have salty waters, for their survival. Mang'ola Riverbanks have been encroached upon with the cultivation of major cash crops, namely onion and maize, which provide significant incomes for other communities. These crops rely heavily on pesticides, some of which pollute the Mang'ola River. Present and future climate-change impacts are projected to exacerbate multiple challenges across the district, affecting nearly all residents. These *impacts* are expected to include a profound decrease in water availability; thermal stress on humans, wildlife, livestock, and crops; changes in farming practices; changes in incomes and food security; ecological disruption; and human health impacts, such as the introduction of new disease vectors and changes in disease vectors.

1.2. Climate Change Context

Climate change is a challenge to economic growth and poverty eradication in most developing countries. It affects all countries worldwide, but the impacts are unevenly distributed across regions, generations, age groups, income groups, and occupations. The adverse impacts of climate change, such as droughts and floods, are already evident across nearly all sectors of the country's economy, resulting in high economic costs, loss of life, property damage, and other human capital losses¹.

Climate change trends and future scenarios.

There is documented evidence that the climate is changing in Tanzania and worldwide. There is an increase in the frequency and intensity of extreme events, including heavy rainfall, strong winds, hail, and high temperatures. Between 1981 and 2020, severe flooding, drought, and record-breaking rainfall were observed in many parts of our country. According to IPCC reports, most of these extreme events have occurred in the last five years (2015, 2016, 2017, 2018, and 2019). This proposal will also examine rainfall and temperature projections and anomalies.

Rainfall projections and anomalies

Rainfall projections indicate that some parts of the country may experience a 28% increase in mean annual rainfall by 2100. Projections from Future Climate for Africa (2017) indicate that

rainfall will decrease during the dry season and increase during the wet season, increasing drought and flood risk. The northwestern region around Lake Victoria is projected to observe a higher amount of rainfall by 2030. By 2090, these changes could increase by up to 10% relative to current annual rainfall averagesⁱⁱ. Rainfall distribution in Tanzania is characterised by bimodal patterns with peaks in October and December. These rains are called “Vuli”, and the rains from March to May are called “Masika”. Vuli and masika rains are more typical across the country from October to December, January to March, and April to June. TMA observations indicate that from 2016 to 2017, most regions of the country experienced low rainfall during the same months. Observations from TMA show that Karatu district annual rainfall has been increasing over time.

Recent climate analyses for Tanzania for the period **1991–2020** show a **statistically significant warming trend**, with mean annual temperatures increasing by around **0.5–1.0°C**, particularly in minimum temperatures. [PMC+1](#) National climate statements up to **2023** highlight that recent years have been among the warmest on record, with pronounced rainfall variability and alternating episodes of heavy rainfall and prolonged dry spells.

The Eyasi Basin and surrounding Hadzabe lands are characterised as semi-arid, with annual rainfall below 400 mm and mean temperatures around 30°C. Field studies indicate that many natural springs, small streams and waterholes have dried over recent decades due to declining and more erratic rainfall and recurrent droughts directly affecting Hadzabe access to water and wild foods. Regional climate projections using CMIP6 models indicate continued warming of 1.5–3°C by mid-century, with increased rainfall variability, more intense rainfall events, and potentially longer dry spells in semi-arid zones. [PMC+1](#) These trends justify urgent adaptation investments in water security, ecosystem resilience and diversified livelihoods for the target communities.

Table 1. Annual Rainfall (mm) by Stations, 2012 – 2018

Rainfall Regime	Station	2012	2013	2014	2015	2016	2017	2018	Mean
Bimodal Areas	Bukoba	2280.0	1863.3	2227.2	1755.1	1452.9	2676.2	1706.9	1994.5
	Mwanza	1307.5	1125.6	971.4	1530.7	1039.3	872.2	1153.0	1142.8
	Dar es Salaam	702.6	1004.4	1278.9	1038.9	782.9	1248.6	1208.4	1037.8
	Musoma	646.3	766.2	720.9	1038.0	627.2	622.5	1031.0	778.9
	Kilimanjaro	429.2	411.8	501.7	482.8	492.5	442.3	861.8	517.4
	Morogoro	646.7	551.8	993.8	587.6	587.6	762.2	1138.1	752.5
Unimodal Areas	Mtwara	646.3	1157.1	1023.9	1072.0	1332.9	1369.4	1180.7	1111.8
	Songea	896.0	1072.7	1010.8	852.3	846.7	1226.1	1039.0	991.9
	Tabora	810.8	939.8	826.5	957.4	911.6	885.3	1112.9	920.6
	Kigoma	735.3	999.9	832.7	951.6	913.5	869.2	985.1	898.2
	Mbeya	508.1	1028.3	1220.3	876.0	952.6	1043.6	1731.9	1051.5
	Iringa	545.3	859.1	885.5	555.4	757.6	622.1	509.3	676.3
	Dodoma	620.9	487.4	489.7	452.2	545.2	428.0	679.3	529.0
	Mean	828.8	872.7	968.8	934.6	864.8	1005.2	1102.9	939.7

Source: Tanzania Meteorological Authority (TMA)

In 2016-2018, the same months recorded relatively high rainfall. In 2019, rainfall varied across months, reflecting different trends and patterns. These changes in rainfall trends and patterns have significant impacts on the availability of food and water for vulnerable communities in Karatu District.

Temperature projections and anomalies.

Global climate models predict warming of 0.8 to 1.8 °C by 2040. More warming is projected over the western side of the country. A warming of less than 1.760 °C for 2050 and 3.280 °C for 2100 is projected over parts of the northern coastal regions and the northeast highlands. Studies have shown rising temperatures across the country. In 2019, the annual mean temperature was 23.80 °C, 0.90 °C above the long-term average (1981-2010). Temperatures in Tanzania are usually characterised by relatively fewer fluctuations throughout the year. Changes in temperature may affect humans, wildlife, and livestock. Communities that depend on these sectors may face adaptation risks that require measures to build resilience. Tables 2 and 3 show the monthly minimum and maximum temperatures from 2012 to 2018.

Table 2. Monthly Mean Minimum Temperature (°C), 2012-2018

Year	Jan	Feb	Mar	Apr	May	Jun	July	Au	Sep	Oct	Nov	Dec	Mean
2012	19.8	20.4	19.9	19.4	18.2	16.6	15.8	16.9	18.1	19.6	19.9	20.2	18.7
2013	20.3	20.1	20.5	19.7	18.2	15.9	15.6	16.7	18.1	19.5	20.5	20.1	18.8
2014	19.9	19.9	19.8	19.4	18.3	17.9	16.4	18.1	17.9	19.7	19.7	19.8	18.9
2015	19.9	20	19.6	18.6	18.6	16.9	16.4	16.9	18	20.1	20.2	20.1	18.8
2016	19.9	20.2	20.9	20	18.3	16.7	15.8	15.6	17.3	18.7	20	18.1	18.5
2017	19.7	19.7	19.2	18.9	17.9	16.5	15.5	16.8	16.9	18.7	19.0	19.8	18.2
2018	19.2	19.4	19.2	18.7	17.7	15.6	15.5	15.8	17.3	18.6	19.5	19.7	18.0
Mean (2012-2018)	19.8	20.0	19.9	19.2	18.2	16.6	15.9	16.7	17.6	19.3	19.8	19.7	18.6
LTM (1981-2010)	19.5	19.5	19.5	19.2	18.0	16.3	15.6	16.3	17.5	18.8	19.5	19.6	18.3

Source: Tanzania Meteorological Authority (TMA)

Table 3. Monthly Mean Maximum Temperature (°C), 2012-2018

Year	Jan	Feb	Mar	Apr	May	Jun	July	Au	Sep	Oct	Nov	Dec	Mean
2012	29.3	29.9	29.5	28.1	27.5	27.4	27.5	28.2	29.2	30.3	29.5	28.9	28.8
2013	29.3	29.9	29.3	28.2	27.7	27.3	27.5	27.9	29.3	30	30	28.8	28.8
2014	29	28.4	28.9	28.2	27.4	27.8	27.4	28.4	28.4	29.8	29.7	29	28.5
2015	28.6	30	29.8	28	27.8	27.7	27.9	28.6	29.6	29.9	29	28.7	28.8
2016	28.4	28.9	29.8	27.9	27.9	27.3	26.8	28.1	28.5	29.9	29.6	28.5	28.5
2017	27.8	27.2	26.7	26.1	27.4	27.4	27.1	27.1	29.2	30.3	29.3	30.0	28.0
2018	27.7	30.2	28.1	27.4	27.6	27.4	26.9	28.3	29.5	29.5	30.2	29.1	28.5
Mean (2012-2018)	28.6	29.2	28.9	27.7	27.6	27.5	27.3	28.1	29.1	29.9	29.6	29.0	28.5
LTM (1981-2010)	28.5	29.0	28.9	28.0	27.3	26.8	26.6	27.4	28.7	29.4	29.2	28.6	28.2

Source: Tanzania Meteorological Authority (TMA)

These monthly mean maximum and minimum temperatures show that communities can continue to undertake livelihood activities without much impact of temperature changes. Therefore, this project proposes to develop and implement concrete adaptation actions at the grassroots level to increase community resilience to climate change impacts, and it will align with the following sectors: water resources and supply, forestry and beekeeping, livestock production, tourism, and gender-related climate change. The project will apply transformative integrated environmental management, resilient rural water supply systems and climate-smart agriculture practices to reduce vulnerabilities. The project will be implemented in eight selected villages across the three wards: Baray, Endamaghan, and Mang'ola. This approach offers a

practical and effective combination of Community-Based-Adaptation and Nature-Based-Adaptation techniques to support the transformation of the livelihood system, combat poverty, enhance the climate resilience of rural communities and gender equality, and reduce emissions through long-term carbon storage in landscapes. The resources sought from the Adaptation Fund (AF) will implement concrete and practical cost effective and multi-stakeholder's adaptation solution to improve livelihoods of the poor and vulnerable communities in the district through the following five outcomes:

- i. Increased food security, income and resilience to climate change impact through Climate Smart practices in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- ii. Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gatherers and hunters) and Datoga (blacksmiths) in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- iii. Improved forest services and functions to sustain climate change resilient livelihoods in selected villages in the three wards of Baray, Endamaghan and Mang'ola
- iv. Improved Health and sanitation infrastructure and services for Hadzabe (hunters and gatherers) and Datoga (blacksmiths) in selected villages of the three wards of Baray, Endamaghan and Mang'ola
- v. Improved capacity of Karatu District Council and Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities in planning, implementing and monitoring climate adaptation actions

1.3. Socio-economic development and environmental context

1.3.1. Location and Topography

Karatu district is located South of the Equator between Latitudes 3°10'4°00'S and Longitudes 34°47'E-35°56'E. The district is bordered by Mbulu District to the South, Iramba and Meatu Districts to the Northwest, Ngorongoro to the north, and Monduli and Babati Districts to the southeast. Karatu District is estimated to cover approximately 3,300 square kilometres, with Lake Eyasi occupying about 10.6 square kilometres. Administratively, the Karatu District is divided into four divisions: Mbulumbulu, Eyasi, Karatu, and Endabash. There are 14 wards and 49 registered villages.

The hunters and gatherers are mostly found in Baray, Endamaghan and Mang'ola wards. Karatu District has natural vegetation in the Rift Valley Highlands, characterised by bush and wooded grasslands. This enables the district to practice farming systems of Maize, Wheat, coffee, barley, legumes, dairy and traditional livestock. Figure 1 shows the map of Tanzania and the project sites.

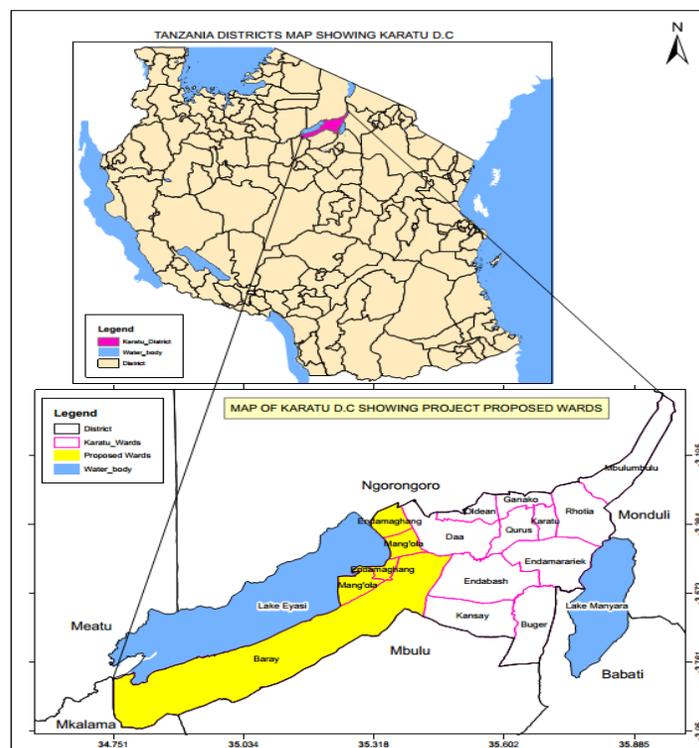


Figure 1. Map of Tanzania showing project location

1.3.2. Socio-economic and development context

Karatu District has a population of 233,691, of which 117,769 are males, 112,397 are females, and 48,345 households, according to the 2012 Census. The district's birth rate is 3.1%. The average population density is 73.4 persons/km², with low densities in the western zone along Lake Eyasi (7-10 persons/km²) and higher densities (100 persons/km²) in Karatu and Mbulumbulu Division. The district is mostly populated by the "Iraqw tribe" being the dominant, the Barbaigs (Datoga) being the minor tribe who are pastoralists, and the Hadzabe who are hunters and gatherers. It is believed that, in the long run, Karatu Township will be the second-largest tourist town after Arusha City on the Northern Circuit. The district has three main ethnic groups, namely: "Iraqw, Hadzabe, Datonga and Barbaigs. The Iraqw are the largest community, estimated at 65 % of the population, and they occupy most of the highland areas. They practice mixed farming, which involves cultivation, herding cattle, and maintaining home gardens and trees. However, there are other ethnic groups found in the district. These are Maasai, Mangati, Chaga and Warangi.

Urban-Rural differentiations are manifested in Karatu District from 2002 to 2012. Urbanisation increased from 5.3% in 2002 to 6.4% in 2012. This change indicates a small movement of people, especially hunters and gatherers whose livelihoods depend heavily on natural bushes and forests in the Rift Valley near Lake Eyasi. The district's per capita income is estimated to be TSh. 800,000/= per annum³. Other important indicators of development are as follow; literacy rate is 64, population growth rate 3.1, dependency ratio 97, employment in agriculture 61%, livestock keeping 7.49%, office 3.14%, elementary occupation 21.33%, plant operations/assemble 0.37%, Business operation 5%, hand hoes as owned by most people is 79%, while sex ratio is 108, energy consumption (electricity) is 4% and firewood is 96%.

The rural areas of Karatu District require water for human consumption, livestock, wildlife, and possibly irrigation. The majority of the rural population still relies on unprotected water sources, mainly earth dams, charcoal dams and water holes in swampy areas. In the execution of rural water schemes, the district strategy is to mobilise village communities to construct them. Thereafter, involve them in the management, maintenance, and operation of these schemes

through their water user committees, with funds financed by user fees. The availability of infrastructure such as accommodation facilities, telecommunications services, roads, banks, and tour operators is an important factor in developing a competitive tourism industry. Accommodation facilities are important in attracting tourists. Therefore, information about hotels, campsites, and lodges is vital for tourists, as it helps them choose the type of accommodation they prefer and value for money. The Karatu District had at least 15 campsites by 2008. Some Hadzabe and Datoga communities are also involved in tourism.

The district is also promoting eco-tourism through campsites, particularly in areas inhabited by the Hadzabe hunters and gatherers and the Datoga (blacksmiths). Eco-tourism is therefore a good source of employment and income for the Karatu District. Another boost to the tourism sector is that the district lies in the main wildlife corridor between Ngorongoro and Marang Forest to Lake Manyara to the South (in the Mbulu District). Karatu town, located along the road to Ngorongoro Crater, hosts many tourist hotels and lodges. Likewise, there is heavy tourist traffic through the north-east, along the route to Manyara National Park, Ngorongoro Conservation Area, and Serengeti National Park. The district derives economic benefits from taxes and visitor sales revenue. Eco-tourism includes safaris, walking, wildlife watching, specialized bird-watching safaris, observing wildlife in its natural habitat, and meeting local people without interfering with their lifestyles. There are already eco-tours operated in the Hadzabe areas. Clients primarily go to the Mang'ola area for walking safaris. Tourists walk with the Hadzabe to learn about their traditions and to see wildlife. Other walking safaris come from the Ngorongoro Conservation Area to Mang'ola. Tour vehicles also come from Karatu to Mang'ola where particular villages offer camping sites for small fees. There is potential for birdwatching near the Lake Eyasi wetlands.

1.3.3. Environmental context

The proposed 35,399 ha intervention area in Karatu District consists entirely of legally designated Village Land under the Village Land Act (1999). Within this, the 600-ha referenced under Outcome 1 has been voluntarily allocated by Village Governments through Village Assembly resolutions for community-based restoration and natural resource management. No land acquisition, compulsory reclassification, or displacement is involved.

All activities will be implemented only when land tenure is clear and with full community participation. In areas inhabited by the Hadzabe, the project will apply Free, Prior and Informed Consent (FPIC) and ensure that customary land rights, cultural practices, and access to natural resources remain fully protected.

The project's design fully aligns with the Adaptation Fund Environmental and Social Policy (ESP), ensuring that interventions do not restrict access to land, alter existing rights, or adversely affect vulnerable groups or Indigenous Peoples.

On reforestation, efforts are being made by District institutions, such as individuals, the Council, CBOs, and NGOs, to address environmental degradation. There are six tree nurseries that support the production and planting of seedlings for afforestation projects in eight wards: Baray, Ganako, Qurus and Kansay, Oldeani, and Rhotia. All non-protected forests are used for grazing. Particularly in the Western zone, many goats and sheep are reared by exploiting the salts in areas near Lake Eyasi, resulting in heavy pressure on shrubs.

The forestry sector is important to residents of Karatu District primarily because it meets their domestic fuel needs. It is estimated that 95% of residents depend on fuel wood for their domestic energy needs. Charcoal is rarely used in rural areas; it is primarily produced for sale. Most Charcoal produced in the western zone is sold in the towns of Karatu, Oldeani, Mto wa Mbu, and the Ngorongoro Conservation Area. Tree species for charcoal include Acacia and Combretum species from natural woodlands and those planted in woodlots and on public lands (e.g., Acacia mearnsii, the wattle tree). Charcoal is not an efficient use of wood, as about 80% of its heat value is lost in its production.

The forest resources of the Western zone are unique for their diversity of plants and shrubs.

These resources are used by Hadzabe for food. The baobab is the most important tree, providing staple foods. There are many natural fruiting shrubs. Among the important tuber crops are *Vigna esculenta*, *Coccinea aurantica*, and *Ipomoea transvalensis*. These tuber crops are crucial components for the survival of the Hadzabe. One hectare of *Vigna Esculenta* can support one family for about 148 days. Most shrubs and trees can provide useful medicine for both humans and livestock.

Beekeeping in Karatu District is primarily practised in traditional ways. Some tribesmen, such as the Tindiga and Hadzabe, live on honey, hunting, and tree roots. To them, honey is a staple food. Additionally, honey is used in the production of local brews, in the preparation of medicines, and is significant in traditional ceremonies and rituals, as well as in conflict resolution as a mediation symbol. There is significant potential to increase honey and beeswax production through both traditional and modern beekeeping techniques. Beekeeping is permitted upon request in the forest reserves. To date, honey production has been limited to local consumption, with potential to increase exports.

2.0. Project/Programme Objectives:

To enhance climate resilience and adaptive capacity of Hadzabe and Datoga communities in Karatu District through inclusive, ecosystem-based, and livelihood-centred adaptation interventions that reduce climate vulnerability, strengthen food and water security, and promote sustainable natural resource management. This project will specifically envisage achieving the following:

- i. To Enhance integrated climate change resilient livelihood diversification system in the selected sites in the three wards of Baray, Endamaghan, and Mang'ola in Karatu District
- ii. To enhance climate-resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities at Baray, Mang'ola, and Endamaghan Wards in Karatu District
- iii. To improve the climate change resilience of forests and non-timber products for selected villages of the three wards of Baray, Endamaghan, and Mang'ola in Karatu District
- iv. To promote climate change resilience of health systems at three wards of Baray, Endamaghan, and Mang'ola in Karatu District
- v. To Enhance capacity of the Karatu District Council and Communities in the three wards of Baray, Endamaghan, and Mang'ola to design and implement climate change adaptation interventions and improve the level of understanding of climate change-related issues

3.0. Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific subsets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions/projects.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
<p>1. Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<p>1.1. Sustainable beekeeping initiative for food security and increased household income in the selected village of the three wards of Baray, Endamaghan and Mang'ola improved.</p> <p>1.2. Use an alternative source of biomass energy promoted for Datoga (Blacksmith) communities in the three wards of Baray, Endamaghan and Mang'ola.</p> <p>1.3. Use of local and improved breeds of rabbit and poultry for food security and income generation for the selected villages, three wards of Baray, Endamaghan and Mang'ola improved</p> <p>1.4. Production of diversified cultural and nature-based tourism products for Hadazabe (hunters and gatherers) and Datoga (blacksmiths) women, men and youth improved.</p> <p>1.5. Identification and production of suitable traditional and modern crops for enhanced food security and increased household income in selected villages of</p>	<p>1.1. Improved household income security and climate resilience among smallholder farmers, pastoralists, and agro-pastoral communities in Baray, Endamaghan, and Mang'ola wards through diversified, climate-smart livelihood options and strengthened adaptive capacities.</p>	<p>534,463</p>

	Baray, Endamaghan, and Mang'ola promote		
2. Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District	<p>2.1. At least 10 boreholes drilled in Hadzabe (gatherers and hunters) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water availability</p> <p>2.2. Water supply systems constructed in Hadzabe (gatherers and hunters) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water quality</p> <p>2.3. Hadzabe (hunters and gatherers) and Datoga (blacksmiths) were facilitated, trained and supported to operate and maintain the water infrastructure.</p> <p>2.4. Climate resilient behavioral change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endmagahan and Mang'ola enhanced</p>	<p>1.2. Improved access to reliable, climate-resilient and safe water supply systems for Hadzabe and Datoga households in Baray, Mang'ola, and Endamaghang Wards, reducing vulnerability to droughts, seasonal water shortages, and climate-induced health risks.</p> <p>1.3. Strengthened community and institutional capacity for sustainable water resource management and climate adaptation, including operation and maintenance of rural water infrastructure, inclusive governance structures, and integration of climate risk considerations into local water planning and service delivery</p>	945,893
3. Improving climate change resilience of forests and non-timber products for selected villages of the three wards of	<p>3.1. Improve ecological and environmental services and functions in Baray, Endamaghan and Mang'ola wards</p> <p>3.2. Integrate management</p>	3.1. Improved ecological and environmental services and function to sustain climate sensitive	128,569

Baray, Endamaghan and Mang'ola in Karatu District	of environmental and ecological systems aimed at sustaining climate-sensitive rural livelihoods.	livelihood	
4. Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District	<p>4.1. A climate vulnerability assessment for a comprehensive action plan in the health sector at Karatu District Council was conducted.</p> <p>4.2. Climate change issues are mainstreamed into health projects and programmes at Karatu District.</p> <p>4.3. Community awareness on climate-related diseases and adaptation in three wards of Baray, Endamaghan and Mang'ola in Karatu District.</p> <p>4.4. Climate-smart community health resource centres in selected villages of the three wards of Baray, Endamaghan and Maong'ola built, retooled and strengthened</p>	Improved health and sanitation infrastructure and services for Hadzabe and Datoga (blacksmiths) in three wards of Baray, Endamaghan and Mang'ola in Karatu District	165,320
5. Enhancing the capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve the level of understanding of climate change-related issues	<p>5.1. The capacity of Karatu District Council in facilitating public awareness and understanding of climate change-related issues and the adoption of resilient climate livelihood practices has been strengthened.</p> <p>5.2. Community institutions to assist in collecting climate-related local knowledge (including traditional knowledge) and disseminate relevant climate change</p>	Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities in planning, implementing and monitoring climate adaptation actions.	344,400

	<p>adaptation knowledge and information to communities in the three wards of Baray, Endamaghan and Mang'ola established.</p> <p>5.3. The capacity of the hunters, gatherers and blacksmith communities in planning and decision-making for undertaking climate-resilient livelihood practices is strengthened</p> <p>5.4. Upgrade Karatu District meteorological services and its network and infrastructure for the provision of essential data for climate service and early warning systems to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola.</p>		
6. Project/Programme Execution cost			201,271
7. Total Project/Programme Cost			2,118,645
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			180,084
Amount of Financing Requested			2,500,000

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	July 2026
Mid-term Review (if planned)	2027

Project/Programme Closing	June 2029
Terminal Evaluation	September 2029

PART II: PROJECT/PROGRAMME JUSTIFICATION

- A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.**

All five components and the indicative activities under this project focus on achieving concrete adaptation outcomes. All activities will be implemented on the ground in order to build resilience and improve the adaptive capacity of vulnerable Hadzabe (hunters and gatherers and Datoga (Blacksmith) communities. The proposed project will also promote gender-responsive climate action. The details of the five proposed project components are further described hereunder, and how these will contribute to the community's resilience

I. Theory of Change

The project's Theory of Change is based on the understanding that climate vulnerability in the target areas is driven by recurrent drought, unreliable access to water, degraded ecosystems, and dependence on climate-sensitive livelihoods. The project therefore focuses on four interconnected interventions: livelihood diversification, climate-resilient water systems, forest and ecosystem restoration, and climate-health risk reduction. Through these interventions, the project will deliver immediate outputs, including improved access to water, adoption of alternative income-generating activities, restored ecosystems, and strengthened community health systems. These outputs are expected to lead to outcomes including increased income stability, enhanced water security, improved natural resource conditions, and reduced climate-related health risks.

The causal pathway follows an IF–THEN logic: **IF** communities gain climate-resilient livelihoods, reliable water supply, healthier ecosystems, and better climate-health preparedness, **THEN** they will have the capacity to withstand shocks and adapt to climate variability. **Ultimately**, this will result in improved community resilience, reduced vulnerability to drought, and enhanced well-being.

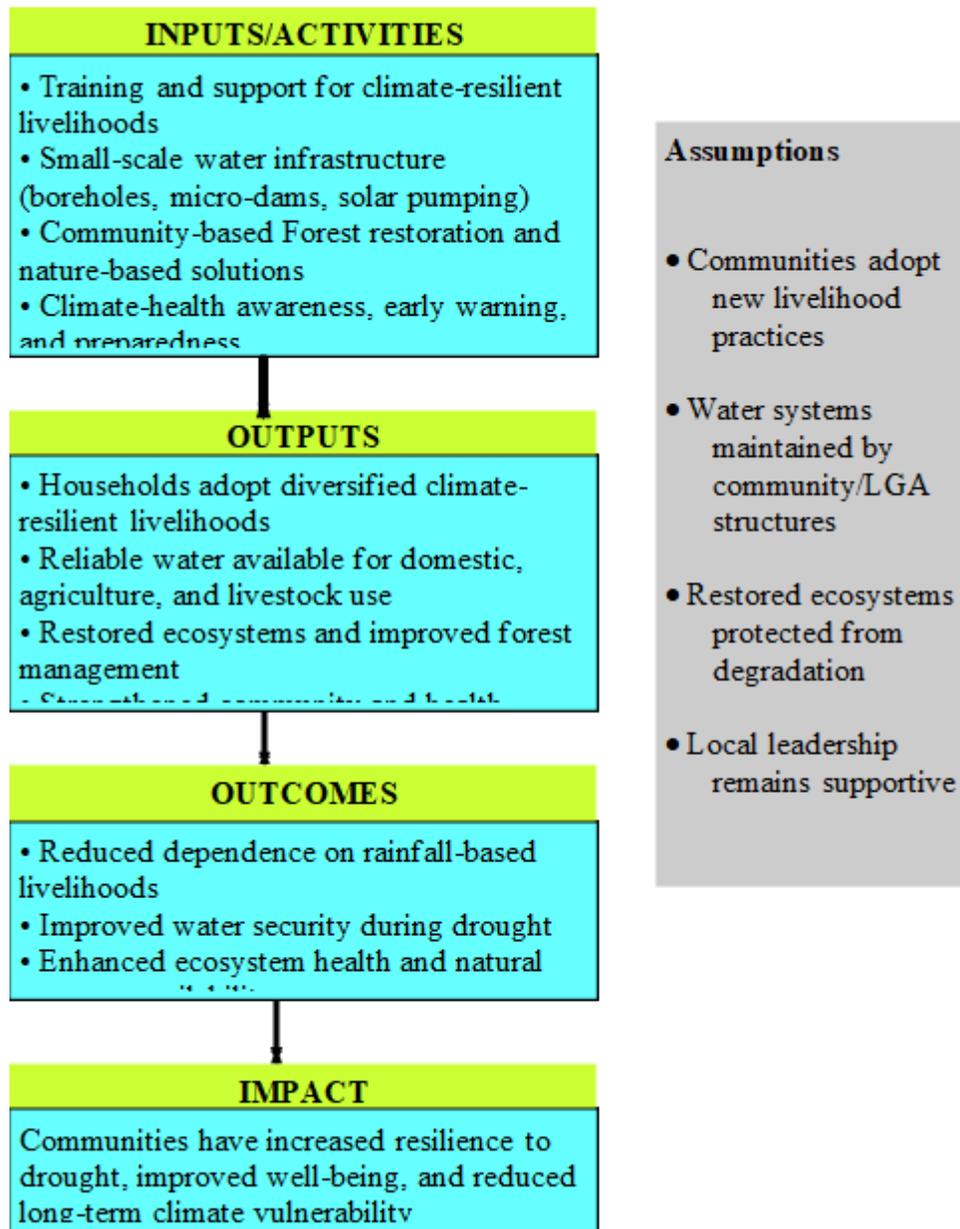


Figure 2. Theory of Change

II. Justification for Project Components

Component 1: Developing an integrated climate resilient livelihood diversification system in the selected sites in the three wards of Baray, Endamaghan and Mang’ola.

The Hadzabe and Datoga communities in Karatu have rich traditions in hunting, gathering, and blacksmithing that underpin their cultural identity, social cohesion, and dietary practices. As we look to introduce crop and livestock production, it’s essential to take a culturally sensitive approach that honours existing knowledge, values, and preferences within these communities. To foster acceptance and minimise resistance, we will adopt a collaborative, community-driven strategy.

The first key component will be active community engagement and consultation. Before

introducing any new foods or animal breeds, we will prioritise participatory engagement, including workshops, focus group discussions, and food-preference assessments with community members—elders, women, and youth. This process will help us better understand their dietary habits, taboos, and seasonal resource use. By incorporating indigenous knowledge and traditional food practices, we can ensure that any new crop and livestock selections resonate with local tastes, culinary methods, and environmental conditions.

Next, a gradual and flexible approach to integrating new food systems will be implemented. Through demonstration plots, small-scale animal pilot programs, and co-managed kitchen gardens, households will have the opportunity to experiment without compromising their traditional practices. This phased strategy will help build trust within the community and highlight tangible benefits, such as increased food availability, enhanced nutritional diversity, and new income opportunities, enabling adaptations based on community feedback.

Additionally, we will focus on capacity building and knowledge exchange to complement the project's technical aspects. Training in climate-smart agriculture, animal husbandry, and post-harvest handling will be paired with documenting and sharing indigenous practices. This co-learning approach not only preserves cultural identity but also strengthens resilience.

Finally, we will implement continuous monitoring and feedback mechanisms, giving communities the platform to voice their concerns, suggest adjustments, and actively influence the evolution of new food systems. By combining collaborative planning, a gradual introduction of changes, culturally respectful selection, and a focus on shared learning, this project aims to enhance dietary diversity and resilience while upholding cultural values and food traditions.

Outcome 1

Improved household income security and climate resilience among smallholder farmers, pastoralists, and agro-pastoral communities in Baray, Endamaghan, and Mang'ola wards through diversified, climate-smart livelihood options and strengthened adaptive capacities.

Tanzania's economy and the livelihoods of its people are closely linked to climate-sensitive resources, underscoring the critical importance of promoting adaptive strategies to build climate-resilient livelihoods. Emphasising the integration and diversification of livelihoods presents a powerful opportunity to bolster resilience, as overreliance on a single income source can expose communities to greater risks in the face of climate-related challenges.

This multifaceted approach encourages the melding of various livelihood activities into a cohesive system, leading to increased cost-effectiveness and the generation of valuable co-benefits and synergies. For example, the harmonious combination of tree planting, poultry and rabbit husbandry, the cultivation of both traditional and modern crops, and beekeeping on the same farm creates a web of interdependencies that enhances overall productivity. The trees not only serve as guardians of the soil, preventing erosion and improving water infiltration, but also provide shade and habitat for beneficial organisms.

Meanwhile, poultry and rabbits generate nutrient-rich manure that fosters healthy crop growth, and beekeeping plays a crucial role in pollinating plants, ensuring bountiful harvests and forest conservation, all while yielding sweet honey that contributes to household income.

This innovative integration has the potential to uplift approximately 300 camps and farmsteads in the vibrant wards of Baray, Endmarghan, and Mang'ola in Karatu District, offering both direct and indirect benefits to the community. The envisioned transition to an integrated climate-resilient livelihood diversification system is projected to increase household income by at least 30% by the conclusion of the project, fostering economic stability and prosperity. Additionally, the government's forward-thinking decision to allocate 600 hectares of forest land for conservation efforts not only safeguards vital ecosystems but also paves the way for sustainable income generation through beekeeping and carbon credit sales, setting a strong foundation for a more resilient future.

Output 1: Sustainable beekeeping initiative for food security and increased household income in the selected village of the three wards of Baray, Endamaghan and Mang'ola improved.

Beekeeping represents a promising nature-based livelihood activity that can significantly enhance resilience against the impacts of climate change. This initiative aligns with the national beekeeping policy, which emphasises the vital role of the beekeeping sub-sector in promoting Tanzania's sustainable development and conserving natural resources.

This viable enterprise delivers meaningful benefits to communities living in and around forests, particularly in the wards of Baray, Endamaghan, and Mang'ola. Importantly, beekeeping serves as an effective tool for raising community awareness regarding forest management and conservation.

Compared to cultivated crops, beekeeping is less susceptible to climate variability, often resulting in more stable income streams. The resilience of beekeeping is partly due to honeybees' ability to withstand higher temperatures to a certain degree. Additionally, integrating beekeeping into farming practices can enhance crop yields through improved pollination.

The project will directly benefit 10 beekeeping groups across the three wards, each with up to 20 members, including men, women, and youth. The initiative includes procuring 1,500 beehives, which will be designated as group-owned assets for the ten registered beekeeping groups. Ownership will be formalised through group constitutions and bylaws, which will outline regulations for maintenance, harvesting, processing, and revenue sharing. This collaborative approach strengthens community ties and fosters sustainable economic growth.

Output 2: Use an alternative source of biomass energy promoted for Datoga (Blacksmiths) communities in the three wards of Baray, Endamaghan and Mang'ola.

For communities to be more adaptive to the impacts of climate change, they need to

adopt resilient, less carbon-intensive and climate change smart infrastructures, tools and products. Datoga communities use charcoal as a source of fuel for forging metal tools and cooking. This project will introduce the use of alternative sources of energy and energy-saving stoves. This output aims at empowering 80 communities of Datoga (blacksmith) homesteads to be able to understand climate change – energy-related issues and to make briquettes and cooking stoves. This intervention aligns with the government's aim to increase the use of alternative energy to at least 50% of current levels. This initiative is in line with the Tanzania Sustainable Energy for All (SE4All) Action Agenda (2015).

Under Output 2, the project will promote alternative household energy solutions, including improved cookstoves and locally produced briquettes. Briquettes will be produced using agricultural residues and other biomass wastes (e.g. crop residues, sawdust, non-timber forest residues), identified through feasibility studies to ensure that feedstocks are sustainable, do not compete with food, fodder, or construction needs, and do not incentivise forest clearing.

The adaptation rationale for these interventions is threefold: (i) Reducing pressure on forests and woodlands helps maintain ecosystem services (shade, soil moisture, wild foods) critical for Hadzabe and neighbouring communities under a drying climate. (ii) Decreasing time and distance for fuel collection, particularly for women and girls, frees up time for education, caregiving, and climate-resilient livelihoods and reduces exposure to climate-related hazards (e.g. walking long distances during extreme heat). (iii) Lower indoor air pollution from improved stoves reduces respiratory and eye problems, contributing to stronger, healthier households that are more able to cope with climate shocks. The project will support co-design and testing of stove and briquette options with communities to ensure cultural acceptability and sustained uptake.

Output 3. *Rabbit and Poultry farming established/ improved*

This intervention aims to facilitate communities in the three wards of Baray, Endamaghan, and Mang'ola in starting and improving local chicken and rabbit enterprises for food and income generation. This is a potential enterprise to generate income and build resilience for poor households and women's groups. According to the Tanzania Livestock Master Plan (2017), which sets out livestock sector investment interventions, including improved genetics, feed, and livestock health services. This is also well articulated in the Agriculture Sector Development Plan II 2015-2025, which is further translated into the Karatu Agriculture Development Plans (DADPs).

Therefore, this project will provide some technical assistance to interested communities on how to establish and run poultry and rabbit enterprises. The project will support small-scale commercial poultry and rabbit enterprises with a view to enabling farmers to produce meat and eggs in a very short time. This is intended to bolster the incomes of targeted communities, thereby enabling them to cope with climate-induced losses in hunting and gathering. The project will support 10 poultry groups and 10 rabbit groups in the specified wards, with each group having at least 25 members, comprising men, women, and youth.

Beneficiary selection for the 10 poultry and 10 rabbit groups (25 members each) will follow a transparent, community-led process that prioritizes women, youth, Indigenous Peoples, and persons with disabilities. All groups will have at least 50% women and 30% youth. FPIC will guide identification in Hadzabe areas. Selection will be based on

vulnerability status, interest, and community validation to ensure equitable access and avoid any negative impacts or exclusion, in full compliance with the AF ESP and Gender Policy.

Output 4: *Women's jewellery and leather-making business improved*

Hunters, gatherers, and blacksmith communities are also involved in cultural tourism, sharing their cultural experiences with tourists and selling jewellery, metal tools and accessories, and leather clothing and ornaments. This project aims to support these communities in improving their products and in better making, packaging, and displaying them. This in turn will help them to have more income which can support them to buy food and other household needs, this intervention is in line with the national tourism policy (1996) which is currently under review to better address nature base tourism for the purpose of improving community livelihoods and development of quality tourism that is culturally and socially acceptable, ecologically friendly, environmentally sustainable and economically viable. In this project, 15 groups of jewellers, 15 groups of leather tanners, and 15 groups of blacksmith communities will be empowered to improve their enterprises to serve markets within the project sites and beyond. Income generated from jewellery selling supports livelihoods and ensured resilience to climate change-induced stress

Output 5: *The production of traditional crops for home consumption has been introduced*

The Hadzabe and Datoga communities, known for hunting, gathering, and blacksmithing, are currently facing food and nutrition insecurity exacerbated by climate change. Additionally, they are experiencing significant water shortages due to increased activities from other community groups, such as farmers and pastoralists.

In response, this project is designed to engage the community and value their local knowledge and experiences. It aims to identify both traditional and modern crops the community considers suitable for improving food and water sufficiency. This initiative aligns with the Agriculture Sector Development Programme II (2015-2025), which focuses on transforming the agriculture sector and enhancing the livelihoods of smallholder farmers through income generation, ultimately improving food and nutrition security.

To support this goal, we will establish demonstration farms and kitchen gardens across three wards, creating spaces where the community can learn and share best practices. We plan to utilise a total of 10 hectares for community groups of 20 individuals each—women, men, and youth. These groups will receive training on good agronomic practices through farmers' field schools, Female Farmers' Field Schools, and demonstration plots.

By prioritising food security as a key element of climate change adaptation, this project aims not only to enhance nutrition security but also to build the adaptive capacity of the communities involved.

To support the successful adoption of market-oriented livelihoods such as rabbit keeping and jewellery making among the Hadzabe and Datoga communities, the project will

incorporate measures to mitigate potential market-access risks, including demand uncertainty, transportation barriers, pricing challenges, and limited commercial experience.

The project will begin with **market assessments and demand studies** to identify viable buyers, evaluate pricing trends, and map local and regional market opportunities for both rabbit meat, honey, poultry and handmade jewellery. This information will inform production planning and ensure alignment with actual market demand. To strengthen the communities' market position, **producer groups and cooperatives** will be established to provide a platform for collective marketing, bulk production, and shared learning. These groups will be supported to negotiate **formal off-take agreements** with target partners, including local cooperatives, retailers, tourism operators, and regional market networks. The agreements will guarantee minimum purchase volumes and fair pricing, provide predictability and reduce financial risks for community producers.

Complementing these arrangements, the project will deliver basic **training in business management, marketing, and financial literacy**, equipping women, youth, and other community members with skills to manage production, set prices, maintain quality standards, and respond to customer preferences. To overcome logistical constraints, **pooled transportation systems and community storage hubs** will be established to ensure timely product delivery and reduce post-harvest losses. The introduction of **pilot production batches** will allow communities to test market response and refine production processes before full-scale implementation. Continuous monitoring and feedback mechanisms will further enable adaptive management of production, pricing, and marketing strategies.

Through this integrated approach combining market intelligence, producer organisation, capacity building, formal partnerships, and logistics support the project ensures that new livelihoods are **commercially viable, culturally acceptable, and sustainable**, while directly addressing the barriers identified in previous assessments and review recommendations. These measures will enable a managed transition from purely subsistence practices to market-oriented livelihoods, while reducing exposure to price volatility and market failure.

Component 2: Enhanced climate-resilient rural water supply system in vulnerable communities of Hadzabe (Gatherers and hunters) and Datoga (blacksmiths) at Baray and Endamaghan Wards.

Rural communities in Karatu District depend on climate-sensitive water resources and infrastructure for their water supply. It is evident that water services in the proposed project sites are facing water security risks in various aspects such as scarcity and quality, both of which affect health and other economic development systems. Existing water sources have proven unable to withstand the effects of climate change and rising water demand. Although quantification of water demand in these villages have yet to be well done by proper numerical models but based on villagers' views, field observation and visits paid to the community and issues raised in the planning workshops, it is clear that water shortage is a big problem especially to women and children and therefore a burden to people's life quality, health and livelihood. In the two wards, community members are forced to fetch supplementary water about 30 kilometres away from their homesteads. The impacts of climate change are evident, and this project will enhance resilience to them.

Outcome 2

Improved access to reliable, climate-resilient and safe water supply systems for Hadzabe and Datoga households in Baray, Mang'ola, and Endamaghang Wards, reducing vulnerability to droughts, seasonal water shortages, and climate-induced health risks.

The project aims to enhance access to reliable, climate-resilient, and safe water supply systems for households in the Hadzabe and Datoga communities in Baray, Mang'ola, and Endamaghang Wards. It addresses challenges from increasing drought frequency and seasonal water shortages by reducing reliance on shallow wells and unsafe water sources. To achieve this, the project will construct solar-powered boreholes, rainwater-harvesting systems, and protected springs, supported by hydrogeological assessments to ensure sustainable groundwater use. Groundwater, being less affected by rainfall variability, offers a more reliable supply during dry periods. Additionally, watershed protection and ecosystem restoration will improve groundwater recharge and reduce contamination risks.

Community water user committees will be formed and trained to manage water operations equitably, with a focus on including women and vulnerable groups. Hygiene promotion and water quality monitoring will further improve health outcomes. Together, these efforts will reduce vulnerability to drought, enhance adaptive capacity, and ensure culturally appropriate, sustainable water access for the Hadzabe and Datoga communities.

Output 1: A least 10 boreholes drilled in Hadzabe (gatherers and hunters) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for Improved water availability.

The initiative to drill at least 10 boreholes in the Hadzabe and Datoga communities of the Baray, Mang'ola, and Endamaghang wards is a proactive measure to address climate-induced water scarcity in the Karatu District. Community consultations and planning workshops have highlighted significant seasonal water shortages in traditional sources, often forcing women and children to travel long distances for unsafe water. This situation is worsened by climate variability, emphasising the need for more reliable water sources.

Groundwater is identified as a resilient option, as boreholes access deeper water that is less affected by rainfall fluctuations. In Karatu, wider regional aquifers recharge more reliably than local sources, making them dependable during droughts. The project incorporates risk management and sustainability through several key measures:

- **Hydrogeological assessments:** Borehole sites will be selected based on hydrogeological data, ensuring sustainable yields and monitoring to prevent over-extraction.
- **Community governance:** Local water management committees will oversee water extraction, enforce equitable usage, and ensure availability.
- **Solar-powered pumping:** Renewable energy systems will reduce operational costs and stress on aquifers.
- **Conservation efforts:** Watershed protection initiatives will enhance groundwater recharge and align with Environmental and Social Policy safeguards.

Evidence indicates that improved water interventions in Karatu, such as World Vision's WASH projects, have reduced water-collection distances and improved access (<https://www.suaire.sua.ac.tz/handle/20.500.14820/3386>). Water quality studies in the Arusha Region show that borehole water typically meets national safety standards. The proposed project's approach to drilling boreholes is designed to increase water availability and reliability amid climate challenges while embedding risk mitigation and governance measures to ensure a sustainable future for these communities.

Output 3: Community Water Users Association (WUAs) established, facilitated and committee members trained in the operational and maintenance of the water supply systems

Establishing WUAs and equipping them with the necessary tools and expertise will empower vulnerable communities in the two wards to leverage their own knowledge and decision-making processes to take action and play an active role in delivering the expected outputs of Component 2 over the long term, beyond the project lifetime. The indicative activities to be implemented under this output are: Formulate water governance structures (WUAs) and promote equitable water allocation for all uses and revenue collection. Promote the development of water governance bylaws to ensure effective water use and protect water sources. Conduct Technical Trainings of Trainers on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of WUAs for the three selected wards.

This output proposes establishing a robust, sustainable institutional structure to manage the community- and village-level climate-resilient water supply systems at the project sites. The output suggests establishing WUAs to be trained in group management and dynamics, as well as in the maintenance and operation of rural water systems.

Output 4: Climate resilient behavioural change and governance at community level enhanced

In this component, community members will be trained and given the opportunity to share their local knowledge and experience on how to change behaviour related to water governance at the community level. This project will support communities in forming representatives from traditional leaders' women, men, and youth. The CBWSOs are being recognised by the new Water and Sanitation Act No.5 of 2019, which established "Rural Water Supply and Sanitation Agency–RUWASA" with responsibility to manage rural water supply. Under the new Water and Sanitation Act, 2019, village water schemes are classified as CBWSOs. These are required to operate rural water supply in communities professionally, with technical managers and accountants employed and paid by the Government, who will work with community representatives (Village Water Boards) to sustain water services. These CBWSOs will be backstopped by the RUWASA District Managers' Office in Karatu District for technical and management issues. All CBWSOs to be formed will be responsible for setting water tariffs and collecting water revenues. Approximately 8 CBWSOs will be formed, one in each selected village.

Component 3: Improving climate change resilience of forests and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District

The proposed restoration approaches, including assisted natural regeneration, enrichment planting of 30,000 –40,000 indigenous trees, soil and water conservation structures, riverine rehabilitation, and community woodlots, are designed to enable long-term ecological recovery across hillsides, woodlands, bare lands, and riparian zones. These interventions will restore 600 ha of community-designated land, reduce erosion by 30–50%, improve vegetation cover by over 40%, enhance groundwater recharge, and stabilise degraded slopes. Together, these actions will deliver sustained environmental benefits and strengthen the climate resilience of vulnerable communities, including the Hadzabe, by improving ecosystem services such as water, soil fertility, wild foods, and biodiversity.

The project addresses past and ongoing negative practices by providing climate-resilient alternative livelihoods, strengthening community natural resource governance, promoting behaviour change, and protecting restored areas. By creating economic incentives to stop harmful practices, introducing sustainable energy and water solutions, and empowering women, youth, and Indigenous groups in decision-making, the project will generate long-term changes in how land, forests, and water resources are used and stewarded. These approaches ensure that restored ecosystems are maintained and that vulnerable communities benefit from healthier, more resilient landscapes.

Outcome 3: Improved ecological and environmental services and function to sustain climate-sensitive livelihoods.

For many years, ecological systems in Karatu have been challenged by both human activities and climate change. The transition from natural savannah ecosystems to agricultural schemes initiated by colonial governance led to significant degradation. Since then, various human-induced factors, including unsustainable farming practices, deforestation, charcoal production, and overgrazing, have further affected the area. To address these issues effectively, it is crucial to implement innovative approaches that integrate community engagement and ecosystem-based solutions for climate change.

This initiative, particularly under component 3, aims to strengthen ecosystem services and environmental functions critical to climate-sensitive livelihoods, particularly in agriculture, livestock, forestry, fisheries, and nature-based enterprises. Climate change has notably exacerbated issues such as land degradation, water scarcity, biodiversity loss, and ecosystem fragmentation. These challenges undermine natural systems' ability to support food production, income generation, and community well-being. However, by focusing on restoring and sustainably managing ecosystems, we can significantly enhance the resilience of landscapes and livelihoods, ensuring communities continue to benefit from essential ecological services as climate conditions evolve.

Key strategies will include restoring degraded forests, rangelands, wetlands, and watersheds through initiatives such as assisted natural regeneration, tree planting, and soil and water conservation measures. Protecting critical habitats will also be a priority. These efforts will enhance soil fertility, regulate water flow, mitigate erosion and flooding, boost groundwater recharge, and stabilise microclimates, all of which are essential for fostering climate-resilient agricultural and pastoral systems. A strengthened focus on biodiversity conservation will further bolster pollination services, pest control, and genetic diversity, essential components for sustainable food systems and overall ecosystem

health.

The project will also work to empower community-based natural resource management structures to promote sustainable land-use practices, enforce regulations, and incorporate climate risk considerations into local development planning. By improving access to ecosystem-based adaptation approaches such as agroforestry, sustainable forest management, and nature-based solutions we can enhance the adaptive capacity of households and institutions. Special attention will be given to supporting women, youth, and marginalised groups in environmentally sustainable livelihood activities, including non-timber forest products, beekeeping, eco-tourism, and value-added natural resource enterprises.

By improving ecological and environmental services, we can effectively reduce vulnerability to climate shocks, boost productivity in climate-sensitive livelihoods, and safeguard natural capital for both present and future generations. This approach contributes to a more inclusive, sustainable, and climate-resilient development.

Output 1: Improve ecological and environmental services and functions in Baray, Endamaghan and Mang'ola wards

The ongoing degradation of environmental and ecological systems, coupled with climate change, has reduced forest and woodland cover and the availability of associated goods, accelerating land degradation and water catchment degradation in Karatu District. Across the district, wetlands have been severely degraded as a result of inter alia:

- a) Use of forestry as a source of energy
- b) Intensive cultivation of crops such as maize and horticultural crops;
- c) Excavation of sand and clay for brick works; and
- d) Grazing activities.

These activities directly align with the National Environmental Action Plan (NEAP) 2020, which identifies land degradation, deforestation, unsustainable fuelwood use, and ecosystem depletion as critical environmental challenges and calls for community-based restoration and sustainable natural resource management in vulnerable landscapes.

Therefore, this component and the proposed output activities aim to establish and implement ecological restoration and rehabilitation plans for hills, observed bare land, mountainous, and woodland systems. All eight villages will be engaged in restoration and rehabilitation activities, including tree-planting campaigns that engage communities to plant trees on surrounding homesteads and camps, as well as in other degraded landscapes at schools and other public institutions.

Output 2: Integrate management of environmental and ecological systems aimed at sustaining climate-sensitive rural livelihoods.

The output will implement Ecosystem-based Adaptation (EbA) activities, such as promoting beekeeping in woodland and mountainous systems and establishing fruit trees as income-generating activities.

The indicative activities to be implemented under Output 2 are:

- i. Establish and implement ecological and forest restoration and rehabilitation plans (hills, mountainous and woodland restored and conserved) in selected villages of Baray, Endamaghan and Mang'ola wards.
- ii. Promote improved ecosystem-based income-generating activities such as improved beekeeping activities in woodland, hills and mountainous systems and

fruit plants planting in selected villages of Baray, Endamaghan and Mang'ola wards.

- iii. Mobilise enclosure systems in degraded ecosystems to promote natural regeneration and recovery of ecological functions and explore the use of local/traditional institutions to strengthen management of sensitive ecological systems in selected villages of Baray, Endamaghan and Mang'ola wards.

Under Activity 3.1.3, the project will support the planting of approximately 30,000 – 40,000 trees over the project duration. These will mainly include indigenous, drought-tolerant, and multipurpose species (e.g., for shade, food, fodder, and NTFPs), established through community woodlots, riverine and hillside restoration, and homestead planting. Final species selection and site-specific targets will be agreed with communities and technical agencies during the PFG and full proposal stage

Component 4: Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District

This initiative aims to strengthen the resilience of health systems in Baray, Endamaghan, and Mang'ola wards against climate-related health risks. Climate change is increasing the frequency of heat stress, vector-borne diseases, and other health issues, placing additional strain on already strained rural health services. Building climate-resilient health systems is vital for protecting vulnerable populations, including women, children, older adults, and people with disabilities.

The focus will be on enhancing climate preparedness and adaptive capacity through climate-informed health planning, risk mapping, and early warning systems. Health workers will be trained in climate-sensitive disease surveillance and emergency response to climate-related threats like floods and droughts. Facilities will improve WASH infrastructure, adopt solar energy solutions, and upgrade to climate-resilient structures to ensure essential services continue during climate shocks.

Community-level efforts will promote awareness of climate risks through outreach, nutrition education, and behavioural communication. Community health workers and local leaders will disseminate early-warning information and encourage adaptive practices, such as safe water use and heat-stress prevention. Strengthening links among health, environment, and disaster management sectors will foster a holistic approach.

Overall, this initiative will enhance local health systems' capacity to adapt to climate-related risks, reducing morbidity and mortality and improving community well-being in Karatu District.

Outcome 4: Improved health and sanitation infrastructure and services for Hadzabe and Datoga(blacksmiths) in three wards of Baray, Endamaghan and Mang'ola in Karatu District

This outcome aims to promote, preserve, and maintain public health, with a view to ensuring comprehensive, functional, and sustainable public health services for vulnerable communities in the Karatu District. This component aligns with the National Health Policy (2007), which aims to improve the provision of health services for all by

reducing disability, morbidity, and mortality, improving nutritional status, and increasing life expectancy. The policy recognises that good health is a major resource for poverty alleviation and economic development. This project will also be responding to the Health National Adaptation (HNAP) to Climate change 2018-2023

Output 1: Health - Climate change-related risk and vulnerability assessment for the strengthened capacity of the health sector at Karatu District was undertaken.

This comprehensive assessment under this output aims to assess the relationship between climate change and health in the district. By identifying and documenting potential risks and vulnerabilities, the project aims to reveal the multifaceted impacts of climate change on health, particularly among vulnerable populations such as women and children. As the project addresses these pressing challenges, the project's goal is to deepen understanding of how climate change exacerbates health issues in the district. This enriched perspective will inform the project's development of targeted strategies to enhance resilience and improve health outcomes in the project's targeted communities.

Output 2: Staff and community awareness on climate-related diseases and adaptation in three wards of Baray, Endamaghan and Mang'ola in Karatu District strengthened

This output focuses on enhancing the knowledge, skills, and practices of health staff and communities to prevent, prepare for, and respond to climate-related diseases and health risks. Through targeted training, community dialogues, and behaviour change communication campaigns, health workers, community health volunteers, and local leaders will be equipped with practical knowledge of climate-sensitive diseases, including malaria, cholera, heat-related illnesses, respiratory infections, and malnutrition.

The project will develop and disseminate culturally appropriate information, education, and communication (IEC) materials in local languages and utilise community forums, schools, health facilities, and mass media to promote healthy behaviours and climate-resilient practices. Special attention will be given to women, youth, and vulnerable groups to ensure inclusive participation and equitable access to information. As a result, improved awareness and preparedness will contribute to reduced disease incidence, strengthened community resilience, and enhanced adaptive capacity across the three wards

Output 3: Mainstreaming climate change into health projects and programmes at Karatu District

Integrating climate change considerations into Karatu District's health strategies, programs, and projects is essential to enhancing the climate resilience of public health systems. This initiative aligns with the National Climate Change Response Strategy (2021), the vision for development by 2050, the National Adaptation Plan (NAP 2025), and the Tanzania Health NAP (2020). By mainstreaming climate action, the project will significantly bolster the district's health sector capacity to make informed, climate-conscious decisions that benefit our community's well-being.

Output 4: Climate-smart community health resource centres built, retooled and

strengthened

This project seeks to enhance community resilience by establishing resource centres in eight selected villages. These centres will provide essential services, including first-aid emergency care, training in human nutrition, and spaces for committees to share experiences. In accordance with Adaptation Fund (AF) policies on Undetermined Sub-Projects (USPs), site-specific designs and cost estimates will be finalized during implementation. This approach ensures that the infrastructure is culturally acceptable and climate-resilient while complying with AF Environmental and Social Policy (ESP) requirements.

Implementation will follow a two-stage process. First, each centre will undergo participatory site selection and climate risk screening, addressing factors like land tenure, ecosystem sensitivity, and community safety. Only projects meeting AF safeguard criteria will proceed. Next, detailed engineering designs, cost estimates, and Environmental and Social Management Plans (ESMPs) will be developed prior to construction. By employing climate-resilient design standards such as heat-resistant materials and flood-safe siting, we will ensure long-term functionality. Construction will begin after obtaining safeguards clearance and confirming informed consent from the communities.

This phased USPs approach promotes flexibility while upholding environmental sustainability and social inclusion, enabling continuous learning and adaptation to local conditions for the Hadzabe and Datoga communities.

Component 5: Enhancing the capacity of Karatu District Council and Communities in the three wards of Baray, Endamaghanand Mang'ola to design and implement climate change adaptation interventions and improve the level of understanding and awareness

Outcome 5: *Improved capacity of Karatu District Council, Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities in planning, implementing and monitoring climate adaptation actions.*

The outcome and output activities of this component are designed to strengthen the capacities of all actors by improving their understanding of climate change. This will support communities in participating in implementing measures necessary for the success of resilience-building efforts and the continued replication of adaptation strategies in the district. When implemented, this component is expected to make a lasting contribution to the sustainability of climate change adaptation measures across the district and beyond.

The output will facilitate the integration of effective adaptation practices into existing community-level development plans, including village and ward plans. Enhancing the knowledge management system and the capacities for planning, coordination, and implementation at the local level is critical to guaranteeing effective climate adaptation in the district.

Output 1: *The capacity of Karatu District Council in facilitating public awareness*

and understanding of climate change–related issues, and in promoting the adoption of resilient climate livelihood practices, strengthened.

This project will support institutional capacity building for planning and managing adaptation interventions, which is vital for successful implementation. The project will work in an integrated manner to strengthen the capacity of local institutions, farmers' associations, and communities in promoting the adoption of climate-smart practices. At one level, the project will seek to influence and involve local people in adopting climate-smart agriculture by building community capacity. This approach will be especially effective in the proposed project areas, given the well-developed local organizational structures that exist within the communities. Community groups and institutions will be supported through encouragement and technical advice to promote the adoption of climate-smart livelihood practices. In addition, communities will be equipped to implement climate-smart interventions at their camps or homesteads.

The project will further promote learning and knowledge management so that key messages reach as many people as possible. This will be achieved by facilitating the sharing and communication of project results and lessons learned among district councils and local communities. Thus, the project will develop mechanisms to disseminate results and lessons to the wider community in the project districts and across Tanzania. Karatu District Council staff at all levels will be supported in designing and implementing climate change actions.

Output 2: Established Community institutions to assist in collecting climate-related local knowledge (including traditional knowledge) and disseminate relevant climate change adaptation knowledge and information to communities in the three wards of Baray, Endamaghan and Mang'ola

The project will establish and strengthen **community-based climate knowledge institutions** in Baray, Endamaghan, and Mang'ola Wards to collect, document, and disseminate climate-related local and traditional knowledge alongside scientific climate information. At least **nine Community Climate Knowledge Committees (three per ward)** will be formed and operationalised. This project aims to bolster community resilience to climate change by creating and strengthening climate knowledge institutions in Baray, Endamaghan, and Mang'ola Wards. We will establish at least nine Community Climate Knowledge Committees with at least 50% representation of women and youth. These committees will serve as local platforms for climate education and decision-making.

Key activities will include: (i) documenting indigenous climate indicators and coping strategies; (ii) setting up community climate information hubs through notices and mobile messaging; (iii) training at least 45 community facilitators in climate literacy and communication; and (iv) sharing seasonal forecasts and adaptation advice with at least 4,500 community members annually. This initiative will enhance community ownership of climate information and improve localised adaptation strategies across the wards, with at least **50% representation of women and youth**. These institutions will serve as trusted local platforms for climate learning, early warning dissemination, and adaptive decision-making.

Output 3: The capacity of the hunter-gatherer and blacksmith communities to plan

and make decisions to implement climate-resilient livelihood practices is strengthened.

The project seeks to strengthen the capacity of the Hadzabe (hunters and gatherers) and Datoga (blacksmiths and pastoralists) communities by enhancing their skills in planning, decision-making, and climate-resilient livelihood practices. We aim to engage at least 200 community members, with a focus on women, youth, and elders, to ensure inclusive participation.

Key activities will include training workshops on climate risks and sustainable livelihoods, community-based planning sessions to design climate-resilient options and establishing producer and decision-making groups for collaborative resource management. Mentorship will be provided on monitoring and record-keeping. The project targets an 80% increase in the knowledge of climate-resilient livelihood planning among trained members, the creation of at least 10 functional community planning groups, and the development and implementation of community-led action plans for activities such as small-scale agriculture and crafts. These efforts will empower communities to make informed decisions and ensure that livelihood interventions are sustainable, culturally appropriate, and locally owned.

Output 4: Upgrade Karatu District metrological services and its network and infrastructure to the areas surrounding the three wards of Baray, Endamaghan and Mang'ola for the provision of essential data for climate service and early warning systems. In this project, the staff of Karatu DC will be capacitated to be able to collect and use climate information in their decision-making.

4.1. Addressing Past and Ongoing Unsustainable Practices and Enabling Long-Term Change

The project recognises that ecosystem degradation in Karatu is driven by decades of unsustainable practices such as deforestation for fuelwood, overgrazing, uncontrolled burning, soil mining, expansion of cultivation into fragile areas, and heavy reliance on wild foods in Hadzabe territories. To address these challenges, the project adopts an integrated, community-led approach that reduces harmful practices while creating lasting behavioral and economic shifts.

4.2. Replacing Unsustainable Practices with Climate-Resilient Livelihoods

- The project will provide **viable alternatives** to the practices that degrade ecosystems: Beekeeping, agroforestry, poultry, rabbit production and craftmaking reduce dependence on charcoal, fuelwood, and unsustainable wild harvesting.
- Alternative household energy sources (briquettes, improved cookstoves) reduce demand for firewood and for woodland clearing by 40–60%.
- Water infrastructure reduces the need for long-distance foraging and cutting of wood for boiling water.

These alternative livelihoods create economic incentives for communities to stop harmful behaviours and support restoration.

4.3. Strengthening Community Governance and Natural Resource Management

The project supports:

- Revitalised **Village Natural Resource Committees (VNRCs)** and **Water User Committees**.
- Clear community bylaws regulating grazing, fire use, tree cutting, and woodland access.
- FPIC-based agreements with Hadzabe communities to define sustainable use norms for wild foods and forest resources.
- Community monitoring groups (women + youth) to track restoration and enforce agreed rules.

This ensures long-term ownership and governance of restored ecosystems.

4.4. Behaviour Change and Environmental Education for Long-Term Impact

The project integrates:

- **Community awareness campaigns** on climate change, sustainable harvesting, fire management, and soil conservation. School-based environmental clubs and youth engagement to internalise long-term stewardship.
- Demonstration sites showing the benefits of restoration (water retention, shade, fodder, bees).
- Targeted outreach to **men, women, and youth** to promote locally appropriate behaviour shifts.

These approaches build **social norms** that favour conservation and responsible use.

4.5. Protecting Restored Areas to Prevent Re-Degradation

The project will:

- Establish **closures** (protected restoration zones) for 2–3 years to allow ecosystems to recover.
- Introduce rotational grazing plans and livestock corridors to minimise pressure on restored hillsides and woodlands.
- Promote community woodlots that reduce pressure on natural forests.
- Install erosion control structures (bunds, terraces, gabions) that physically stabilise land and prevent further degradation.

This creates long-term ecological stability.

4.6. Enabling Long-Term Structural Change

The combination of economic incentives, governance reforms, behavioural shifts, and physical restoration measures will generate a sustained reduction in tree cutting, charcoal production, and uncontrolled burning. Improved soil fertility and water retention support climate-smart agriculture. Increased vegetation cover and biodiversity support livelihoods, such as beekeeping. Stronger community-driven stewardship is rooted in cultural, economic, and ecological benefits.

These shifts collectively ensure the long-term sustainability of restored ecosystems and the resilience of vulnerable communities, including the Hadzabe.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate

negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

All five components of this project are designed to deliver environmental, economic, and social benefits, especially at the community level, where local farmers and marginalised groups (including women, youth, and people with disabilities) will directly benefit from improved capacity to adapt to the impacts of climate change. This project also complies with the Environmental and Social Policy of the Adaptation Fund, whereby relevant risks are clearly identified, and mitigation measures are proposed.

i. Beneficiary Estimates

The project will directly benefit 3,000 people, of whom approximately 1,800 are women and 1,200 are men, across the eight targeted villages. In addition, an estimated 30,000 indirect beneficiaries will be reached through improved access to water, diversified livelihoods, ecosystem restoration, climate-health services, and community awareness activities. This includes approximately 18,000 women and 12,000 men. These estimates reflect the total population of the eight intervention villages and surrounding catchments, ensuring comprehensive coverage of vulnerable households, including women, youth, and Indigenous Peoples. Table 4 below summarises the direct and indirect project beneficiaries.

Table 4. **AF** Core Indicator 1: Number of Beneficiaries

Category	Baseline	Target at Project Completion	Means of Verification
Direct Male Beneficiaries	0	1,200	Beneficiary Registry
Direct Female Beneficiaries	0	1,350	Beneficiary Registry
Direct Youth Beneficiaries (15-24)	0	450	Disaggregated Registers
Total Direct beneficiaries	0	3,000	Midterm and Final Evaluation
Indirect Male Beneficiaries	0	12,000	District Population Data
Indirect Female Beneficiaries	0	15,000	District Population data
Indirect Youth Beneficiaries (15-24)	0	3,000	Demographic monitoring
Total Indirect beneficiaries	0	30,000	Annual Reports

The project integrates a gender analysis aligned with the Adaptation Fund Gender Policy (2021) and the AF Gender Guidance Document (2022). Women, men, youth, and Indigenous Peoples were assessed for their climate vulnerabilities, workload distribution, access to resources, decision-making roles, and exposure to climate risks. Women face disproportionate burdens in water and energy collection, limited access to livelihood opportunities, and greater health risks from drought. Men face increased livelihood insecurity due to declining wild foods and hunting opportunities. The project incorporates

these findings to ensure gender-responsive access to water, livelihoods, natural resource management, training, and leadership positions, guaranteeing equitable participation and benefit-sharing.

ii. Economic, Social and Environmental Benefits

The project will generate measurable economic, social, and environmental benefits, including a **20–35% increase in household income**, **3 hours/day of time savings** for women through improved water access, and a 60% reduction in fuelwood consumption. Environmental benefits include **planting 100,000 trees, restoring 600 ha of community land, and sequestering 5,000–7,000 tCO₂eq** over 10 years. Women, youth, and persons with disabilities will benefit from targeted training, inclusive design of community infrastructure, improved health outcomes, and equitable access to all project resources and opportunities.

iii. Beneficiary Selection Criteria

The project will distribute 1,500 beehives across 10 beekeeping groups using a transparent, community-driven process. Groups will be formed through Village Assemblies and FPIC processes in Hadzabe areas, ensuring prioritisation of vulnerable groups, **including** women, youth, and persons with disabilities. At least 50% of participants will be women, and 30% will be youth. Clear eligibility criteria and community validation mechanisms will ensure equitable benefit-sharing and prevent exclusion or elite capture.

Beneficiary selection for the 10 poultry and 10 rabbit groups (20 members each) will follow a transparent, community-led process that prioritises women, youth, Indigenous Peoples, and persons with disabilities. All groups will have at least 50% women and 30% youth. FPIC will guide identification in Hadzabe areas. Selection will be based on vulnerability status, interest, and community validation to ensure equitable access and avoid any negative impacts or exclusion, in full compliance with the AF ESP and Gender Policy.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

a) Cost effectiveness from a technical perspective

It is believed that enhancing direct engagement of vulnerable communities in villages to empowers local communities to conceive and drive local adaptation responses directly, build their adaptive capacity to climate and seasonal weather shocks, foster transformation of their livelihood systems to be more climate resilient and allow them to scale up successful climate adaptation actions. This enhanced direct implementation approach, using the force account modality and the self-reliance spirit in villages, is a time-sensitive, efficient, and cost-effective way to deliver concrete adaptation projects with direct local-level benefits in the United Republic of Tanzania. The costly conventional way, the top-down approach of designing and implementing adaptation projects from the central government, usually from the Ministry headquarters, facilitated by multilateral implementing entities, would not permit this level of local ownership, design and implementation.

For instance, adaptation projects such as the Adaptation Fund Project Implementation of Concrete Adaptation Measures to Reduce Vulnerability of Livelihood and Economy of Coastal Communities in Tanzania– which is currently under implementation in Dar es Salaam and the Least Developed Countries Fund (LDCF – GEF) project – Ecosystem = Based Adaptation for Rural Resilience in Tanzania, both implemented under the United Nations Environmental Program (UNEP); and the LDCF – project under the United Nations Development Program (UNDP) – Strengthening Climate Information and Early Warning Systems in Tanzania for Climate Resilient Development and Adaptation to Climate Change” used top – down approach and their running cost when quantified using elements like fuels costs from Ministry headquarters to project sites in villages and districts, the cost of international consultant fees extremely high are perceived to be extremely higher when compared to the proposed project. This project will enable climate finance from the Adaptation Fund (AF) to flow directly to activities that will be implemented by vulnerable communities themselves in Baray, Endamaghan and Mang’ola wards, and will provide an important complementary adaptation response at the higher levels in the district and the nation at large. Another example is the Africa Adaptation Program (AAP) which was also implemented through UNDP funder by JICA, has limited community involvement and engagement of Local Government Authority at district and village levels. Through has strong concrete adaptation activities, yet it appeared to be reactive and costly as it didn’t tap the in-kind cost contribution from communities using the popular force account modality.

In-contrast the project funded by the African Development Bank (AfDB) = Institutional Support for Climate and Seasonal Weather Information for Adaptation Planning in Mwanga and Same Districts in Northern Tanzania, had concrete adaptation interventions which used Force Account and Ujamaa spirit to deliver activities at local levels. The cost recovery in monetary terms was estimate to be about 49%. However, this project which is now completed was coordinated by Vice President’s Office, more than 500 km away from the project sites in Same and Mwanga districts. This resulted into project administration/execution cost amounting to 30% of the total project cost, nevertheless this project was able to promote transformation of traditional agriculture and water supply in Jipe and Mabilioni Villages and increased adaptive capacity of local communities to current and future climate risks. This project, is learning from lessons and experience from this project while recognized that the administrative costs remains well below 9.5%, will amplify the value of requested AF resources by almost over 40%.

Cost – effectiveness of this project will also be delivered through socio-economic and income improvement in communities, efficiency way of timely delivering actions on the ground including effectiveness and sustainability of the proposed climate interventions. For example, current approach to climate related risk management and poverty reduction projects in Karatu have been mostly reactive based on time events which in most cases are not sustainable. Options like supplying food aid to communities as adaptation actions to respond on the vagaries in climate and seasonal weather is mostly reactive and costly relative to promotion of climate resilient – water supply with the view of transforming rural livelihoods and improving income generation. Socio-economic and income generation expected from integrated forest management will be effective, efficiency and economical way to realize adaption

benefits compared to traditional ecological restoration project in the United Republic of Tanzania in the 1980s, like the costly HADO program which failed due to limited integration of livelihood activities. For example, preliminary socio-economic analysis on the proposed project activities (climate resilient-rural water supply, bee keeping, poultry and rabbit farming, when implemented using Force Account modalities have highest internal rates of return beyond 40 – 89% higher benefit; cost ratios, currently estimated to be up to 27:1500 for concrete actions under components 1, 2 and 3. It is therefore obvious that, the proposed project is cost – effective and the project’s investment will accrue large benefit for life and livelihood quality improvement vis-à-vis the traditional and existing way of implementing adaption projects in the United Republic of Tanzania.

Thus, the project evaluated several alternative options for addressing climate vulnerability in Karatu District. The selected measures are the most cost-effective, environmentally sound, and socially appropriate, particularly for vulnerable groups and Indigenous Peoples. When compared with realistic alternative options in the same sector and geographic context, the selected combination of decentralized water access, climate-resilient livelihoods, and community-based ecosystem restoration provides:

- i. More beneficiaries reached per dollar invested,
- ii. Lower recurrent costs,
- iii. Stronger alignment with Indigenous and local livelihoods, and
- iv. Greater long-term resilience and environmental gains.

TABLE 4: PROJECT COSTS AND BENEFITS

Component	Project Cost (USD)	Concrete adaptation benefits	Avoided losses	Trade offs
2. Enhancing climate-resilient rural water supply systems in vulnerable Hadzabe (gatherers and hunters) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghan Wards in Karatu District	945,893	<ul style="list-style-type: none"> • Easy and reliable access to domestic water • Availability of water for livestock and crop production • Improved food availability • Increased food and nutrition security • Reduced time for communities to collect water, hunt and gather • Increased boma income/assets • Improved experience and knowledge on water resource management • Increased resilience to the impacts of climate change 	<ul style="list-style-type: none"> • Food and nutrition insecurity • Loss of crops and livestock produce • Loss of boma income • Increased poverty • Reduced resilience to climate change 	<ul style="list-style-type: none"> • Lack of reliable and sufficient source of water which increases government spending • Increase government spending of humanitarian food supplies for communities that have affected by loss of water and food
1. Developing integrated climate resilient livelihood diversification systems in the selected sites in three wards of Baray, Endamaghan and Mang'ola	534,463	<ul style="list-style-type: none"> • Reduced vulnerability to climate change impacts • Improved food and nutrition security • Improved management of forest ecosystem • Reduced income poverty • Enhanced resilience to climate change impacts 	<ul style="list-style-type: none"> • Food and nutrition insecurity • Extreme poverty • Ill health • vulnerability to climate change impacts 	<ul style="list-style-type: none"> • Deforestation • Increased vulnerability to climate change • Increased cost of adaptation for the government to provide food and other social amenities to vulnerable communities
4.Improving climate related health services and awareness for Hadzabe and Datoga (Blacksmith) communities in 3 wards of Baray, Endamaghan and Mang'ola	165,320	<ul style="list-style-type: none"> • Improved access to health services • Improved sanitation • Increased productivity • Reduced vulnerability to climate related health incidences • Increased resilience to climate change effects 	<ul style="list-style-type: none"> • Disease outbreaks • Vulnerability to climate change impacts • Food and nutrition insecurity • Loss of Life 	<ul style="list-style-type: none"> • High incidence of diseases outbreak • Poor health which may affect productivity of communities • Increased government spending to provide health services to vulnerable communities

Component	Project Cost (USD)	Concrete adaptation benefits	Avoided losses	Trade offs
3. Improve ecological and environmental services and functions	128,569	<ul style="list-style-type: none"> • Increased natural resource management capacity • Increased forest cover • Increased boma income • Enhanced resilience to climate change 	<ul style="list-style-type: none"> • Degradation of natural resources • Loss of forest cover • Loss of livelihood • Loss of life due to floods and drought • Food and nutritional insecurity 	<ul style="list-style-type: none"> • High loss of biodiversity • Increased cost of adaptation for flood and drought victims • Increased cost of providing food for hunger victims • Increased cost of health services for victims of extreme weather events • Land degradation
5. Building institutional capacity of Karatu District Council staff and Hadzabe and Datoga (blacksmith) communities in planning, implementation of climate change adaptation actions	344,400	<ul style="list-style-type: none"> • Improved capacity of Local Government Authority and communities to plan and implement resilient climate adaptation actions • Improved coordination of climate interventions at local level • Increased capacity to communicate project results and key lessons learnt • Increased resilience to climate change 	<ul style="list-style-type: none"> • Increased vulnerability • Inability to predict future climate change impacts • Loss of livelihoods • Food and nutrition insecurity • Abject poverty 	<ul style="list-style-type: none"> • Increase numbers of victims of climate change as a result of Local government and community poor planning and limited preparedness • Reduced adaptive capacity of communities • Increased adaptation cost • Failure of adaptation interventions as a result of not integrating climate change into District of plans and budgets

Cost effectiveness from a project management perspective

The Project Management Unit (PMU) is proposed to be based in the project area at the district headquarters. As much as possible the project will utilize the existing government staff available at the district and at TAEPO including to be hosted in the buildings of the district headquarters. No new staff is expected to be hired; no pensions and insurances will be paid by the requested fund under this project as those costs are already covered by Karatu District Council and TAEPO. However, the project will pay some reasonable top up salaries only for project key staffs who will be placed in the PMU. This is viewed to be cost effective and promote best use of resources by reducing project management costs. Both Karatu District Council and TAEPO may hire the services of other experts at reasonable rates. Utility bills of project staff will be covered by Karatu District Council and TAEPO. This will cut-off the project running cost by around 25 – 40%.

c) Cost-Effectiveness and Alternative Options Considered

The proposed project was designed to maximize cost-effectiveness by prioritizing low cost, high-impact, community-led interventions that require minimal recurrent spending and build long-term resilience. The selection of climate-resilient livelihoods (beekeeping, poultry, rabbit production, briquette making, agroforestry) reflects activities with proven high benefit-to-cost ratios, especially in remote and Indigenous contexts where capital-intensive solutions are not sustainable. Boreholes will use solar pumping to eliminate fuel and maintenance costs associated with diesel systems, and ecosystem restoration relies on Assisted Natural Regeneration (ANR), which is significantly more cost-effective than full replanting. Leveraging existing village committees, district technical staff, and community structures eliminates parallel systems and reduces administrative overheads. These approaches ensure that investments generate lasting social, economic, and environmental benefits at the lowest feasible cost.

Several alternative measures were assessed during project design but were not selected due to higher costs, lower feasibility, or reduced sustainability for vulnerable groups. Mechanized irrigation systems, large-scale afforestation, and commercial livestock schemes were excluded because they require high capital investment, high maintenance, and are unlikely to be maintained by poor or Indigenous households. Likewise, purchasing machinery-intensive processing equipment or introducing unfamiliar value chains posed high risks of failure. The project instead prioritised options that align with Hadzabe and Datoga cultural practices, require minimal inputs, and can be maintained locally using existing skills and village governance frameworks. These selected options offer a superior cost-effectiveness profile compared to the discarded alternatives and ensure that climate adaptation benefits can be sustained beyond the project's duration.

d) Comparison with Other Possible Interventions in the Same Sector and Region

In designing this project, several other intervention options used in similar semi-arid areas of Tanzania were considered and found to be **less cost-effective** or less appropriate for Hadzabe and neighboring communities than the proposed package.

1. Large Centralized Water Supply Schemes vs. Decentralized Boreholes

An alternative option would have been to invest in a **single large, piped water scheme** supplying multiple villages. While technically feasible, capital and operation costs are substantially higher, and such systems are less suited to dispersed Indigenous settlements.

- Large, piped schemes typically require **3–4 times higher capital investment per beneficiary** and high recurrent energy and maintenance costs.
- By contrast, the proposed **solar-powered boreholes and community-managed water points** can provide basic water access at a lower cost per household, with simple O&M and strong local ownership.

Given the scattered nature of Hadzabe settlements and the project budget, decentralized boreholes are more cost-effective and less risky.

2. Cash Transfers and Input Subsidies vs. Climate-Resilient Livelihoods

Another option would have been to focus on **cash transfers** or **short-term input subsidies** (e.g. fertilizer, seed packages) as the primary adaptation measure.

- Cash transfers can provide temporary relief but typically require recurring annual budgets and do not necessarily build skills, assets, or diversified income streams.
- Input subsidies for conventional agriculture can increase production but often bypass Indigenous groups and can increase dependence on rainfall and external inputs.

By contrast, the proposed livelihood diversification package (beekeeping, poultry, rabbits, agroforestry, crafts, briquettes) offers:

- One-off or short-term investment per household,
- Expected **20–35% increases** in household income, and
- Low environmental footprint and good cultural fit with Hadzabe and neighbouring communities.

This makes the chosen approach more cost-effective over the project lifetime.

3. Contractor-Led Tree Planting vs. Community-Based Ecosystem Restoration

A further alternative would have been to rely on **contractor-led afforestation and mechanised land rehabilitation**.

- Contractor-driven tree planting in similar settings often costs 3–5 times more per hectare than community-based assisted natural regeneration and has lower survival rates due to limited local ownership.
- Mechanised rehabilitation (heavy machinery, extensive earthworks) is expensive and less suitable for fragile hillslopes and culturally important areas.

The project instead prioritizes **community-based restoration and Assisted Natural Regeneration (ANR)**, complemented by targeted enrichment planting and low-cost soil and water conservation measures. This approach:

- Reduces per-hectare costs significantly,
- Achieves higher survival through community stewardship, and
- Directly involves vulnerable households in paid restoration work and benefit-sharing

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project being proposed here reflects communities, district and national issues and therefore is consistent and in-line with national vision for sustainable development, policies, plans, strategies, programs and actions. For instance this project is well reflecting top most five priorities (adaptation contributions) listed under the current Nationally Determined Contributions, the NDCs commits to : Up-scaling the level of improvement of agricultural land and water resources management; Increasing yields in an environmentally sustainable way through inter alia climate smart livelihood interventions; providing accessible mechanism for vulnerable communities such Hadzabe (hunters and gatherers) and Datoga (Blacksmith) against climate related shocks; and strengthening knowledge systems, extension services and water supply and health infrastructure to target climate actions, including through the use of climate services and traditional knowledge. For water related contributions, the NDCs indicate to: promote integrated water resources development and management practices and development and sustainable exploitation of groundwater resources. For livestock actions, the NDCs intend to promote climate resilient traditional and modern knowledge for sustainable management systems and practices; enhance climate resilient livestock infrastructure and services, promote livelihood diversification of livestock keepers; and Increasing livestock production through climate smart livelihood agriculture interventions. For ecosystem and forestry related commitments, the NDC will be safeguarding the ecosystem services, including through the promotion of alternative livelihood options to forest dependent communities. Therefore, all five components of this project and their output activities are strongly supporting implementation of the Nationally Determined Contributions (NDCs, 2021) and the National Climate Change Response Strategy 2021 as all of them are consistent with the Adaptation Contributions.

In addition, this project is also well reflecting top most three adaptation priorities listed under the National Adaptation Programme of Action (NAPA, 2007), reflects the first and second priority sectors identified under the intended Nationally Determined Contributions (INDCs, 2014) and the National Climate Change Response Strategy (URT, 2021) that are most vulnerable, which need urgent and integrated adaptation measures. The project is also in consistency with the Tanzania Development Vision 2025, National Five-Year Development Plan (FYDP) III (2020/2021- 2026/2026), the First and the Second National Communication

submitted to the the United National Framework for Convention on Climate Change (UNFCCC), the National Strategy for Growth and Poverty Reduction (MKUKUTA II), National program under the Tanzania Social Action Fund (TASAF). The Roadmap of the National Adaptation Plan (NAPs), Karatu District Strategic Plan (2017/2018- 2021/2022). All these national and district documents take account and recognize the challenges and negative effects posed by climate change. In this way there is a need to implement climate actions at local levels, where vulnerable people, particularly women and children who suffer the most and are now being forced into deeper poverty challenges as a result of increased climate vagaries. This project is also linked to sustainable Development Goals (SDGs); particularly SDG 1: End poverty in all its forms everywhere; SDG 2; End hunger, achieve food security and improved nutrition, and promote sustainable agriculture; SDG 3: Ensure healthy lives and promote wellbeing for all ; SDG 5; Achieve gender equality and empower all women and girls; SDG 6; Ensure availability and sustainable management of water and sanitation for all, SDG 13; Take urgent action to combat climate change and its impacts (in line with the United Nations Framework Convention on Climate Change); and SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems., sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. In the same way, the proposed project is in line with the Agenda 2023; the Africa we want which promotes issues of sustainable and inclusive economic growth and to take actions to reduce the effects of climate change in rural areas. Additionally, the linkages to the national and sub national/district policies and other poverty reduction strategies can be easily seen at each component.

The project is also consistence with the current Karatu district plans, which thrive to reduce poverty among communities in this climate impacted area, a strategy to introduce poultry and rabbit farming, production of traditional and modern crops will ensure food and nutrition security and reliable income and resilience to climate change. The project will support implementation of this strategy and a plan is sought to have satisfactory extension services.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The proposed project is aligned with relevant national technical standards and meets requirements/standards stipulated by Environmental Management Act (Cap. 191 of 2004) and its subsequent Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations (G.N. No. 349 of 2005). Since the project is mainly aiming at improving the state of the environment in Karatu district as well, it will not generally have negative environmental impacts. It is clearly expected to have positive environmental impacts through improving the environment and ecosystems of the area, through improving the sustainable management of land, terrestrial and other environmental systems through addressing issues of community resilience to climate change and improving community livelihoods.

The project also took into consideration of the broader of the National Guidelines for the Preparation of Water Safety Plans – Resilient to Climate (2015). Other pertinent national standards for rural water supply, agriculture, forestry and beekeeping,

environment, agriculture and food security and village land use planning/rural land tenure systems will be highly considered at advanced stage of designing of this project and during implementation. In that way, the proposed project will be fulfilling vital national policies, plans, strategies and programmes set by the United Republic of Tanzania including plans and bylaws formulated by Karatu District Council. Similarly, this project is relevant to the Environmental and Social Safeguard policy of the Adaptation Fund (AF) and any other Environmental and Social Safeguard Policies of International and UN agencies such as the World Bank as its intervention will enhance sustainable development benefits while avoiding unnecessary harm to the environment and communities.

All activities under each component will facilitate social security of the riparian communities and veracity of the environment. However, the executing entities (Karatu District Council and TAEPO) have adequately screened this project proposal and will place this Adaptation Fund. This is because there is no any component of this project which indicates any serious risk to the environment or social systems and on public health.

Compliance with National Technical Standards for Water Interventions

All water-related interventions—including borehole siting, drilling, testing, equipping, solar pumping, and distribution—will comply fully with the national technical standards and regulatory frameworks of the United Republic of Tanzania. These include:

- 1. Water Supply and Sanitation Act (2019)** – governing water supply infrastructure development, performance standards, and supervision by the Ministry of Water and District Water Engineers.
- 2. National Rural Water Supply Design Standards (MoW, 2021)** – specifying minimum requirements for borehole depth, casing, pump specifications, hydraulic capacity, disinfection procedures, and community water point design.
- 3. National Groundwater Development Guidelines (MoW, 2014)** – outlining technical protocols for hydrogeological surveys, site selection, aquifer protection, drilling methods, borehole construction, pumping tests, and groundwater quality analysis.
- 4. Drilling and Groundwater Licensing Regulations** – requiring the use of licensed drilling contractors, certified hydrogeologists, and submission of borehole completion reports to the Ministry of Water.
- 5. Environmental Management Act (2004) and Water Resources Management Act (2009)** – ensuring environmental safeguards, protection of water sources, and sustainable abstraction levels.
- 6. Solar Water Pumping Guidelines (MoW, 2020)** – guiding selection, sizing, installation, and maintenance of solar pumping systems for rural water supply.

8. Village Land Use Planning Guidelines (MLHSD) – ensuring boreholes and water points are sited according to approved land use plans and community consultation processes.

All boreholes will be drilled by **licensed contractors**, supervised by the **District Water Engineer**, and subjected to mandatory **pumping tests, water quality analysis, and structural integrity inspection** before commissioning. Water points and storage tanks will follow **gender-sensitive and disability-inclusive design standards** to ensure safe and equitable access.

The project will therefore meet and maintain all national technical, environmental, and social standards throughout implementation.

F. Describe if there is duplication of project/programme with other funding sources, if any.

There is no any duplication of this project with other funding sources. This project will rather complement Any efforts geared to foster adaptation actions in Karatu district for climate resilient livelihoods thematic area. Preliminary meetings and discussions were conducted with various stakeholders at village, ward, division, district and national levels to confirm the existence of potential synergies of proposed activities with various national development and climate action, which have suffered absence of funds. The AF resources will therefore build on ongoing district development programming as operationalized through its investment and operational budgets. Karatu district like any other Local governments receive funding from the national government and ministries through core programmes as well as through more targeted projects (including donor - supported projects). The proposed project will build on core operational funding delivered to the district through the departments of agriculture, planning, environment, forestry, tourism, beekeeping and Rural Water Supply Agency (RUWASA) in Karatu. This will also build on more targeted projects or initiatives being implemented in Karatu particularly those funded by adaptation fund such as; Bunda Climate Resilience and Adaptation Project currently being implemented in Bunda Districts; Enhancing Climate Change Adaptation for Agro-Pastoral Communities currently being implemented in Karatu District, Enhancing Climate Change Resilience of Coastal Communities of Zanzibar currently being implemented in Unguja and Pemba Islands.

Other Programmes and initiatives that are currently being implemented include; Livestock Development in collaboration with IFAD which work with livestock keepers, agro-pastoralists and other land users in Tabora, Shinyanga, Ruvuma regions to support integrated dry land-based livelihoods including access to markets and income generation while providing ecologically sound strategies for resolving conflicts between farmers and pastoralists; Institutional Support for Climate and Seasonal Weather Information for Adaptation Planning in Mwanga and Same districts, Northern Tanzania

the project funded by the African Development Bank (AfDB), had concrete adaptation intervention which used Force Account to deliver activities at local levels. Therefore, AF resources under this project are expected to build synergies on the ground particularly for component 1, 2, 3 with activities related livelihood improvements and ecological restorations, rather than duplication of resources. However, there is no geographical duplications with the sited donor funded project. There is no fund which has been allocated to implement this project, except this application to the Adaptation Fund.

(a) Complementarity with other projects/programmes

KARAHADA complements the Tanzania Agriculture Climate Adaptation Technology Deployment Programme-TACATDP (GCF–CRDB) by preparing vulnerable producer groups to later access climate-smart technologies and finance. It draws on ecosystem-based adaptation lessons from the GCF–UNHCR Kigoma project and the Usangu Community-Led NBS project to strengthen Component 3 on landscape restoration.

The project will use improved climate and weather information generated under the Systematic Observations Financing Facility (SOFF) Programme to support Component 4 on community early warning. KARAHADA is fully aligned with the World Bank SCALE programme, applying locally led climate action tools such as (Climate Infused Opportunities to Development (ciO&OD), Local Climate Action Plans (LCAPs) and serving as a demonstration model for Indigenous-inclusive resilience investments.

In the agriculture sector, the project builds on ASDP II, aligning its agroforestry, small livestock and value-addition activities with national value chain priorities and district-level extension systems. These synergies ensure complementarity, avoid duplication, and enable scaling of successful models beyond the three target wards.

Table X: Relevant Projects/Programmes and Synergies with KARAHADA

Project / Programme	Key Linkage	Synergy & Complementarity	Coordination Approach
TACATDP (GCF–CRDB)	Climate-smart agriculture & finance	Prepares producer groups to access TACATDP technologies and financial products	District-level coordination with CRDB & extension services
GCF–UNHCR Kigoma EbA Project	Village-based ecosystem restoration	Adopts EbA tools and community restoration models	Engagement through national EbA platforms
Usangu Community-Led NbS (World Bank/JSDF)	Community restoration, WASH–climate	Applies NbS and micro-catchment planning lessons	Technical exchange with MoW& WB

SOFF Programme (TMA)	Climate information systems	Delivers last-mile climate services using SOFF data	Collaboration with TMA regional office
SCALE Program (World Bank)	Locally led climate action	Serves as Indigenous-inclusive LLA demonstration aligned with SCALE tools	Coordination through PORALG & district structures
ASDP II	National agriculture development	Aligns value chains & CSA practices with ASDP II priorities	Integration into DADPs & extension systems

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Issues of learning and knowledge management including dissemination of lessons learned are captured under component five; which aims to strengthen local institutional capacity for effective adaptation strategies and reduce risks associated with climate-induced socio-economic failures in Karatu district. Hence, this project will utilize a fraction of the requested fund to build core knowledge capacity and to disseminate results and outcomes including sharing lessons which will be generated by the project.

The project will strengthen Knowledge Management (KM) by systematically documenting lessons from the new livelihood models (Component 1) and ecosystem restoration practices (Component 3). Lessons will be captured through participatory reviews, technical monitoring, and MEL processes, and shared via community centres, district learning forums, national platforms, and digital media. The project will produce case studies, technical briefs, videos, and community guidelines, feeding insights into national programmes including SCALE, TACATDP, ASDP II, and SOFF to support wider replication and policy learning

Under Activities 5.1.3, 5.1.4, 5.2.1, 5.3.1 and 5.4.1 where issues of learning, trainings and communicating results will be effectively implemented. In this way, issue on climate change education and awareness raising will be well addressed. Participatory approaches and community involvement through volunteering to implement project activities, they're in – kind contribution, trainings, tour and visits and on-site demonstrations will be conducted as part of learning and knowledge management. Sharing project results and communicating outcomes at various community and inter-village levels will also be conducted under component five. Positive project results and outcomes will be also communicated and disseminated at regional, inter district, national and international levels through progress reports, seminars, meetings, workshops, project briefs, various publications in peer reviewed journals. Other means such as newspapers, radio and video documentaries, techniques and achievements will be used as well to

share and communicate lessons and outcomes of the project. Moreover, various technical training under short term basis will be conducted as part of knowledge management.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. *Consultation during development of the KARAHADA project proposal*

Stakeholder consultation for this project was done in three phases. This include consultation with Hadzabe (hunters and Gatheres and Datoga (blacksmith); consultation with Local Government officials and leaders and consultation with other actors who have been working in Karatu District or are currently working in Karatu. These consultations were preceded by national level consultation where representatives from Government Ministries and Agencies, Academia and researchers were consulted. The aim of this stage of consultation was to present the opportunity for this round of funding and agree on the sectors/ Districts to implement projects which will support to enhance resilience of Tanzanians. This meeting was in July 2021. where participants were in consensus that Karatu district be one of the targeted District and in particular the Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities. The list of participants to this workshop is attached as Annex 2

Community consultations were conducted from 12th -17th July in Karatu. This participatory process was complemented by field visits to different Hadzabe (hunters and gatherers) and Datoga (blacksmith) camps and homesteads. The areas visited include Quangdeng, Dumbechan, Mbuga Nyekundu and Mikocheni with the aim of getting more physical observations and eyewitness on the full picture of the landscape, socio – economic interactions and vulnerabilities, needs and challenges of the these communities. The consultations assisted in soliciting viewpoints and to better understand the problem, it's root causes and potential interventions that would achieve greater resilience to climate change shocks in Karatu district and for Hadzabe and Datoga communities. Consultations were done to women and men separately and then joint consultations were done to give voice to the marginalized group or individuals. These meeting for pre-designing of this project assisted to perform quick analytical scanning of gender and environmental related issue as well as qualitative analysis and reviews on how climate change affects woman and men differently to facilitate proposing gender sensitive actions. The list of community members and traditional leaders consulted is attached as Annex 2.

The project formulation team conducted a two intra – and inter-departmental meetings in the district with senior officials and technical experts in Karatu as well as at TAEPO offices in Arusha to share and exchange views on the proposal, and to jointly identify and align priorities for the development of the full proposal. Thereafter, a series of virtual consultations among key technical and legal staffs between Karatu district council and TAEPO were also conducted, The district and council leadership and head of

departments were also involved in site selection of the project, Relevant face to face virtual consultations on processes involved experts from accounting, procurement, planning, agriculture, water, tourism forestry and beekeeping, land use and settlements, livestock, environment and cooperatives sections. The meetings also involved the representatives of NGOs working in Karatu. Because of COVID 19 pandemic follow up consultations were made by phone. This included consultation with Division, ward and village leaders (the list of district experts and other partners involved in the consultation process is attached as Annex 2).Further consultations continued with the staff of NEMC where the proposal was evaluated and refined to align with development polices and plans and strategies of the United Republic of Tanzania and with that of the Adaptation Funds.



Figure 3. Project Formulation Team, Technical Experts from Karatu District Council in one of technical sessions as part of consultative process conducted in Karatu District Headquarters.



Figure 4. Discussions with Hadzabe (hunters and gatherers) community members



Figure 5. Datoga (blacksmith) young men at work.

Key suggestion and concerns from stakeholders.

- i) Stakeholders and beneficiaries from Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities, technical staff from Karatu district council, government ministries, agencies and higher learning institutions indicated factors to be taken into consideration for successful planning and implementation for KARAHADAproject :
 - The project must adopt a participatory approach, best practices from design to project implementation. This can be achieved by applying lessons from community

experience and local knowledge. This, in turn, will assist in attaining the main goal of the project, “increasing resilience of vulnerable communities at the village level”.

- Almost 100% of all stakeholders and individual experts proposed to apply **Force Account Implementation Modality** from the design to implementation stage of this project. The approach is being widely applied by the Government of the United Republic of Tanzania and it has shown success in terms of value for money and project completion rates. This modality is now being adopted by other actors particularly for infrastructure development projects. This modality is viewed as cost effective and creates a sense of community ownership and practical involvement of communities by making themselves available for physical works with modest payments or with no payment and in-kind contributions through contribution of building materials such as collection of gravels, sands and willingness for working in groups.
 - The project should be hosted at Karatu district headquarters and use existing office accommodation and work with district technical staff together with TAEPO staff. The Finance should be channeled through a special account guided by the Government Final Standard Operating Procedures.
 - The District Development Plan (DDP) is a key local planning process the project must align with. This could be achieved by locating the project implementation unit at Karatu district and district planners will be part of the Project Steering Committee.
 - Although the entire community at the project site is vulnerable to climate change impacts, the project proposal preparation team and all stakeholders agreed that it was more humane and sensible to have provisions for supporting vulnerable households who are most vulnerable than others, such as youth/ children, female-headed families, people with disability and those with special needs.
- ii) Stakeholders discussed and analysed project interventions and pointed out that project components should address climate change risks, particularly on issues related to water security and water resources management, food security, environmental and ecosystem management, and strengthening community and local government institutions for planning and implementing climate change resilient interventions as urgent needs and priorities. Therefore, they all agreed that;
- The proposed activities/interventions for the project components in the approved full proposal are **urgently needed** and therefore reaffirm the proposed components, expected concrete outputs, indicated activities, and expected project outcomes.
 - For interventions related to food security and income generation, stakeholders and direct beneficiaries advised the project to adopt an implementation approach that supports both on-farm **and off-farm livelihood activities**.
 - Since Karatu district has in place a plan to diversify livelihood for its community members, stakeholders and district experts agreed that the proposed interventions under component 2 should consider activities to facilitate the **availability of traditional and improved seeds and stock**.

- For the **improvement** of beekeeping interventions for food security and income generation, stakeholders requested that **modern beehives** be used to increase honey productivity. These best practices can also be adopted by other neighbouring communities.

Table 5: Some perceived challenges and possible solutions for project interventions as thought by the community and Karatu District Council representatives

s/n	Challenge	Solution
1.	Water scarcity and lack of water infrastructure leading to inadequate water supply	<ul style="list-style-type: none"> • Invest in exploration and invest and extraction of underground water resources • Improve water availability through drilling of boreholes and installation water supply system • Promote sustainable water use
2.	Food scarcity, food insecurity and Malnutrition	<ul style="list-style-type: none"> • Provision of humanitarian food support at Village community centres • Promote use of traditional and improve crops varieties • Promotion of beekeeping practices, • Promote climate change – resilient Promote. climate change–resilient livestock practices such as Poultry and rabbit farming
3.	De forestation	<ul style="list-style-type: none"> • Mainstream climate change into forest management practices in all villages of Karatu District. • Promote alternative livelihoods in villages particularly targeting women and youth groups/the most vulnerable community groups. • Awareness on Participatory Forest Management • Tree planting • Law enforcement
4.	Poor health services	<ul style="list-style-type: none"> • Enhance capacity of public health care systems. • Improve disease surveillance and design of disease – control at health centers and village dispensaries. • Improve knowledge of climate change – related occupational health risks. • Provision Community Health Insurance
5.	Limited information on climate change, impacts and associated risks including limited knowledge and information of planning with climate change in mind	<ul style="list-style-type: none"> • creating awareness on climate change • Sharing local knowledge and solutions • Building strong community institutions • Strengthening climate information services • mainstreaming climate change District Development Plans
6.	Gender related issues	<ul style="list-style-type: none"> • Promote gender equity and equality among communities in Karatu to address norms and traditional systems which expose women to struggle mostly with domestic issues and to keep domestic matters of families going. • Promote and implement alternative income diversification activities such as beekeeping, poultry farming, local chickens'

		productions, Fruit tree planting, and home gardens for traditional crops <ul style="list-style-type: none"> • Promote awareness to encourage women and girls to participate in all stages of the projects implementations and meetings
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Source: Field Visit 2021



Figure 6. Proposal development team visited one of the caves used by Hadzabe hunters

(b) Gender analysis

At the stage of full proposal development, a gender scoping was done. Its findings were analyzed and discussed during consultations with Karatu district council staff and also with other partners working in Karatu. As it is indicated at section 1.2.2 inequality related to gender, exclusion of those with disabilities and income inequality are some of the factors that contribute significantly for vulnerability of women and disabled groups to the current and future climate change impacts and even structural inequality. Such inequality predisposes women and other marginalized groups in Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities especially widows, subjects vulnerable women and girls to negative, even harmful, coping strategies, including risky behaviors such as transactional sex. The analysis on gender also indicates traditional gender roles in Karatu confer more powers to men over women, but this situation does not relieve women from burdens of house work and looking for food and water. This is mainly due to prevailing social, economic and political barriers. As a result, women constitute

approximately 60 percent of rural people living in extreme poverty in Karatu District. The district is, relatively more vulnerable to climate change- induced risks, when compared to approximately only 40% percent for men. In addition, their heavy workload that combines exploitative agriculture, household and domestic works as well as earning from nonfarm activities such as intensive tasks of child-care, fetching water and food from afar distances, as well as food processing in a context where these services are either inadequate or do not exist, are multiple gender disadvantages which trigger the intergenerational transfer of poverty among women groups in the district. Therefore the proposed actions in this project should ensure early sensitization of all key decision-makers and communities to the need for and benefits of women's equal participation in activities of project components; specify targets for female and male participation at meetings and training events in order for the meeting/training to reach quorum, the target for women/men ration should be encouraged to be no less that 50/50 where possible and develop implementation plan which ensures targets for male /female participation in project activities to be at least 40% women. *See annex 1 summary on project component and gender analysis*

ii. Updated Consultative Process

Since the original submission in 2022, additional consultations were carried out between 2022 and 2024 to ensure that the proposal reflects the current priorities of Hadzabe, Datoga, and neighbouring communities. With the support of Kratu District Council, a total of 11 structured consultation sessions were conducted across the three target wards, bringing together 213 participants (92 women and 121 men) including village leaders, Hadzabe elders, Datoga pastoralist representatives, women's groups, youth groups, natural resource committees, health workers, extension officers, and district technical staff. A full list of stakeholders and gender-disaggregated participation is now included in the annex.

Consultation Techniques Used

Consultation approaches were adapted to fit the cultural and social dynamics of each target group.

- Hadzabe communities: FPIC-led forest-edge consultations, small-group discussions, camp-based storytelling sessions, and traditional sign-based dialogue were used to ensure respect for cultural norms.
- Datoga pastoralists: Mobile household dialogues, group discussions at grazing points, and livelihood mapping tools were used to capture changing climate and livestock dynamics.
- Women and youth: Separate focus group discussions created safe spaces to explore needs related to water access, workloads, livelihoods, sanitation, and health.
- Village Committees (VWC, VNRC, CBOs): Structured meetings used participatory rural appraisal (PRA), problem ranking, and resource-use mapping.
- District stakeholders: Technical working sessions with the District Council, water engineers, health officers, community development officers, and natural resource experts validated proposed interventions.

Updated Priorities Since 2022

Consultations held from 2022–2024 highlighted significant changes in community needs, including:

- increased water scarcity in dry seasons.

- rising human–wildlife and human–livestock pressure around woodland areas.
- growing interest in small livestock, beekeeping, and non-timber forest products for income.
- renewed requests from women for safer water points, improved cooking technology, and health insurance.
- stronger community demand for ecosystem protection due to visible degradation around hillsides and riverbeds.
- The Hadzabe community emphasises preserving natural food sources, fire management, and access to culturally important forests.

These inputs have been fully integrated into the updated project design, ensuring the proposal reflects current, locally expressed adaptation needs and adheres to FPIC principles for Indigenous Peoples.

iii. Safeguards Discussions During Consultations (CR19)

Throughout the 2022–2024 consultation rounds, safeguard considerations were presented and discussed with all stakeholder groups, including Hadzabe hunter-gatherer communities, Datoga pastoralists, women’s groups, youth and traditional leaders. The consultations included explanations of the Adaptation Fund Environmental and Social Policy (ESP), community-level risks related to water access, land use, ecosystem restoration, gender inclusion, and Indigenous Peoples’ rights. FPIC processes with the Hadzabe explicitly covered safeguards, including protection of natural food-gathering areas, avoidance of culturally sensitive forests, and voluntary participation in all livelihood activities. Communities affirmed their support for proposed interventions under clear conditions: (i) no activity should restrict traditional hunting/gathering zones, (ii) all assets are shared equitably, (iii) location of boreholes and restoration areas must be approved through Village Assemblies, and (iv) cultural norms must not be violated. These inputs have been integrated into the ESMP and the project design.

Willingness to Adapt New Livelihood Options (CR20)

Consultations also explored the willingness of Hadzabe hunters and gatherers to participate in new livelihood Discussions confirmed that the Hadzabe community does not wish to abandon its cultural identity but is open to diversifying income sources to cope with declining availability of wild foods, increased climate stress, and reduced access to traditional territories. Participants expressed strong interest in beekeeping, honey processing, herbal product development, nature-based tourism, and sustainable harvesting of non-timber forest products—activities that align closely with their cultural knowledge and lifestyle. For livelihood options that are less familiar (such as poultry and rabbit keeping), communities requested phased introduction, practical demonstrations, and voluntary enrollment. For Datoga pastoralists, climate shocks affecting livestock herds created openness toward complementary income sources.

Where preferences were not discussed or where uncertainty remains, the project will use continuous FPIC, iterative consultations, and pilot-based adoption to ensure that no one is pressured to change traditional practices. Sustainability will be ensured by supporting only livelihood activities selected voluntarily by Indigenous groups, maintaining traditional knowledge, and enforcing cultural safeguards through Village Assemblies and community-led monitoring.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Like most of the rural areas in Tanzania, the economy and livelihood system of communities in Karatu district are mainly driven by sensitive sectors. Negative effects due to changing weather seasons and climate variability and change have already disrupted the economy and people's lives in Karatu. Historical degradation of ecological ecosystems and through the ongoing poor livestock and farming practices and climate induced processes adversely affect the existing social-ecological and livelihood systems in the proposed project sites in Karatu district. The current climate trend and the continued global change in the climate system accelerates these effects and calls for adaptation actions in life supporting sectors such as water, agriculture and livestock. The requested funds from Adaptation Fund is viewed to support direct implementation of concrete climate smart innovations and built resilient economy and livelihoods of the people in Baray, Endamaghan and Mang'ola wards, the activities proposed by this project will be implemented to attain project objectives including its expected outputs and outcome to enhance adaptive capacity of marginalized communities in Baray, Endamaghan and Mang'ola wards and to increase their climate resilience to the adverse effects of climate change and variability without any other addition funds apart from the resources from the AFs' resources. The capacity gap relates to financial resources available to build concrete climate action at the project sites, which will be effectively addressed with the requested funds in this proposal. However, the resources will be amplified through the adoption of Force Account Modality (FAM)

Component 1: Enhancing integrated climate change resilient livelihood diversification in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District

Baseline scenario (without AF resources): Without the AF project, rural communities in the Baray, Endamaghan, and Mang'ola wards of Karatu District will continue their traditional hunting, gathering, and blacksmithing practices, which are vulnerable to climate change impacts. Limited availability of animals, leaves, seeds, fruits and roots due to drought and unpredictable seasons has caused serious food insecurity and famine. Without AF resources, it means that no measures to improve existing livelihood productivity and transformation to climate resilient livelihoods for communities to be more climate resilient in Baray, Endamaghan and Mang'ola wards. This scenario will worsen the situation and the future. If this happened, vulnerable communities, especially women, would be pushed deeper into poverty.

With AF funding: The requested AF resources will be sufficient to achieve the expected outcome and outputs, including the adaptation objectives under this component. AF resources will therefore be used to improve existing livelihood systems and introduce transformative livelihood systems that make communities more climate-resilient and adaptive to the future effects of climate change (including increased mean annual temperatures and increased frequency and intensity of droughts).

Component 2: Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmiths) communities at Baray, Mang'ola and Endamaghaw Wards in Karatu District

Baseline scenario (Without AF resources): Without the AF Fund, no actions will be taken to implement Component 2 activities under this project, allowing present and future climate threats to continue to exacerbate existing water scarcity. Observed climate and weather extremes, such as droughts and prolonged dry periods, will continue to destroy livelihoods, particularly water supplies. In this manner, adaptation failure will be witnessed, and the detrimental effects of climate change will be irreversible in the near future. There is sufficient evidence that women in these areas are suffering the most and are now forced to walk longer distances to find water. Such evidence on water scarcity driven by climate change has instigated increased social group conflicts, such as hunters and gatherers, farmers and livestock keepers, including incidents of gender-based violence. Local communities in the project area have limited capacity to adapt to

induced water scarcity due to poverty. Moreover, as a developing country, the Tanzanian Government has limited adaptive capacity and inadequate financial resources to assist.

With AF Funding: the AF funding will sufficiently facilitate to meeting the expected outputs and adaptation objective of this component,) to enhance climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District. Financial resources from the AF will enable the construction of rural, climate-resilient water supply systems adapted to current and future climate shocks in these communities, and no additional funds will be required. The empowerment of community groups, capacity building, and the adoption of the Force Account Modality and WUAs will provide sustainable supervision, operational, implementation, and management arrangements for infrastructure to be developed to withstand the effects of current and projected climate change.

Component 3: Improving climate change resilience of forests and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District

Baseline scenario without AF resources: Over the years, ecological and environmental systems in the Baray, Endamaghan, and Mang'ola wards have been degraded by both human-induced and climate change-related drivers. The original and natural ecosystems, covered by savannah thickets, were degraded over the past 5-7 decades. There is a continued trend of environmental degradation, including poor farming methods, deforestation, charcoal production, and overgrazing at the project sites. Unless concrete adaptation approaches that integrate community- and ecosystem-based solutions to tackle climate change are implemented, the trend will continue, with disastrous effects on vulnerable communities.

The AF resources scenario: AF resources will be used to implement concrete adaptation activities that enhance integrated management of environmental and forest systems, thereby sustaining climate-sensitive rural livelihood systems at the project sites. The requested financial resources will therefore be used to establish and implement forest rehabilitation and restoration activities. Beekeeping activities, including tree planting and windrow establishment, will be solely supported under this project. AF funds will also be used to support campaigns to plant fruit trees as income-generating activities, including engaging the Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities in tree planting in their camps and homesteads, as well as around public institutions such as resource centres, schools, and health facilities.

Component 4: Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District.

Baseline scenario (without AF resources): Without the AF project, rural communities in Baray, Endamaghan, and Mang'olawards in Karatu District will continue to rely on traditional medicines for diseases and other ailments. Hadzabe (hunters and gatherers) have limited access to health services due to their nomadic lifestyle, which requires frequent movement in search of water and food. It is difficult to ascertain the cause of deaths without a proper diagnosis. Research shows that the leading causes of death are acute illnesses such as infectious and gastrointestinal diseases, which contribute to about 70% of all deaths. About 20% of other deaths are a result of trauma, including accidents and violence. These ailments require investigation and specialised treatment. Limited availability of animals, leaves, seeds, fruits, and roots due to drought and unpredictable seasons has caused a serious shortage of medicinal plant roots and seeds. Without AF resources, existing measures do not reach hunters and gatherers, who lack health insurance or access to emergency health services. If no measures are put in place, the vulnerable communities, especially women, will be in danger of losing their lives.

With AF funding: The requested AF resources will be sufficient to achieve the expected outcome and outputs, including the adaptation objectives under this component. AF resources will therefore be used to improve existing health systems, particularly access to health services through the provision of health insurance and emergency care. The proposed project aims to deliver transformative health services that help communities build resilience to the health impacts of climate change.

Climate Health Linkage

The investment in health under Component 4 directly supports climate adaptation, as the climate extremes described in the background—prolonged droughts, rising temperatures, reduced water availability, and seasonal shifts—are already increasing climate-sensitive health risks in the target communities. During extended dry seasons, the Hadzabe and Datoga experience dehydration, heat stress, reduced dietary diversity, food scarcity, and increased exposure to dust-related respiratory infections. Rising temperatures and stagnant water sources increase the incidence of vector-borne diseases such as malaria and dengue, while drought-induced poor sanitation increases the risk of diarrheal diseases. These climate impacts are especially pronounced for mobile and marginalised Indigenous groups living far from formal health services.

By strengthening health outreach systems, improving maternal and child health surveillance, providing climate-health education, and enabling early diagnosis/treatment of climate-related diseases, the project helps ensure communities remain productive and able to adapt to climate stress. These measures are therefore not “business-as-usual” health improvements, but targeted actions that reduce climate-induced morbidity, protect vulnerable groups, and enhance overall adaptive capacity in line with AF adaptation goals.

Health Insurance for Mobile Indigenous Communities

The support for health insurance is designed as a climate adaptation measure by ensuring that vulnerable Hadzabe, Datoga, women, children, elderly persons, and other at-risk groups can access essential climate-sensitive health services during periods of mobility driven by drought and food scarcity. The insurance does not require households to abandon their Indigenous way of life; coverage applies across multiple facilities in Karatu District and neighbouring locations, enabling mobile access when communities move in search of water, food, or safe shelter during climate extremes.

The intervention strengthens resilience by reducing climate-related health shocks, preventing catastrophic household expenditure on treatment, and ensuring continuity of care for climate-linked conditions, including malnutrition, dehydration, vector-borne diseases, and respiratory infections. The activity is voluntary, FPIC-compliant, and culturally sensitive, providing flexible financial protection without imposing lifestyle change or restricting traditional practices.

Component 5: Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang’ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues.

Baseline scenario: without AF resources: At present Karatu district do not have adequate capacity to effectively support implementations and scale up climate adaptation. Without the AF project, it is likely that the pace to integrate adaptation issues into district development plans including and carrying out adaptation actions on ground will be slow and, in most cases, will be not possible. Without FA resources, vulnerable communities in wards of Baray, Endamaghan and Mang’ola wards in Karatu district are likely to continue with their unsustainable way of life which involves hunting, gathering and blacksmith practices which are also likely to limit their adaptive capacity in future.

With AF resources: Funds from the AF will perfectly be used to promote best practices and lessons in the course of project implementation to be effectively shared and communicated with

key stake holders and decision makers in the district and beyond. This will pave a way to upscale and replicate outcomes and results in other places with similar environment. The requested AF resources are sufficient to achieve the expected outputs under this component

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

The project's sustainability will be supported by emphasising the active participation of other stakeholders in decision-making and implementation of the project's activities, and strengthening the institutional and technical capacity at the community and district levels to ensure that stakeholders have adequate knowledge and skills to maintain the benefits of the project's interventions firmly in the local communities. By engaging communities in the design and implementation of the project and by creating WUAs, Cooperative societies, community groups, farmers/beekeepers/livestock/tree-planting groups, and community-based enterprises, the KARAHADA project will empower and build the capacity of local people to continue sharing local knowledge and adapting to climate change risks. Community ownership will also ensure that the environmental gains are not reversed. The proposed investment matches government priorities set out in key national policy documents, including the Development Vision 2050, the Third Five-Year Development Plan, the National Climate Change Response Strategy (NCCRS 2021), Nationally Determined Contribution (NDC3.0 under review), the Karatu District Council's Strategic Plan, and the National Adaptation Plan (NAP, 2025). Alignment with national priorities demonstrates the government's commitment to the project's objectives during and beyond implementation. The operation of the project at the district authority headquarters will also ensure that district sectors and village-level governments play a central role in project implementation and in sustaining the project through the irrigation of adaptation plans into district performance contracts, institutionalising and sustaining community interventions.

The use of community animators to deliver project interventions will demonstrate the project's commitment to investing in local people and recognise that community members are best placed to lead implementation at the community level. The proposed components and interventions are rooted in the sectors that touch the everyday lives of communities in Karatu. By supporting adaptation measures to improve resilience to long-term and more sustainable solution to rural and vulnerable communities.

The proposed collective action, opportunities best practices, knowledge-sharing and communicating project outputs among departments, across sectors, districts and regions, and village communities in the district is viewed to accrue a disproportionately large benefit for life and livelihood quality improvement under the current and the expected future climate change effects, vis-à-vis the traditional and existing way of implementing development/adaptation projects using dis-integrated and isolated projects in the district.

The project will be implemented through the existing strong district institutions and village government structures by implementing their respective activities. Conduct technical trainings of trainers (TOTs) on maintenance and operation to selected community members to ensure operations and maintenance of infrastructures beyond the project lifetime. For instance, activities under component 2 will also include training selected

members of Water Users Associations (WUAs) in operations and maintenance, revenue collection, group dynamics, accounting, and financial management to ensure sustainability. Activities under components 1 and 5 will involve training of selected farmers on Farmer Field School (FFS) at Baray, Endamaghan and Mang'ola wards.

Equally, self-selected beekeepers will be trained on their maintenance and operation issues. For instance, it is designed that no beehives will be purchased for communities; instead, experts and the necessary workshop tools and equipment will be purchased, and community members will be equipped with practical knowledge of modern beehives and honey-processing techniques, including maintenance and operations. Activities under component 3 will also promote sustainable environmental and forest management, including tree planting. The proposed investment corresponds with the Government priorities set out in the District Strategic Development Plan for Karatu District. The Secretariat Strategic Development Strategy (2016/2021) is being implemented by 6 District Authorities, in line with key national policy documents such as Development Vision 2050, the third Five Years Development Plan (2021/2022-2025/2026), the Climate Change Response Strategy 2021, the NDCs 2021, and the NAPA 2007.

Alignment with national priorities demonstrates the government's commitment to project objectives during and beyond implementation. The operation of the project through the District Authority Headquarters will also ensure that the district, sector users at the district and village levels, and the regional governments play a central role in project implementation and in ensuring sustainability by integrating adaptation plans into District and village plans to institutionalise and sustain community interventions. This provides greater opportunity for regional government in Arusha and Central government to scale up the project outcomes after phasing out of the AF funding and interventions, through sharing and communications of the lessons learned.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

Environmental and Social Management Plan (ESMP) – Management Plan

The project includes a comprehensive Environmental and Social Management Plan (ESMP) that outlines how all identified environmental and social risks will be managed during implementation. The ESMP provides a structured system for screening activities—particularly Unidentified Subprojects (USPs)—identifying risks, determining mitigation measures, and monitoring compliance with the Adaptation Fund Environmental and Social Policy (ESP) and Gender Policy. The plan assigns clear responsibilities to the Project Coordination Unit (PCU), the District Environmental and Social Officers, Village Natural Resource Committees (VNRC), Water User Committees (VWC), and NEMC for oversight, reporting, and enforcement.

The ESMP Management Plan includes: (i) risk screening and categorization procedures for all subprojects; (ii) required mitigation and enhancement measures; (iii) monitoring parameters; (iv) reporting and documentation requirements; (v) frequency and timing of monitoring; (vi) institutional roles and responsibilities; and (vii) a costed budget for implementation. The ESMP will be implemented throughout the project cycle using participatory approaches including FPIC, environmental and social audits, gender-

responsive monitoring, and adaptive management to ensure that any unanticipated risks are identified and addressed promptly. The Table below presents the ESMP Management Plan

Table 5. ESMP Management Plan

ESMP Activity	Potential Risks	Mitigation Measures	Responsible entity	Monitoring Indicators	Frequency
1. Site-specific ES screening for all subprojects (boreholes, beehives, restoration sites)	Land use conflict, habitat disturbance, and cultural sensitivity	Use AF screening form; apply FPIC; avoid sensitive sites; ecological checks	District Environmental Officer, PCU Safeguards Specialist	Screening forms completed; FPIC minutes	Before implementation
2. Implementation of mitigation measures	Soil disturbance, vegetation loss, waste, and safety risks	Erosion control, native species, PPE, safe construction	Contractors, VNRC, PCU	Mitigation actions completed	Continuous
3. Quarterly safeguards monitoring	E&S non-compliance	Field checks, VWC & VNRC reporting	DEO, DCDO, PCU	Monitoring reports filed	Quarterly
4. Water quality monitoring for boreholes	Contamination, health risks	Water testing (chemical & bacteriological)	District Water Engineer	Water test reports	Twice yearly
5. Gender Action Plan implementation	Exclusion of women/youth/PwD	Gender-responsive targeting, separate consultations	PCU Gender Specialist	Disaggregated monitoring reports	Semi-annually
6. Annual ESMP Audit	Systemic risks, governance issues	External auditor: recommendations implemented	PCU, NEMC	ESMP audit reports	Annually
7. Grievance redress mechanism (GRM)	Community conflict, complaints	Functioning GRM at district & village levels	PCU + District	GRM logs	Continuous
8. Training committees (VWC, VNRC)	Weak governance, maladaptation risk	Capacity building and refresher training	PCU + District	Attendance lists, training reports	Annually
9. Adaptive management updates	Unanticipated risks	Adjust activities; update ESMP	PCU, NEMC	Updated ESMP	As needed

The project has been screened in accordance with the Adaptation Fund Environmental and Social Policy (ESP) and is classified as Category B, as its anticipated environmental and social impacts are site-specific, reversible, and manageable through appropriate mitigation measures.

The project will directly benefit an estimated **3,000 people**, including Hadzabe and Datoga Indigenous communities, vulnerable women, youth, elderly persons, households with disabilities, and neighbouring residents across the three wards. Indirect beneficiaries number approximately **30,000 people**, who will benefit from improved water access, ecosystem resilience, climate-health awareness, and strengthened local governance systems.

The environmental assessment identified potential risks associated with borehole drilling (noise, waste, minor soil disturbance), small-scale construction works for community centres, vegetation disturbance during ecosystem restoration, and risks of inequitable access to livelihood assets. These risks are moderate in scale and can be effectively mitigated through site-specific screening, adherence to national technical standards, environmentally sensitive siting, use of indigenous species, and application of community-based resource bylaws.

The assessment also highlights the gender-specific and cultural context of the target population, particularly the Hadzabe and Datoga Indigenous communities, who maintain unique cultural practices tied to land, mobility, forest resources, and food systems. Women across all communities carry primary responsibilities for water collection, childcare, food processing, and household well-being, making them disproportionately vulnerable to climate-induced water scarcity, heat stress, food shortages, and health shocks. Social risks include potential exclusion of women, persons with disabilities, youth, and Indigenous households from project benefits if not intentionally addressed. These have been mitigated through Free, Prior, and Informed Consent (FPIC) processes with the Hadzabe, gender-responsive targeting, separate consultations for women and youth, and strengthened village governance structures to ensure inclusive decision-making.

The assessment further integrates the legal context governing land, water, environment, and Indigenous Peoples in Tanzania, including the Environmental Management Act (2004), the Water Supply and Sanitation Act (2019), the Village Land Act (1999), and guidelines issued by the National Environmental Management Council (NEMC) and the Ministry of Water. Compliance with these laws is embedded in the ESMP through screening procedures, contractor licensing, water quality testing, and community validation for all land-based activities.

Overall, the updated environmental and social assessment concludes that the project will generate substantial environmental and social benefits—including improved water security, strengthened ecosystem services, increased climate-resilient livelihoods, reduced health risks, and enhanced governance—while all residual risks will be managed through the Environmental and Social Management Plan (ESMP), the Indigenous Peoples Plan, gender action plan, and ongoing safeguards monitoring throughout implementation.

USP Justification and Screening

Some activities under the project require the use of the Adaptation Fund's Unidentified Subproject (USP) modality because their exact micro-locations or technical specifications cannot be determined prior to implementation. This applies particularly to borehole drilling, beehive placement, rainwater harvesting structures, and specific ecosystem restoration sites. These locations depend on factors that can only be determined during implementation, including Free, Prior, and Informed Consent (FPIC) with Hadzabe Indigenous communities, hydrogeological surveys to identify viable groundwater sources, ecological screening to avoid sensitive habitats, and Village Assembly approvals for land-use changes. Pre-identifying these sites at the proposal stage risks selecting culturally inappropriate locations, drilling in non-productive aquifers, or establishing restoration activities in ecologically unsuitable zones, which would undermine both safeguard compliance and project effectiveness.

To ensure full alignment with the Adaptation Fund’s “Guidance Document for Projects/Programmes with Unidentified Subprojects,” a USP Screening Procedure has been integrated into the ESMP. The procedure includes site-specific environmental and social screening, FPIC validation, technical feasibility checks, risk categorisation, and the development of mitigation and monitoring measures prior to any field activity. No USP will be implemented until it has passed this screening and has been endorsed by District technical teams, Village Assemblies, and relevant culturally appropriate structures. This approach ensures that each micro-activity fully complies with the Adaptation Fund Environmental and Social Policy, Gender Policy, and Indigenous Peoples safeguard requirements, while allowing the project to remain flexible, culturally sensitive, and technically sound during implementation. The USP screening form is attached as Annexe 5

Table 6.ESMP Budget

ESMP Activity	Unit Cost	Frequency	Total (USD)
1. Environmental & social screening of subprojects (boreholes, beehives, restoration sites)	1,500	10 screenings	15,000
2. Quarterly safeguards monitoring visits	2,000	4 visits × 3 years	24,000
3. Annual ESMP audit/safeguards review	5,000	3 audits	15,000
4. FPIC refreshers & community consultations	2,000	3 rounds	6,000
5. Safeguards & gender capacity building (VNRC, VWC, livelihood groups)	3,000	2 cycles	6,000
6. Grievance redress mechanism strengthening	Lump sum	1	3,000
7. Gender Action Plan implementation	Lump sum	1	3,000
TOTAL			72,000

This budget is fully integrated into the existing project cost structure and does not increase the overall budget

Potential Environmental and Social Impacts

Direct impacts:

- Localised soil disturbance, noise, and waste generation from borehole drilling.
- Vegetation removal and soil exposure during restoration and construction of community centres.
- Temporary safety risks during construction activities.
- Potential inequity in the distribution of livelihood assets.

Indirect impacts:

- Increased pressure on water points if governance is weak.
- Shifts in women’s workload associated with new livelihood activities.
- Potential exclusion of Indigenous households if culturally appropriate engagement is not maintained.

Cumulative impacts:

- Improved groundwater recharge across restored landscapes.
- Long-term biodiversity recovery across the 600 ha of woodland and hills.
- Increased social cohesion through strengthened committees and inclusive governance.

Transboundary impacts

- No transboundary environmental or social impacts are anticipated. The project operates fully within Karatu District and does not affect international water bodies or shared ecosystems.
- Table 6 below uses the official AF ESP screening template without modification.
- A checkmark (✓) is placed ONLY in the “No further assessment required” column where the risk is clearly negligible or fully addressed by design.
- Where further assessments or mitigation are needed, the column is left blank, and the “Potential impacts and risks” column includes a concise justification (1–2 sentences) and a brief description of mitigation measures.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>	(✓)	
<i>Access and Equity</i>		Risk of unequal access to water or livelihood assets
<i>Marginalized and Vulnerable Groups</i>		Hadzabe/Datoga may face cultural exclusions - Hadzabe/Datoga may face cultural exclusions
<i>Human Rights</i>	(✓)	No rights violations
<i>Gender Equality and Women’s Empowerment</i>		Gender gaps may arise in assets and resources ownership and allocations – Implement GAP/GESI
<i>Core Labour Rights</i>	(✓)	Only voluntary community labour-compliance with labour standards and guidelines
<i>Indigenous Peoples</i>	(✓)	Hadzabe and Datoga require culturally adapted engagement
<i>Involuntary Resettlement</i>	(✓)	No land acquisition or displacement foreseen
<i>Protection of Natural Habitats</i>	Assess sensitive woodland areas for restoration	Screening and ANR safeguard is required
<i>Conservation of Biological Diversity</i>		Risks of non-native/invasive species – plan native species

<i>Climate Change</i>	Risks and vulnerability assessment on climate change and health	Inform the district health system under climate change era
<i>Pollution Prevention and Resource Efficiency</i>	EIA for Borehole drilling and the construction of community centres produce waste	Contractor Occupation Health and Safety & waste disposal compliance needed
<i>Public Health</i>	Water points require sanitation & water-quality checks	Hygiene & climate-health training.
<i>Physical and Cultural Heritage</i>	No known heritage sites affected	FPIC protects Hadzabe and Datoga intangible heritage
<i>Lands and Soil Conservation</i>	Minor soil disturbance	Apply erosion control methods (mulching, use of deep-rooted grass for soil and slope stabilization, erosion control, land restoration and contour planting); conduct works in dry seasons; supervise by LGA engineers.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project/programme implementation.

a) *The National Implementing Entity (NIE):*

The project will be implemented by the National Environment Management Council (NEMC). NEMC has significant experience in implementing projects and programs of this nature, with dedicated groups/units for climate change adaptation and execution of the NIE mandate related to the AF operations in the United Republic of Tanzania. The following are the implementation services that will be provided by NEMC under this project:

- Overall coordination and management of NIE functions and responsibilities
- Facilitate interactions with the AF secretariat and other related stakeholders at global scales
- Oversight of project implementations and reporting on budget performance
- Quality assurance and accountability for output and delivery during project development, implementation and the completion phase;
- Receipt, management and disbursement of the AF's funds in accordance with the financial standards of the AF;
- Oversight and quality assurance of evaluation processes for project performance and ensuring that lessons learned/ best practices are incorporated to improve future projects in the United Republic of Tanzania; and
- General administration and support costs, including legal services, procurement and supply management, IT and human resources management

b) The Executing Entities: Tanzania Environmental Protection Organization (TAEPO) & Karatu District Council

TAEPO and Karatu District Council will be the overall coordinators of the project whereby;

TAEPO will serve as the **lead technical coordination, policy mainstreaming partner**, responsible for project design support, stakeholder engagement, strengthening climate governance, and alignment with national adaptation frameworks (NAPs, NCCRS, TDV 2050, FYDP III and NDCs). TAEPO will lead monitoring, evaluation, learning, and knowledge management, support the development of off-take agreements and market linkages for livelihood activities and facilitate policy dialogue to scale successful models. TAEPO will also ensure the integration of gender and social inclusion and contribute to safeguarding compliance and reporting to the Implementing Entity.

TAEPO will further lead **community-level implementation of ecosystem-based adaptation and livelihood interventions**, with a focus on natural resource management, biodiversity conservation, and climate-resilient livelihoods. The organisation will mobilise communities, facilitate training and capacity building, support the establishment of producer groups and community institutions, and implement restoration and conservation activities. TAEPO will also contribute to environmental and social safeguards monitoring, knowledge documentation, and community feedback mechanisms

The Karatu District Council will serve as the **collaborative Local Government Authority**, coordinating project activities at the district and ward levels while integrating them into development plans and sector strategies. The Council will promote community engagement, facilitate land-use approvals, and ensure alignment with national and regional climate and resource policies. Through its relevant departments, it will provide technical oversight, support compliance with safeguards, and promote the sustainability of infrastructure and services beyond the project period.

All these will be realized through the services of a project management unit (PMU), which will be staffed with a project coordinator, an assistant project coordinator, a project driver and a project accountant are referred here as project personnel and will be sourced from the existing staff within Karatu district council except the project coordinator will be sourced within the existing staff within NEMC. Strong participation of other District staff will be at the project implementation level, as activities involve cross-sectoral coordination.

The project steering committee will be formed, with the PMU serving as the committee's secretariat, supported by the District Executive Director (DED) and the Executive Director of TAEPO. The members of the project steering committee will be the DED of Karatu District Council, the District Planning Officer, one representative from each of the following sector ministries: the ministry responsible for Local governments, the ministry responsible for livestock, the ministry responsible for agriculture, the ministry responsible for environment and climate change, and the ministry responsible for forestry and natural resources. Other members will be an officer from the National Environmental Management Council (NEMC), one member from TAEPO, one from the Tanzania Meteorological Agency, and one from RUWASA Karatu. Heads of Departments from Karatu District Council and TAEPO will be invitees. The following table lists the proposed project partners.

Table 7. Summary of analysis of possible project partners.

STAKEHOLDERS	RESPONSIBILITIES
PRIME MINISTER'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMORALG)	PMO-RALG is mandated to administer and manage Regional Secretariats and Local Government Authorities. PMO- RALG will be responsible for the coordination of Regional and District Climate Change Interventions and will be part of the Steering Committee

STAKEHOLDERS	RESPONSIBILITIES
VICE PRESIDENT'S OFFICE (VPO)	The Vice President's Office and the NDA to the Adaptation Fund and is the Focal Point to the UNFCCC. The VPO is also responsible for coordination and overseer of all climate change activities in Tanzania. Thus, this project will work with the VPO to ensure its implementation contributes to the objectives articulated in the climate change strategy, NDCs, NAP and NAPA documents. VPO will chair the Steering Committee
MINISTRY OF FINANCE	MoF will be responsible for ensuring that all project components align with national development plans, visions, and strategies. MoF will be part of the Project Steering Committee.
MINISTRY OF WATER	MW is responsible for water supply, water resources management, and irrigation. This project will utilise.MW will be part of the Project Steering Committee
MINISTRY OF AGRICULTURE (MoA)	MoA is responsible for agricultural development issues in Karatu. All agricultural-related activities will be implemented under the MoA's guidance. MoA will be part of the Project Steering Committee
MINISTRY OF LIVESTOCK AND FISHERIES DEVELOPMENT (MOLF)	This project will leverage MoLF's experience and technical capacity to implement livestock activities. MoLF will be part of the Project Steering Committee
ARUSHA REGIONAL ADMINISTRATION SECRETARIAT (RAS) OFFICE	The Arusha Regional Administration Secretariat (RAS) office, which is widely involved in project design, will be involved in implementation and provide policy guidance to the project management unit. RAS will be part of the Project Steering Committee, and various reports during the design and implementation will be communicated to the RAS.
TANZANIA METEOROLOGICAL AGENCY (TMA)	Responsible for weather and climate-related information, and will be a key stakeholder during the implementation and post-implementation stages of the project. TMA will be part of the Project Steering Committee
TANZANIA FOREST SERVICE AGENCY (TFS)	The Tanzania Forest Service is a strategic stakeholder in tree planting, afforestation, and ecological rehabilitation and restoration activities. TFS will be part of the Steering Committee.
RURAL WATER SUPPLY AGENCY-RUWASA (Karatu Office)	This is the National Authority responsible for water supply in rural areas; RUWASA is the government's technical arm for the management and development of water supply infrastructure in rural areas. RUWASA in KARATU will be responsible for implementing activities related to underground water drilling and supply systems.
TAEPO	TAEPO is a lead stakeholder for providing training and support for Karatu District Council. They have experience in building community institutions amongst Northern highlands tribes. They have worked in the Karatu district on other projects. TAEPO will be part of the steering committee. It will also serve as the key technical coordination and policy integration partner for the project. It will focus on project design, stakeholder engagement, and strengthening climate governance aligned with national frameworks (NAPs, NCCRS, TDV 2050, FYDP III, NDCs). The responsibilities will include monitoring, evaluation, and knowledge management, as well as facilitating market linkages for livelihood activities. TAEPO will promote policy dialogue to scale successful models while ensuring gender and social inclusion and contributing to safeguard compliance and reporting to the Implementing Entity.
LAKE EYASI OPEN SCHOOL AND HELP OTHER PEOPLE TO EXCEL TANZANIA FOUNDATION	This school offers integrated Post-primary Education (IPPE) through Open and distance learning, which will be a key stakeholder in the provision of training to communities. It will be used for tailor made courses as agreed by communities and stakeholders. The school has learning facilities and accommodation and provides health services to communities within Lake Eyasi and beyond.

STAKEHOLDERS	RESPONSIBILITIES
LOCAL NGOS, SOCIAL GROUPS AND CBOs	Non-governmental organizations, community-based organization are very few in number, and most of them are not active. However, few of them such as World Vision and Convoy of Hope operates in the project area. Informal and community-based organisations, such as farmers, livestock and other social organisations, exist in Karatu. These are key partners for developing and operate to the project. Additionally, are key beneficially of results and outcomes of the project.
PRIVATE SECTOR, PARASTATAL, AND GOVERNMENT AGENCIES.	This project will aim to maximise linkages among beekeepers, farmers, livestock keepers, jewellers, and blacksmiths to markets, financial institutions, and buyers of agricultural and non-agricultural products.
DIRECT BENEFICIARIES	Direct beneficiaries of the KARAHADA project are vulnerable and marginalised communities in Karatu District, particularly the Hadzabe (hunters and gatherers) and Datoga (blacksmiths). These are key stakeholders and will be actively involved throughout the planning, implementation, and monitoring of the KARAHADA project.

c) Project Management Unit:

The project Management unit will be established and hosted at the headquarters of the Karatu District Council, responsible for the day-to-day management of project activities and facilitating stakeholder engagement. The PMU will comprise a full-time Project Coordinator (PC), a full-time M&E officer, a full-time Financial and Accounting (FA) officer, and a full-time driver and personal secretary (PS). The project coordinator's main responsibility is to ensure the project delivers the results specified in the project document to the required quality standard and within the specified time and cost constraints. The annual work plan is prepared by the project coordinator, presented to the District Executive Director (DED) and TAEPO management, and approved by the Project Steering Committee. However, NEMC will be on the steering committee to ensure its quality assurance role and to be part of the final approval. The project coordinator is also responsible for managing and monitoring the project risks initially identified, submitting new risks to the Project Steering Committee for consideration and decision on possible actions, if required, and updating the status of these risks by maintaining the project risk log in accordance with AFs guidelines. The key functions of the PC will be the following:

Oversee and manage project implementation, monitor work progress, and ensure delivery of outputs and within the specified constraints of time and cost as outlined in the project document.

- Report to Karatu district / TAEPO and PSC regarding project progress
- Develop and facilitate implementation of a comprehensive monitoring and reporting system
- Ensure timely preparation of detailed annual work plans and budgets for approval by the PSC
- Assist in the identification and selection of consultants and other experts as required;
- Supervise, coordinate and facilitate the work of the administrative/ technical team (consisting of the assistant coordinator, finance/ administration staff and consultants)
- Provide input to management and technical reports, and other documents as described in the M & E plan for the overall project. Reports should include assessments of progress in implementing activities, including reasons for any delays and recommendations for necessary improvements.
- Inform the Karatu district Authorities/ TAEPO and PSC without delay of any issue or risk which might jeopardise the success of the project.
- Liaise and coordinate with NEMC on a regular basis

See Annex 3 for the summarised Terms of Reference of the **Project Coordinator**

Because most activities are fieldwork and will require extensive services and training in FFS and FFFS, purchasing a single field vehicle is necessary to ensure the PMU has the capacity to monitor and supervise project activities.

d) Institutional Arrangement

To ensure the project's gendered dimensions are adequately integrated across all components, the implementation arrangements now include a **Gender and Social Inclusion Specialist**. This specialist will support the Project Coordination Unit (PCU), District Facilitation Teams, and community structures to mainstream gender throughout project planning, implementation, monitoring, and reporting. Specifically, the specialist will oversee the implementation of the Gender Action Plan, support gender-responsive targeting of beneficiaries, facilitate separate consultations with women, youth, and vulnerable groups, ensure compliance with the Adaptation Fund Gender Policy, strengthen the collection and reporting of gender- and age-disaggregated data, and provide capacity-building on gender-responsive adaptation. This role ensures that gender considerations are systematically embedded in decision-making processes at district and community levels.

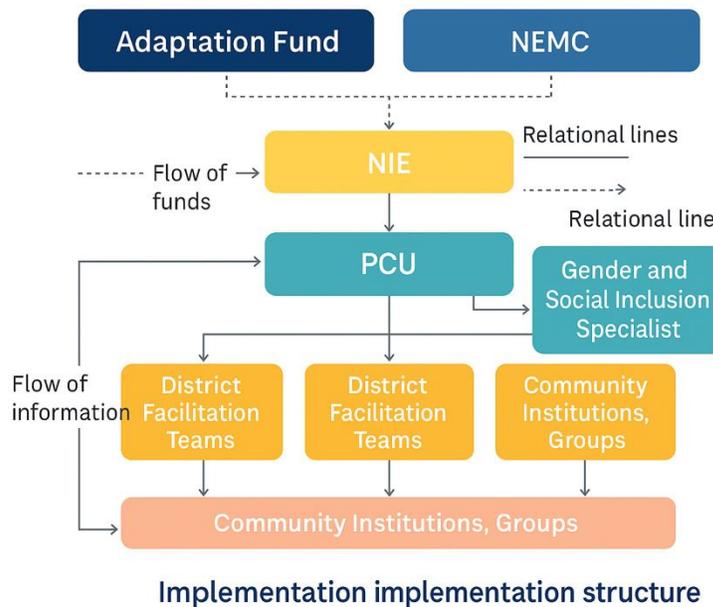


Figure 7. The management arrangements for the project are summarized in the chart below

B. Describe the measures for financial and project/programme risk management.

a) Financial and project risk management

Describe the measures for financial and project risk management

The project anticipates various risks during the implementation phase, as summarized in Table 9. Strict precautionary measures for identified financial and project risks have been developed to mitigate them before they occur. The risk categories are related to delayed time for project implementations and conflict management are pertinent risks of the proposed project. These are rated low, but those risks related to limited stakeholders' involvement and natural and environmental hazards are rated low to medium.

Table 8. Risks and management measures.

S/No	Identified Risks	Level of Risk -Low - L -Medium - M - High-H	Mitigation Measures
1	Competing interests between different stakeholders regarding accessing and use of project benefits and related resources	L	Establish multi-stakeholders' forum to discuss and deliberate on accessing and use of project benefits and related resources
2	Local communities with limited participation and willingness to promote project initiatives	L	Increase awareness campaign about the importance of communities at village community levels to actively participate and own the project, working with available set up of village government and community structures, active involvement of community organizations in project implementation
3	High expectations for quick investments on the ground and resources beyond the available project resources	M	Continue with awareness raising campaign to foster more understanding about the project objectives and activities under the components and implementation arrangements
4	Project financial management	L	The project will have clear separation of roles and strengthen accountability and auditing
5	Delay in project implementation due to government bureaucracy, long and inefficient procurement processes	L	<p>Detailed Implementation Plans (DIPs) and Project Annual Plans (PAPs) will be developed and approved by both the Project Steering Committee (PSC) and National Implementing Entity (NIE). The project monitoring and evaluation plan will also be developed and implemented effectively.</p> <p>Developing a procurement plan and using flexible procedures under TAEPO and negotiating with the Government at Karatu district to get special treatment that can fast-track implementation</p>
6	Limited Stakeholders Involvement	L	<p>All stakeholders were actively involved in all phases of the project, from the early stages of design, and will continue to be involved during implementation, monitoring, and evaluation.</p> <p>Involvement of key stakeholders at the community level and inclusion of marginalised communities and groups, such as women, local leaders, and community beneficiaries, Karatu DC and other public service organisations, will facilitate mitigating any risks related to stakeholders' involvement.</p>
7	Low adoption rate of proposed innovations and adaptation technologies by communities	M	Promotion and demonstration of new technologies and practices

8	Financial Risk	L	<p>There are clear financial management structures in the district that will be followed. These structures follow national laws and regulations governing public financial expenditures and transactions. Therefore, this project will adhere to all Generally Accepted Accounting Principles (GAAP) regarding control, transparency, and documentation, and will have procedures and the necessary infrastructure in place for an appropriate audit system by the Office of the Auditor General or any other internationally accepted auditing firm.</p> <p>Approved regulations, procedures and guidelines on costs for services & goods of the United Republic of Tanzania including the Adaptation Fund Standards, will be strictly followed</p>
9	Conflict Management	L	<p>Although no conflict is expected during the implementation of this project, the NIE management and conflict resolution structure and mechanism, along with their oversight and support roles, will be followed and respected by management to address any unforeseen conflicts that may arise during the project phases. Additionally, the PSC and the PMU will put a strong early warning structure in place to foresee and manage both financial and management risks before they happen</p>

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Environmental and social impacts and risks have been identified for the proposed project (Section II K). Following this, a broader view of Environmental and Social Management Plan (ESMP) for the proposed project will be developed in collaboration with relevant stakeholders and authorities including NEMC Further detailed ESMP for anticipated intervention will be formulated during the inception workshop.

Table 9. Anticipated Environmental and Social impacts and risks management

Environmental and social principle	Identified potential impacts and risks	Level (H, M, L)	Mitigation measures
Compliance with the law	Some activities under component 1 and 2 which are currently not fully itemized/ designed there might be a risk that such activities will not comply with certain laws	L	Environmental and Social Management Plan (ESMP) will be prepared and will be adhered to monitor implementations of on the ground concrete activities such as water supply and micro- irrigation

Access and equity	Given that the beneficiaries are rural people and marginalized poor families who are not often integrated in the village politics and decision-making processes, there could be a risk of insufficient access of the project resources by these people	L	Clear and transparent criteria have been put in place including selection of participants the trainingsad workshop. Measures have been put in place to enable this project to closely monitor all targeted beneficiaries to assure equal access of men, women, youth and the most vulnerable groups. Indicators in this regard will be included in the monitoring and evaluation plan
marginalised and Vulnerable Groups	It is probable that project activities may exclude marginalized/and vulnerable groups at various project sites or may have insufficient access to project resources and total involvement to execute project activities during implementations, thus preventing them from accessing benefits – both in terms of resources and trainings	M	The prepared ESMP will be strongly followed and monitored throughout implementation to ensure that all marginalised and vulnerable groups have adequate access to and benefit from the project interventions. In addition, the project design has ensured that benefits accruing from the project interventions – including technology transfer and awareness-raising activities–reach marginalised and vulnerable groups in the rural villages. The design of this project ensures that all components enhance the adaptive capacity of marginalised and vulnerable groups, including
Human rights	Project objectives promote basic human rights for equitable access to service and safe drinking water, access to food and quality and health environment	N/A	The proposed project respect and adhere to all relevant convections on human rights, national and local laws in relation to human rights
Gender equity and women's empowerment	It is likely that women will be inadequately represented during the implementation of this project, thus making the project not benefiting men and women equally	H	This project has put measures to include 40% ratio for gender consideration during implementation of all project activities under the four components. Fair and equitable selection of beneficiaries will be done and a list of all beneficiaries to each project activities will be maintained and monitored by the PMU and NIE on quarterly basis

Core labor rights	There is a possibility that communities/beneficiaries who will be involved to implement activities using force account modality components 1, 2 and 3, to be exposed to the risk of minor and unforeseen accidents	L	The PMU will ensure compliance with the National and international labor laws and standards required relevant protection gears will be adequately provided
Indigenous peoples	According to Tanzanian laws, there are no indigenous people identified in the proposed project sites	N/A	ESMP will be monitored to ensure equitable access to project benefits and resources by local people and to the greatest extent, communities at grass- root and relevant marginalized community groups are included in community consultation and during participatory planning activities
Involuntary resettlement	No identified risk	N/A	The project design does not include voluntary or any involuntary resettlement
Protection of natural habitats	There is a low risk that the interventions of concrete adaptation actions such as boreholes, rural water supply network, water tanks and micro-irrigation systems could result in the destruction of small areas of natural habitat.	L	ESMP has been prepared to monitor executions of such interventions. Activity-based resettlement will be conducted during implementation phase
Conservation of Biological Diversity	Execution of concrete adaptation actions under components 1, 2, and 3 may have negative impacts on biodiversity.	L	ESMP has been prepared to guide and monitor executions of such interventions. Activity based Mitigation measures has also been developed under the ESMP to be followed during the implementations
Climate change	No identified risk	N/A	None of the project activities will significantly enhance emissions of greenhouse gases

It should be clearly understood that, this project is designed in consistence with Environmental and Social Policy of the Adaptation Fund. However, the proposed activities will be reassessed and monitored in accordance with the ESMP at each stage to identify and manage social and environmental risks, ensuring that adverse impacts are avoided where possible and, where avoidance is not possible, minimised, mitigated, and managed. Although the AF's Environmental and Social Policy categorises a project as A, B, or C, initial discussions indicate that this project is unlikely to pose significant adverse social or environmental impacts. The already identified social and environmental risks are expected to be localised and minimal as most of the proposed interventions are largely considered "green". Thus, this project is classified as under Category B in the classification of the AF's Environmental and Social Policy.

a) Grievance mechanism

Grievance mechanisms are proven tools in helping institutions minimize harm to communities and ecosystems by protecting the existing rights, obligations and standards. The proposed project has included a mechanism to manage conflicts/grievances. The Project will utilize the existing grievance mechanism in the United Republic of Tanzania to allow affected to raise concerns that the Project is not complying with its social or environmental policies or commitments. It will be the responsibility of the Project Coordinator, PMU, and Karatu District Council/TAEPO to ensure that all relevant stakeholders are adequately informed about the grievance mechanism.

The United Republic of Tanzania has established a grievance mechanism through the Employment and Labour Relations Act, 2004 and the Environmental Management Act, 2004, through the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) for all climate change-related projects. Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulation (2005) inform and guide all Actors and persons affected by any projects on bringing forward and responding to stakeholder concerns.

In this regard, the Project Manager/executing partners (in this project the PMU at Karatu District Council Headquarters) are usually the first point of contact for any project-related complaints from stakeholders. The Project Manager and project team should respond promptly and appropriately to a complaint to avoid escalation to the Higher Authorities for Stakeholder Safeguard-related Response.

The Project Coordinator can direct the complainants to write a letter explaining through relevant organs established from the village levels. The concerns can be submitted to the District Executive Director's Office for Stakeholder Safeguard-related Response if the issues cannot be resolved at the project level. The PC should advise complainants to provide complete information, so that the DED's Office can properly assess and address the complaint. If the DED's Office for Stakeholder Safeguard-related Response finds that the complaint is eligible, s/he forms a team composed of internal experts to investigate the case and propose options for the complainant to consider.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

The project will comply with formal guidelines, protocols and toolkits for quality assurance issued by the AF and NEMC. NEMC will develop a supervision plan during the project's inception phase which will be distributed and presented to all stakeholders during the inception workshop. The emphasis of the supervision plan will be an outcome monitoring, learning and sustainability and financial management. Project risks and assumptions will be regularly monitored by NEMC. Risk assessments and rating will be an integral part of the project implementation Review (PIR). The quality of the project's M&E will also be reviewed and rated as part of the PIR. Appropriate financial parameters will be monitored semi-annually to ensure the cost-effective use of financial resources.

An independent final evaluation will take place three months prior to the project's end date in accordance with the available guidance of NEMC as the NIE. The final evaluation will focus on the delivery of the project's results as initially planned- and as corrected after the mid-term evaluation, if any such correction took place. The final evaluation will assess the impact and sustainability of results, including their contribution to capacity development and the achievement of adaptation benefits. Both expected and unexpected impacts will be investigated to inform the situation before and after project implementation.

An annual project progress review (PPR) will be undertaken and its results will be used for improving planned activities for the next financial year and phase. PPR will be prepared to monitor progress made since the project's start and in particular for the previous reporting period. The annual reviews will cover performance, outcome and output of the activities. Generally, the PPR will include but is not limited to reporting on the following

- Progress on the project's objectives and outcomes – each with indicators, baseline date and end-of-project targets (cumulative);

- Project outputs delivered per project outcome (annual)
- Lessons learned/good practice
- Annual work plan and expenditure reports; and
- Project risks and adaptive management

Quantitative and qualitative approaches will be used for quantification and qualification of information gathered. A solid monitoring and evaluating system will be put in place and will base on the indicators and means of verification defined in results framework. Monitoring and evaluation system will be linked to results framework, annual work plans and budgets. In addition, the project will commission an audit (to be certified auditor) of project accounts to ensure compliance with the AF and the government rules and procedures.

Table 10. Project monitoring and evaluation work plan and budget

Activity	Responsibility	Budget in US\$	Timeframe												Notes				
			2022				2023				2024					2025			
			Quarters			Quarters			Quarters			Quarters				Quarters			
			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		Q4			
Inception and annual workshops	Project Manager M& E officer/ project management unit (PMU)	10,000	■													Will be done soon after receiving funds			
Initial studies to improve baseline, gender analyses, environmental and social impact assessment	National consultant, Project Coordinator and M & E officer	10,000	■	■												Will be done at the beginning of the project implementation			
Monitoring project outputs by project management team and reporting	Project manager and monitoring and evaluation officer	18,000	■	■	■	■	■	■	■	■	■	■	■	■	■	Will be done quarterly and the need basis			
Visits to field sites for joint review of status and project progress and reporting	Project team	20,000	■	■	■	■	■	■	■	■	■	■	■	■	■	Will be done on need basis			
Independent final evaluation	National consultant	15,000													■	Will be done at least two months before project closure			
Audits and final project audit	Chief Auditor General	8,000					■				■				■	Will be done at least two months before the end of the project			
Total M & E costs		71,000																	

E. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

The project's results framework defines success indicators for implementation and the corresponding verification methods. A monitoring and evaluation system for the project will be established, based on the indicators and means of the means verification, will be confirmed during the launching event expected in October 2022

Any changes to be done to the results framework will require approval by the Project Steering Committee. The inception workshop is crucial for enhancing understanding of the projects and their implementation, building ownership of project results, and agreeing on modalities of project execution, thereby documenting mutual agreement on proposed execution arrangements among stakeholders and beneficiaries.

Level	Indicator (SMART, Gender and Youth segregated)	Baseline	Target	Means of Verification
Project Objective	1. Beneficiaries with improved adaptive capacity (men/women/youth 15–24).	0	3,000 direct beneficiaries (1,350 women; 1,200 men; 450 youth)	Beneficiary registry, midterm & final evaluation reports.
	2. Number of hectares of ecosystem restored and protected.	0 ha	600 ha restored and protected	GIS data, field verification, VNRC reports.
	3. Number of people accessing climate-resilient water supply.	0 Water point records	3,000 people (gender + youth disaggregated).	District Water Engineer reports.
	4. Number of people receiving and using climate information and health advisories.	0	1,500 people (60% women, 30% youth).	TMA dissemination logs, community records
Outcome 1: Diversified climate-resilient livelihood options adopted	1.1 Number of livelihood groups adopting climate-resilient enterprises (beekeeping, poultry, rabbits, briquettes).	0	20 groups (50% women, 40% youth).	Group registers, training reports.
	1.2 % increase in income among beneficiary households.	0%	+30% average increase.	Household income surveys
Outcome 2: Improved water security	2.1 Number of functional climate-resilient water points operational.	0	10 water points installed and functional	Borehole logs, user committee reports.
	2.2 Number of households with improved water access (gender-disaggregated).	0	600 households (≈3,000 people)	Water user lists, District Water Engineer reports.
Outcome 3: Ecosystems restored and protected	3.1 Hectares of degraded land under restoration	0	600 ha restored	GIS, field verification, VNRC reports.
	3.2 Number of trees planted & survive after 12 months.	0	40,000 trees with ≥70% survival rate	Survival monitoring sheets.
Outcome 4: Improved climate-health resilience	4.1 Number of people reached by climate-health outreach	0	2,000 people (60% women, 30% youth)	Health outreach reports.
	4.2 Number of vulnerable persons enrolled in climate-linked health insurance.	0	600 people	ICHF/TIKA enrolment data
Outcome 5: Strengthened climate knowledge & governance	5.1 Number of people trained on climate adaptation (gender + youth) Strengthened climate knowledge & governance	0	1,500 people (700 women, 450 youth).	Training attendance lists
	5.2 Number of committees strengthened (VWC, VNRC, livelihood groups).	0	30 committees strengthened	Meeting minutes, training register

F. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

This project has been aligned with the Adaptation Fund Strategic Results Framework (SRF) in accordance with Annex 5 of the Operational Policies and Guidelines (OPG). The alignment ensures that the project objective, outcomes, outputs and indicators directly contribute to AF strategic priorities on climate-resilient livelihoods, water security, ecosystem restoration, climate-health resilience, and strengthened climate information services.

a) Alignment of Project Objective with AF Outcomes

The Project Objective is to strengthen the climate resilience, adaptive capacity and ecosystem health of vulnerable Hadzabe, Datoga and neighboring communities in Karatu; has been matched to four relevant AF Fund Outcomes. Each Project Objective Indicator has been mapped to one AF Outcome and one unmodified AF Outcome Indicator, ensuring clarity and precision in measuring long-term resilience gains.

Grant amounts have been assigned to each Fund Outcome in the upper section of the table, with the total equaling the project activity cost of USD 2,118,234.

b) Alignment of Project Outcomes and Outputs with AF Outputs

The project contains five outcomes structured around climate-resilient livelihoods, water security, ecosystem restoration, climate-health resilience and strengthened adaptive knowledge. Each outcome has been paired with the most appropriate AF Fund Output and corresponding Fund Output Indicator. All Fund Output Indicators are taken directly from the AF SRF without modification. The lower section of the alignment table clearly reflects these mappings and includes activity-level grant amounts totalling USD 2,118,234, as required.

c) Improved Completeness and Measurability of Indicators

Outcome and objective indicators have been revised to ensure they are measurable, time-bound and fully aligned to AF indicator terminology. Indicators now capture changes in household adaptive capacity, water access, ecosystem health and access to climate information and early warnings. This strengthened alignment improves traceability from project activities to AF strategic priorities, enabling a robust monitoring framework for implementation and evaluation.

d) Alignment with Adaptation Fund Strategic Objectives

The project is fully aligned with the Adaptation Fund's Strategic Results Framework and contributes to the Fund's overarching goal of increasing resiliency at the community level to climate variability and change. Specifically, it supports:

Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets – through climate-resilient water infrastructure, community centres, and health and extension services.

Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress – through forest and landscape restoration, sustainable natural resource management and nature-based solutions.

Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas – through climate-resilient livelihood diversification for Hadzabe and neighbouring communities.

Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level – through participatory planning, FPIC processes, climate and health awareness, and community governance structures.

These linkages are reflected in the project’s results framework and the AF Results Framework

e) Alignment with the AF results framework

The Detailed Results Framework has been revised to ensure full compliance with the Adaptation Fund Strategic Results Framework (2019). Each project outcome is linked to the appropriate AF Outcome and AF Outcome Indicator. Outputs are aligned with the corresponding AF Output and AF Output Indicator.

All indicators are taken directly from the AF SRF and have not been modified. Each output indicator is assigned an individual, non-lump budget line. The total budget allocation across all indicators equals USD 2,118,234. This alignment provides a clear, measurable structure for tracking project progress and reporting against AF standards.

Table 11. Alignment with AF Results Framework

Project Objective	Projective Objective	Fund Outcome	Fund Indicator	Outcome	Grant Amount (USD)
Strengthen climate resilience, adaptive capacity, and ecosystem health of vulnerable communities in Karatu District	1. Number of households adopting climate-resilient livelihoods	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 access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods		\$600,000
	2. Number of people accessing climate-resilient water supply	Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	4.1. Responsiveness of development sector services to evolving needs from changing and variable climate 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress		\$500,000
	3. Hectares of degraded ecosystems restored	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress		\$580,000
	4. Number of people receiving and using climate information	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 the predicted adverse impacts of climate change, and of appropriate responses 3.2. Percentage of targeted population		\$438,234

			applying appropriate adaptation responses	
TOTAL: USD 2,118,234				
Project Outcome	Project Outcome Indicator	Fund Output	Fund output indicator	Grant Amount (USD)
Outcome 1: Climate-resilient livelihood options adopted	1.1 Number of groups adopting climate-resilient livelihoods	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 (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	\$420,000
	1.2 Percentage increase in household income from alternative livelihoods	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.2.1. Type of income sources for households generated under climate change scenario	\$180,000
Outcome 2: Reliable climate-resilient water systems established	2.1 Number of functional climate-resilient water points	Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale) 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	\$350,000
	2.2 Number of households accessing improved water supply	Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	\$150,000
Outcome 3: Ecosystems restored through community-led actions	3.1 Hectares of restored degraded land	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	\$450,000
	3.2 Number of trees planted and surviving	Output 5: Vulnerable ecosystem services	5.1. No. of natural resource assets created,	\$130,000

		and natural resource assets strengthened in response to climate change impacts, including variability	maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	
Outcome 4: Improved climate-health resilience	4.1 Number of community members reached with climate-health services	<i>Output 2.1:</i> Strengthened capacity of national and sub-national centres 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 (by gender) 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	\$118,234
Outcome 5: Strengthened local & Indigenous adaptation knowledge	5.1 Number of people trained in climate adaptation	Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1 No. of news outlets in the local press and media that have covered the topic	\$220,000
TOTAL: USD 2,118,234				

¹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology, but the overall principle should still apply

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

Formatting and Consistency of Budget Figures

All financial tables have been corrected to ensure consistent punctuation, whole-number rounding, and the use of standard thousand separators across the proposal. All amounts presented in the detailed budget, execution cost table, implementing entity fee table, and disbursement schedule have been harmonized to match the approved total project cost of USD 2,118,234. Budget lines have been revised to eliminate decimal formatting, and all figures are now presented as whole numbers in line with Adaptation Fund requirements

Table 12: Detailed Budget break-down of the Project

COMPONENT	OUTPUT	ACTIVITY	Y1	Y2	Y3	TOTAL (USD)	BUDGET NOTES	
Component 1: Enhancing Climate-Resilient Livelihood Diversification	Output 1.1	1.1.1 Training on sustainable beekeeping	16,997	11,332	5,670	33,999	Covers venue hire, training materials, demonstration protective equipment (PPE), refreshments, facilitator fees, and participant logistics for practical beekeeping trainings conducted across three target wards.	
		1.1.2 Provision of 1,500 beehives & equipment	20,895	13,930	6,965	41,790	Includes procurement of improved beehives and accessories, transportation to beneficiary communities, installation guidance, quality assurance, and verification by district authorities.	
		1.1.3 Capacity building on honey marketing	12,905	8,603	4,302	25,810	Costs for branding and packaging training, hygiene and quality control sessions, business development services (BDS), market linkage facilitation, and participation in exhibitions and trade fairs.	
		1.1.4 Training on forming honey cooperatives	14,561	9,708	4,854	29,123	Supports cooperative registration fees, governance and leadership training, stakeholder meetings, mentorship, and legal compliance support.	
	Sub-total Output 1.1	130,720						
	Output 1.2.	1.2.1 Training on sustainable energy	10,243	6,829	3,415	20,487	Covers community awareness sessions on climate change, renewable energy basics, household energy efficiency, facilitator fees, training materials, and logistics.	
		1.2.2 Training on energy-saving stoves	16,510	11,007	5,504	33,021	Includes stove mold fabrication, tools, raw materials, facilitator costs, safety gear, and hands-on training demonstrations.	
		1.2.3. Training on briquette production	6,972	4,648	2,324	13,944	Covers procurement of briquette presses, biomass feedstock, construction of curing sheds, safety equipment, and technical training.	
		1.2.4. Support for stove & briquette enterprises	14,561	9,708	4,854	29,123	Supports transport to local and regional fairs, branding and packaging materials, promotional activities, and business visibility costs.	

	1.2.5. Establish energy-saver community groups	5,000	3,333	1,667	10,000	Includes leadership coaching, development of group constitutions, advisory services, and facilitation of group formation meetings.
Sub-total Output 1.2	106,575					
Output 1.3.	1.3.1 Training on rabbit & poultry production	12,593	8,394	4,195	25,182	Covers venue hire, training materials, facilitator fees, practical demonstrations, bio-security awareness, animal welfare guidance, refreshments, and participant logistics for community-level trainings.
	1.3.2 Construction of houses	21,166	14,111	7,055	42,332	Includes construction materials, skilled and unskilled labor, transport of materials, simple climate-resilient designs (ventilation, raised floors, roofing), and technical supervision for rabbit hutches and poultry houses.
	1.3.3 Provision of breeding stock	7,676	5,117	2,559	15,352	Covers procurement of improved rabbit breeds and poultry stock, vaccination and health checks, transportation to beneficiary households, and verification by veterinary or district livestock officers.
	1.3.4 Provision of feed, drugs & equipment	11,693	7,795	3,898	23,386	Includes starter feed, supplementary feed inputs, veterinary drugs and vaccines, feeders, drinkers, basic husbandry equipment, and guidance on proper use and storage.
	1.3.5 Establishment of producers' groups	14,529	9,686	4,843	29,058	Supports group mobilization, registration costs, leadership and governance training, development of group constitutions, regular meetings, and mentoring to strengthen collective production and marketing.
Sub-total Output 1.3	135,310					
Output 1.4	1.4.1 Training on jewelry & leather	15,244	10,162	5,081	30,487	Covers venue hire, training materials, tools for practical demonstrations, facilitator and artisan fees, design and finishing techniques, quality control, occupational safety guidance, refreshments, and participant logistics.
	1.4.2 Promote jewelry/leather business	24,912	16,608	8,304	49,824	Includes product branding and packaging support, market linkage facilitation, participation in local and regional trade fairs, promotional materials, transport, and business development services to improve market access and sales.
	1.4.3 Support forming maker groups	13,057	8,705	4,352	26,114	Supports mobilization of artisans, group registration and legal compliance, leadership and governance training, development of group constitutions, coordination meetings, and

							mentoring to strengthen collective production and marketing.
	Sub-Total 1.4	106,425					
	Output 1.5	1.5.1 Training on crop production	13,900	9,268	4,634	27,804	Covers venue hire, training materials, facilitator fees, practical demonstrations on climate-smart agriculture (soil management, improved seed use, water efficiency, pest and disease control), refreshments, and participant logistics.
		1.5.2 Establish 10-acre demo farms	13,814	9,210	4,605	27,629	Includes land preparation, procurement of improved seeds and planting materials, fertilizers and soil amendments, basic irrigation or water-saving inputs, field tools, labor, fencing where required, and technical supervision for demonstration plots.
	1.5	55,433					
Total Component 1	534,463						
Component 2: Climate-Resilient Rural Water Infrastructure	Output 2.1	2.1.1 Hydro-geological survey	11,548	17,323	5,774	34,645	Covers mobilization, geophysical surveys, site identification, borehole siting, data analysis, and reporting for up to ten proposed sites.
		2.1.2 Drill boreholes + solar systems	46,193	69,290	23,097	138,580	Includes borehole drilling, casing, installation of pumps, solar panels, water testing, commissioning, and contractor supervision.
	Sub-total 2.1.	173,225					
	Output 2.2	2.2.1 Water storage + distribution + pumps	119,367	477,468	119,367	716,202	Costs for procurement and installation of storage tanks (50–100 m ³), pipelines, fittings, solar-powered pumps, and system integration.
		2.2.2 Construct community water points	36	145	36	217	Includes construction of tap stands and kiosks, meters, drainage systems, signage, and minor civil works.
	Sub-total for 2.2	716,419					
	Output 2.3	2.3.1 O&M awareness & training	12,083	12,083	12,083	36,249	
	Subtotal 2.3	36,249					
	Output 2.4	2.4.1 Behavior change & governance	10,000	6,667	3,333	20,000	Community engagement
	Subtotal 2.4	20,000					

Total Component 2	945,893						
Component 3: Forest & Non-Timber Product Resilience	Output 3.1	3.1.1 Training on integrated forest management	11,456	7,636	3,818	22,910	Covers training materials, facilitator fees, community workshops, and practical demonstrations on sustainable forest management.
		3.1.2 Establish tree nurseries	25,329	16,886	8,443	50,658	Includes seed procurement, nursery tools and equipment, fencing, watering systems, labor, and technical supervision.
		3.1.3 Tree planting & maintenance	15,872	10,581	5,291	31,744	Covers seedling transportation, planting tools, labor, watering, mulching, and routine maintenance activities.
		3.1.4 Establish tree-planting groups	11,628	7,752	3,877	23,257	Supports group mobilization, leadership training, constitution development, and coordination meetings.
Total Component 3.	128,569						
Component 4: Climate-Resilient Health Systems	Output 4.1	4.1.1 Vulnerability assessment	11,151	–	–	11,151	Includes data collection, field assessments, stakeholder consultations, technical expertise, and reporting.
		4.1.2 Translate results + action plan	6,258	–	–	6,258	Covers translation of assessment findings, validation workshops, dissemination materials, and action plan development.
	Sub-total 4.1	17,409					
	Output 4.2	4.2.1 Climate-health mainstreaming	98,311	9,831	9,831	117,973	Supports integration of climate risks into health planning, capacity building for health workers, policy alignment workshops, and technical assistance.
		Sub-total 4.2	117,973				
	Output 4.3	4.3.1 Community awareness on climate-health	4,096	410	410	4,916	Includes IEC materials, community sensitization meetings, facilitators, and outreach logistics.
		Sub-total 4.3	4,916				
	Output 4.4	4.4.1 Emergency & first aid services	8,000	2,000	2,000	12,000	Covers procurement of first aid kits, emergency response equipment, training sessions, and coordination with local responders.
		4.4.2 Health insurance for 600 people	8,682	2,170	2,170	13,022	Includes premiums and administrative costs to enroll 600 beneficiaries into community or national health insurance schemes.
	Sub-total 4.5	25,022					
Total Component 4	165,320						
Component 5: Capacity	Output 5.1	5.1.1 Training needs assessment	18,477	4,619	4,619	27,715	Covers baseline assessments, consultations, surveys, data analysis, and reporting.

Strengthening & Climate Knowledge	5.1.2 Develop materials & support CBTs	5,582	1,396	1,396	8,374	Includes development and printing of training manuals, facilitation costs, and technical backstopping for community-based trainers.	
	5.1.3 Training LGAs on climate resilience	7,371	1,843	1,843	11,057	Covers workshops, training materials, facilitation, and coordination with local government authorities.	
	5.1.4 Disseminate project results	15,453	3,864	3,864	23,181	Includes documentation, reports, learning briefs, stakeholder dissemination meetings, and media engagement.	
	Sub-total 5.1	70327					
	Output 5.2	5.2.1 Community exchange visits	86,666	21,667	21,667	130,000	Covers transport, accommodation, meals, learning materials, coordination, and facilitation of inter-community learning exchanges.
		5.2.2 Build & equip resource centers	47,177	11,795	11,795	70,767	Includes minor construction or renovation, furniture, ICT equipment, learning materials, and installation costs.
	Sub-total 5.2	200767					
	Output 5.3	5.3.1 Train community committees	10,000	10,000	10,000	30,000	Supports governance training, leadership development, meeting facilitation, and mentoring.
	Sub-total 5.3	30,000					
	Output 5.4	5.4.1 Train on climate-data importance	5,384	21,538	5,384	32,306	Includes workshops on climate information use, materials, facilitators, and practical demonstrations.
		5.4.2 Install an agro-weather station	1,833	7,334	1,833	11,000	Covers procurement, installation, calibration, training on use, and initial maintenance of an agro-weather station.
	Sub-total 5.4	43,306					
Total Component 5	344,400						
Total Project Component and Activities	865,181 (Year 1)	902,452 (Year 2)	351,012 (Year 3)	2,118,645 (Total)			
Project Execution Costs	114,970 (Year 1)	39,400 (Year 2)	46,900 (Year 3)	201,270 (Total)			
Management fee	60,028	70,042	50,014	180,084			
GRAND TOTAL	2,499,999						

Table 13: Executing Entity Fee Breakdown

Activities	Y1(USD)	Y2(USD)	Y3(USD)	TOTAL (USD)	Notes
Project Staff Salary Top Ups					
Project Coordinator	4,200	4,200	4,200	12,600	
Assistant Project Coordinator	4,000	4,000	4,000	12,000	
M&E Officer	3,600	3,600	3,600	10,800	
Accountant	3,600	3,600	3,600	10,800	
Driver	–	900	900	1,800	
Technical and Steering Committees					
Steering committee meetings	2,400	2,400	2,400	7,200	Travel & DSA
Monitoring visits – Technical Committee	3,000	3,000	3,000	9,000	
Monitoring visits – Steering Committee	5,000	5,000	5,000	15,000	
Equipment and Operations					
Computers, printer & accessories	6,500	–	–	6,500	
Office consumables	1,000	1,200	1,200	3,400	
Communication	600	600	600	1,800	
Transport (fuel)	6,000	6,000	6,000	18,000	Fuel
Project vehicle	52,170	–	–	52,170	Transport cost
Baseline studies	12,000	–	–	12,000	Consultancy
Inception workshop	6,000	–	–	6,000	Consultancy
Publishing & translation of project results	3,500	3,500	3,500	10,500	
Final project evaluation	–	–	7,500	7,500	Consultant
Bank charges	1,000	1,000	1,000	3,000	
TOTALS	114,970	39,400	46,900	201,270	

Table16: KARAHADA Project Management Budget for NIE

Component	Activities	Year1	Year2	Year3	Total	Notes
Management Fees	NEMC staff allowances	13,347	13,347	13,347	40,044	
	Monitoring and Evaluation visits	41,681	51,695	31,667	125,043	(Travel cost +perdiems)
	Bank charges	5000	5000	5000	15,000	
Total Project Management Fees		60,028.00	70,042	50,014	180,084	

H. Include a disbursement schedule with time-bound milestones.

Table 14: Disbursement schedule

	Upon signature of the Agreement	One Year after Project Start, a)	Year 2b)	Total
Scheduled date	July 2026	July 2027	July 2028	
Project Funds	865,181	902,452	351,012	2,118,645
Implementing Entity Fees	174,998	109442	96914	381,354
Total	1,049,179	1,011,894	447926	2,499,999

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government²

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

<i>Prof. Peter Lawrance Makenga Msoffe, Deputy Permanent Secretary, Vice President's Office</i>	Date: August, 8th, 2025
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B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (National Environmental Policy (2021; National Climate Change Response Strategy (2021-2026); Nationally Determined Contributions (2021-2030); National Adaptation Program of Action (2007); National Environmental Master Plan for Strategic Interventions (2022-2032); Tanzania Development Vision 2025-2050) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
	
Fredrick F. Mulinda Implementing Entity Coordinator	
Date: 9 th August 2021	Tel. and email: Tel. and email: +255 753 240 517 , nieaf@nemc.or.tz / kasigazi.koku@gmail.com
Project Contact Person: Ally Mdangaya	
Tel: +255767407200 Email: ally.mdangaya@karatu.go.tz	

THE UNITED REPUBLIC OF TANZANIA
VICE PRESIDENT'S OFFICE

Telegrams: "MAKAMU"
Telephone: +255 026 2329006
Fax: +255 026 2329007
Email: ps@vpo.go.tz
In reply, please quote



Government City,
Mtumba Area,
Vice President Street,
P.O. Box. 2502,
40406 DODOMA.

Our Ref. No: **CBA.78/90/03**

08th August, 2025

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

**SUBJECT: ENDORSEMENT FOR KARATU CLIMATE RESILIENCE AND ADAPTATION
PROJECT FOR HADZABE AND DATOGA COMMUNITIES (KARAHADA)**

Please refer to the above subject

2. In my capacity as the designated authority for the Adaptation Fund in Tanzania, I confirm that the above national grant proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Karatu District.
3. Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Environment Management Council (NEMC) and executed by Tanzania Environmental Protection Organization (TAEPO) in collaboration with Karatu District Council.
4. Thank you for your continued support.

A handwritten signature in black ink, appearing to read 'Msolle'.

Prof. Peter L.M. Msolle

NATIONAL DESIGNATED AUTHORITY- DEPUTY PERMANENT SECRETARY

5.0 ANNEXES

Annex 1: Budget Notes

S/N	Description	Notes
1.	<i>Training materials and related services</i>	<p>Training of selected communities on bee keeping</p> <ul style="list-style-type: none"> • Meeting venue • Fuel and ground transport • Teaching materials (banners, flip charts, marker pens, beehives, honey harvesting kit, honey pressing and packaging materials) • Conference facilities • Catering services • Mobile charges • Professional allowance • Casual laborers Local experts
2.	<i>Provision of beehives and related equipment</i>	<p>Provision of beehives to communities</p> <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Production materials (beehives, honey harvesting kit, honey pressing and packaging and labeling materials) /workshop sessions • Catering services • consumables • Mobile charges • Casual laborers

3.	<i>Building capacity on honey making</i>	Capacity for honey making <ul style="list-style-type: none"> • Per diem local • Diesel and ground transport • Professional allowance • Catering services • consumables • Mobile charges
4	<i>Train communities on formation of cooperative societies</i>	Training on formation of cooperative societies <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts, marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
5	<i>Training on climate change and renewable energy.</i>	Training on climate change and renewable energy <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts and marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
6	<i>Trainings on how to make energy saver stove.</i>	Training for making energy saver cooking stove <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (cooking stove mould, clay) • Catering services • Conference facilities

		<ul style="list-style-type: none"> • Facilitation fee/ professional allowance
7	<i>Training on making briquettes</i>	Training on making briquettes <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (rice husks, plant remains) • Catering services • Conference facilities • Facilitation fee/ professional allowance
8	<i>Facilitate market access for cooking stoves and briquettes.</i>	Market access for briquettes <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Market venue • Demonstration on the use of energy saver cooking stove and briquettes/rice husks/firewood.
9	Train Datoga communities on formation of cooperative societies	Training on formation of cooperative societies <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts, marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
10	<i>Training communities on rabbit and poultry production</i>	Training of communities on rabbit and poultry production <ul style="list-style-type: none"> • Meeting venue • Fuel and ground transport • Teaching materials (banners, flip charts, marker pens, sample poultry breeds, tools and feeds) • Conference facilities

		<ul style="list-style-type: none"> • Catering services • Mobile charges • Professional allowance
11	<i>Construction of simple poultry house</i>	<p>Construction of materials.</p> <ul style="list-style-type: none"> • Stones • Interlocking blocks/ bricks • Cement • Sand • Ropes • Wire • Timber • Iron sheets • Water storage tanks • Water gutter drain
12	<i>Provision of breeding stock</i>	<p>Breeding stock</p> <ul style="list-style-type: none"> • Supply of pullets (female chicken) • Supply of rooster (male chicken) • Does (Female rabbits) • Buck (male rabbits) • Per diem • Transport • Cages • Telephone charges • Diesel

13	<i>Provision of feeds, equipment's and drugs</i>	Poultry feeds, equipment's and drugs <ul style="list-style-type: none"> • Animal feed raw materials • Pelletize • Feed mixer • Feed supplements • Vaccines • Veterinary drugs • Brooders • Drinkers • Feeders • Chicken Perch • Pallets • Egg trays • Record books, charts • Fuel and ground transport • Per diem local
14	Train communities on formation of poultry and rabbit keepers cooperative societies	Training on formation of poultry and rabbit keepers c <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts, marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
15	<i>Train communities on quality jewelry and leather making and marketing</i>	Training on quality jewelry and leather products <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (local jewelry materials, leather and tree barks, beads, wire, thread, patterns, labels and packaging material,

		<p>needles, working benches, scissors, old newspapers)</p> <ul style="list-style-type: none"> • Catering services • Conference facilities • Facilitation fee/ professional allowance
16	<i>Facilitate market access for quality jewelry and leather products</i>	<p>Market access for jewelry and leather products</p> <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Market venue
17	Train communities on formation of jewelry and leather cooperatives	<p>Training on formation of jewelry and leather cooperatives</p> <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts, marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
18	<i>Training on production of selected traditional and modern crops</i>	<p>Training on production of selected traditional and modern crops</p> <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts, marker pens, sample traditional and modern crop products) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
19	Preparation of demonstration farms	<p>Preparation of demonstration farms</p> <ul style="list-style-type: none"> • Community Land • Per diem local

		<ul style="list-style-type: none"> • Traditional vegetables and seeds • Consumables • Wheel barrow • Spade • Watering can • Rake/hoe • Manure casual laborers • Diesel • transport
20	Conducting hydro-geological survey	Conducting hydro-geological survey <ul style="list-style-type: none"> • Contract (lump sum)
21	Drilling boreholes	<p>a) costs associated for contractual issues for hydro-geo-physical surveys, physical, chemical and drilling of four boreholes in selected communities</p> <p>b) Costs associated with purchasing solar panels and solar pumps for relevant boreholes in selected villages. The details of specification of the boreholes will be provided in the inception workshop</p>
22	<i>Construct water storage tanks and distribution network systems and pump system</i>	Construction for; <ul style="list-style-type: none"> • Storage tanks • Distribution networks • Solar and pump system
23	Construct community water points/ kiosks for network systems	Construction for; Water points
24	<i>Conduct awareness raising meetings on operation and maintenance of water supply and infrastructure</i>	Conduct awareness raising meetings on operation and maintenance of water supply and infrastructure <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts and marker pens)

		<ul style="list-style-type: none"> • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
25	<i>Conduct awareness raising meetings on behavior change and water governance</i>	Conduct awareness raising meetings on behavior change and water governance <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts and marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
26	<i>Training on forest management</i>	Training on forest management <ul style="list-style-type: none"> • Fuel and ground transport • Per diem local • Training materials (banners, flip charts and marker pens) • Catering services • Conference facilities • Consumables • Facilitation fee/ professional allowance
27	<i>Establishing tree nurseries</i>	Establishing tree nurseries; <ul style="list-style-type: none"> • Per diem local • Tree seeds and fruit seedlings • Consumables • Polythene tubes • Wheel barrow • Spade • Watering can • Rake/ hoe

		<ul style="list-style-type: none"> • Manure • Transport • Casual laborers • Telephone charges • diesel
28	<i>Tree planting and maintenance</i>	Tree planting and maintenance; <ul style="list-style-type: none"> • Transport • Per diem local • Diesel • Telephone charges
29	<i>Establishment community groups for tree planting</i>	Establishment of community groups for tree planting <ul style="list-style-type: none"> • Per diem local • Transport facilities • Catering services • Conference facilities • Consumables • Diesel
30	<i>Hire consultant to conduct vulnerability assessment for the whole district</i>	Hire consultant to conduct vulnerability assessment <ul style="list-style-type: none"> • Consultant fee • Per diem domestic • Telephone charges • Diesel • Conference facilities
31	<i>Translate project results and project plan of action</i>	Translate project results and project plan action <ul style="list-style-type: none"> • Consultancy fee • Telephone charges • Per diem domestic • Diesel • Consumables • Conference facilities
32	<i>Integrate climate change issues</i>	Integrate climate change issues

33	<i>Create awareness on health and sanitation at Boma level</i>	Training on health and sanitation at Boma level <ul style="list-style-type: none"> • Per diem • Domestic facilitation • Catering services • Conference facilities • Transport • Consumables • Diesel • Professional allowance • Telephone charges
34	<i>Provide emergency health services and first aid services</i>	Provide emergency health services and first aid services <ul style="list-style-type: none"> • Emergency medicine • Telephone charges
35	<i>Provide improved community health insurance</i>	Provide improved community health insurance <ul style="list-style-type: none"> • Improved CHI card • Per diem • Domestic facilities • Catering services • Professional allowances • Conference facilities
36	Training needs assessment	Training needs assessment <ul style="list-style-type: none"> • Per diem local • Domestic facilitation • Catering services • Professional allowances • Conference facilities • Transport • Consumables • Diesel • Telephone charges

37	Community training	Community training <ul style="list-style-type: none"> • Professional allowances • Per diem domestic • Telephone charges • Diesel • Conference facilities Consumable
38	Local government training	Training the local government official <ul style="list-style-type: none"> • Consultancy fee • Per diem local • Telephone charges • Diesel • Conference facilities
39	Disseminating project results	Disseminating project results <ul style="list-style-type: none"> • Per diem local and foreign • Catering services • Conference facilities • Transport • Consumables • Diesel • Telephone charges
40	Facilitating community exchange visits and study tours	Facilitating community exchange visits and study tours <ul style="list-style-type: none"> • Per diem domestic and foreign • Consumables • Transport • Catering services • Conference facilities • Professional allowances • Diesel

		<ul style="list-style-type: none"> • Telephone charges
41	Build community resource centers for provision of health	Build community resource centers for provision of health <ul style="list-style-type: none"> • Build resource • Hardtop • Motorcycle • diesel
42	Training on decision making for undertaking climate resilient livelihood practices	Training on decision making on climate resilient livelihood practices <ul style="list-style-type: none"> • Per diem domestic • Telephone charges • Diesel • Conference facilities • Consumables • Professional allowance
43	Training on importance of data for climate change services	Training on importance of data for climate change services <ul style="list-style-type: none"> • Per diem domestic • Telephone charges • Diesel • Conference facilities • Consumables • Professional allowance
44	Install auto agro- weather station	Install auto agro- weather station Procurement of automatic weather station

Annex 2: Summary of gender analysis against project components

Project Components	Gender Risks/Challenges	Proposed mitigation strategies	Benefits
<p>1. Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> • Low adoption rates of the transformative agricultural interventions by all gender groups. • Elite hijacking of the transformative and climate-sensitive agricultural interventions. • Women and children, especially orphans, suffer the most and are more vulnerable to food insecurity whenever crop failure occurs due to drought and prolonged dry spell periods, compared to men. 	<p>Proper guideline for selection of members of farmer and women groups.</p> <hr/> <p>Improve knowledge on best farming practices and transform traditional farming systems through solid, farmer-tailored trainings using the Farmer Field School approach and smart micro-irrigation practices.</p>	<ul style="list-style-type: none"> • Enable improved access to agricultural tools and technologies with the aim of transforming and improving their agricultural practices. • Establish women-based gardens and poultry houses, and provide trainings on FFFS (Female Farmer Field School) – including provision of seeds and tools to diversify gender-based livelihood systems. • Increased use of climate-smart crops and promotion of intercropping with drought-resistant varieties like sunflower, cassava, cereals, sweet potatoes, and early-maturing crops to increase resilience in farming systems.

<p>2. Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District</p>	<ul style="list-style-type: none"> Gender-based conflicts, including incidents of abandonment or separation of couples linked to climate change issues such as water scarcity and food shortage Low level of representation of gender groups in water management systems the current system in the district is dominated by men. 	<p>Proper guidelines to establish a gender-sensitive water governance system to guide representation of women, youth, and vulnerable groups in the village water management institutional structure</p> <hr/> <p>Enable improved access to rural water supply systems and technologies</p>	<ul style="list-style-type: none"> Gender-sensitive water management institutional structures strengthened/established and functioning Water governance/bylaws to regulate effective use of water and protection of water sources formulated and functioning
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<p>Component 3; Improving climate change resilience of forests and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> Inactive and low participation of women and girls in ecological and environmental-based activities and ecological-based income-generating activities, especially marginalization of women, youth, and vulnerable groups 	<ul style="list-style-type: none"> Clear guidelines and bylaws on management of the environment and village ecosystems. <ul style="list-style-type: none"> Ensure that all groups are equally represented in managing ecological and environmental quality and involved in restoration activities. Proper and inclusive criteria for selection of beneficiaries to ensure that 50% of all people involved in implementing activities under this component are women. 	<ul style="list-style-type: none"> Increased alternative income-generating options, contributing to reduction of income poverty and building climate resilience of vulnerable communities, especially women and girls
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<p>4. Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District</p>	<ul style="list-style-type: none"> Lack of access to health services particularly for women, children and the elderly and marginalization in service provision for vulnerable community. 		<ul style="list-style-type: none"> Improved awareness and services for vulnerable communities on climate change related diseases
<p>5. Enhancing capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of</p>	<ul style="list-style-type: none"> Existence of social, economic, and political barriers that limit women from actively engaging in climate change adaptation activities, which makes them suffer the most whenever climate calamities happen. 	<p>Proper guideline on participation of vulnerable groups in capacity building and other project activities will be put in place and adhered to, to ensure the selection of at least 45% of women as beneficiaries for participation in capacity and knowledge management and other project interventions.</p>	<ul style="list-style-type: none"> Improved knowledge of village communities, technical staff in Karatu District Council, and civil societies on climate change, its impacts, and adaptation strategies Capacities of beneficiaries to implement concrete adaptation actions for climate-resilient and sustainable livelihood systems strengthened. Demonstration centers, eco-schools, and eco-villages for ecosystems

<p>climate change related issues</p>	<ul style="list-style-type: none"> • Low participation by vulnerable groups due to low literacy levels and the existence of groups with special or individual interests over others. 		<p>management and alternative income-generating activities established</p>
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Annex 3: List of institutions and stakeholders consulted

STAKEHOLDERS REGISTRATION FORM DURING SITE VISIT FOR COLLECTION OF PROJECTS FORMULATION INFORMATION IN KARATU DISTRICT COUNCIL

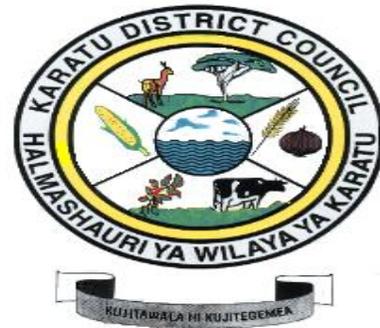
S/N	NAME	TITLE/OCCUPATION	MOBILE NUMBER
1.	LIGHNESS GINGANYI	BLACKSMITH -REVENUE COLLECTOR	0628107372
2.	GUDO MAHIYA	HADZABE-REVENUE COLLECTOR	0743726636
3.	NYERERE SAMAEL	CHAIR-HADZABE	
4.	LAJA GISUSI	HADZABE	
5.	MKUNZUVU	HADZABE	
6.	TARMO JANUARI	HADZABE	
7.	MARUKA SABENA	HADZABE	
8.	ITAMBI HADZA	HADZABE	
9.	MAYU MARTINI	HADZABE	
10.	PANDA MLEKWA	HADZABE	
11.	ELIZA SHIMBI	HADZABE	
12.	HELENA MANJANO	HADZABE	
13.	ELIZABETH SALIBOGO	HADZABE	
14.	ALIMU MASKATI	HADZABE	
15.	SABINA SIAGT	HADZABE	
16.	JUMBE KINYANYI	BLACKSMITH	
17.	LAFaelI KINYANYI	BLACKSMITH	
18.	GINYANYI	BLACKSMITH	
19.	ADE KINYANYI	BLACKSMITH	
20.	DAINGKENI KINYANYI	BLACKSMITH	
21.	SABINA KINYANYI	BLACKSMITH	

STAKEHOLDERS REGISTRATION FORM DURING SITE VISIT FOR COLLECTION OF PROJECT FORMULATION INFORMATION IN KARATU DISTRICT COUNCIL

S/N	NAME	TITLE/OCCUPATION	MOBILE NUMBER
1.	GODFREY G. LUGUNA	AG.DED KARATU DC	0756045323
2.	ALLY J. MDANGAYA	DEMO-KARATU DC	0767407200
3.	FELIX D. SULLE	DCDO KARATU DC	0764229090
4.	CHRISTOPHER O. KITUNDU	AG.DANRO	0754959428
5.	SAUDA LEVERY	HEALTH OFFICER	0754761246
6.	TWILAMBA NGWALE	AG.DAICO	0756660708
7.	ENG.MBARAKA M. KILANGAI	DM-KARATU	0755293780
8.	DENNIS BUBERWA	DLFO	0764886684
9.	RESTIEL HHAYUMA	TASAF	0754828227
10.	EVANCE ABDALLAH MVAMILA	HAKI KAZI CATALYST	0754055565
11.	GODLISTEN DIDAS	CONVOY OF HOPE	0692390032
12.	BERNADETTE BACHUBILA	HAKI KAZI CATALYST	0754369812
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Annex 4: Environmental and Social Management Plan (ESMP) for Karatu District Council

**THE UNITED REPUBLIC OF TANZANIA
KARATU DISTRICT COUNCIL**



**Karatu Climate Resilience and Adaptation project for Hadzabe and Datoga communities
(KARAHADA)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR
KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE AND
DATOGA COMMUNITIES (KARAHADA)**

July 2025

1. INTRODUCTION

1.1 Project Background

The project will specifically target the most vulnerable groups who have fewer resources to adapt to climate change in Karatu. It is built on the principles of local empowerment through the engagement of vulnerable and grassroots communities such as the Hadzabe (hunters and gatherers) and Datoga (blacksmith) tribes, as well as village governments and community groups. The overall objective of the project is to enhance resilience and adaptive capacity to the effects of climate change while reducing the vulnerability of selected communities in Karatu District.

Specifically, the project will address the following objectives:

- (i) To Enhance integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (ii) To enhance climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District
- (iii) To Improve climate change resilience of forests and non- timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (iv) To Promote climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District
- (v) To Enhance capacity of Karatu District Council and Communities in three wards of Baray, Endamaghan and Mang'ola to design and implement climate change adaptation interventions and improve level of understanding of climate change related issues

The project has the following five (5) components:

Component 1: Enhancing integrated climate change–resilient livelihood diversification systems in the selected sites in the three wards of Baray, Endamaghan, and Mang’ola in Karatu District.

Component 2: Enhancing climate-resilient rural water infrastructure and supply systems in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities in the Baray, Mang’ola, and Endamaghan Wards of Karatu District.

Component 3: Improving climate change resilience of forests and non-timber forest products in selected villages within the three wards of Baray, Endamaghan, and Mang’ola in Karatu District.

Component 4: Promoting climate change resilience of health systems in the three wards of Baray, Endamaghan, and Mang’ola in Karatu District.

Component 5: Enhancing the capacity of Karatu District Council and communities in the three wards of Baray, Endamaghan, and Mang’ola to design and implement climate change adaptation interventions, and improving the level of understanding of climate change related issues.

The expected outcomes of the project are:

a) Increased food security, income, and resilience to climate change impacts through climate-smart practices in selected villages in the three wards of Baray, Endamaghan, and Mang’ola.

b) Enhanced climate-resilient rural water supply systems in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities in selected villages in the three wards of Baray, Endamaghan, and Mang’ola.

c) Improved forest services and functions to sustain climate-resilient livelihoods in selected villages in the three wards of Baray, Endamaghan, and Mang’ola.

d) Improved health and sanitation infrastructure and services for Hadzabe (hunters and gatherers) and Datoga (blacksmith) in selected villages in the three wards of Baray, Endamaghan, and Mang’ola.

e) Improved capacity of Karatu District Council and the Hadzabe and Datoga communities in planning, implementing, and monitoring climate adaptation actions.

1.2 Project Coordination and Implementation Arrangements

1.2.1 The National Implementing Entity (NIE)

The project will be implemented by the National Environment Management Council (NEMC). NEMC has significant experience in implementing projects and programmes of this nature, with a dedicated unit for climate change adaptation and execution of the NIE mandate related to Adaptation Fund (AF) operations in the United Republic of Tanzania. The following implementation services will be provided by NEMC under this project:

i) Overall coordination and management of NIE functions and responsibilities.

ii) Facilitation of interactions with the Adaptation Fund Secretariat and other related stakeholders at the global scale.

iii) Oversight of project implementation and reporting on budget performance.

iv) Quality assurance and accountability for outputs and deliverables during project development, implementation, and completion phases.

v) Receipt, management, and disbursement of AF funds in accordance with the Adaptation Fund’s financial standards.

vi) Oversight and quality assurance of evaluation processes for project performance, ensuring that lessons learned and best practices are incorporated to improve future projects in the United Republic of Tanzania.

vii) General administration and support services, including legal services, procurement and supply management, IT, and human resources management.

1.2.2. The Executing Entities:

Tanzania Environmental Protection Organization, jointly with Karatu District Council, will serve as the overall coordinator of the project through the services of a Project Management Unit (PMU).

The PMU will consist of a Project Coordinator, a Monitoring and Evaluation Officer, a Project Driver, and a Project Accountant, who will also serve as the Project Administrative Support Staff. Strong participation of other District staff will be ensured at the project implementation level, given that the activities involve cross-sectoral coordination.

A Project Steering Committee (PSC) will be established to oversee project execution. The Committee will be chaired by the Chairperson of Karatu District Council. The Secretariat of the Committee will be the PMU, operating through the District Executive Director and the Executive Director of TAEPO.

The members of the Project Steering Committee will include:

- District Executive Director of Karatu
- Chairperson of the Karatu District Council
- One representative from each of the following sector ministries:
 - Ministry responsible for rural water supply (RUWASA)
 - Ministry responsible for local governments
 - Ministry responsible for agriculture
 - Ministry responsible for livestock
 - Ministry responsible for environment and climate change
 - Ministry responsible for forestry and natural resources
 - Ministry responsible for energy
 - Ministry responsible for industries
 - Ministry responsible for tourism
- One officer from the National Environment Management Council (NEMC)
- Two members from TAEPO
- One representative from the Tanzania Meteorological Agency (TMA)
- One representative from the Tanzania Forest Services Agency (TFS)

1.3 Project Beneficiaries

The targeted project beneficiaries include mainly the local communities. Such communities include hunters and gatherers, blacksmith farmers, schools, health facilities, vocational college, other rural communities who are vulnerable to climate change effects in Karatu district council. The vulnerable groups including women, youth, the elderly, the physically challenged, flood and drought victims and HIV/AIDS orphans form a special category of beneficiaries whose interest should be safeguarded by the project implementation team/institutions.

2.0 COMPONENTS OF THE ESMP FOR THE KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE AND DATOGA COMMUNITIES-KARAHADA

The ESMP for the KARAHADA-Project includes the following components:

- (a) Sub project activity;
- (b) Potential adverse effects/impacts;
- (c) Proposed mitigation measures;
- (d) Institutional responsibility for mitigation (including enforcement and coordination);
- (e) Monitoring requirements;

- (f) Responsibility for monitoring and supervision;
- (g) Implementation schedule; and
- (g) Cost estimates.

A template of the Environmental and Social Management Plan to guide implementation is provided as Table 2 **Table 6**

3.0 PREVAILING POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT MANAGEMENT

Here is your text cleaned up with proper spacing, punctuation, grammar corrections, and improved readability while keeping the original meaning intact:

This section highlights the policies, legal, and institutional frameworks for environmental and social impacts management of the proposed projects in the United Republic of Tanzania. Generally, the implementation of this project will be governed by several national guidelines, policies, and regulations including:

- National Environmental Policy, 1997
- National Water Policy, 2002
- Forestry Policy, 2002
- National Environmental Management Act, 2004
- Water Resource Management Act, 2009
- National Agriculture Policy, 2013
- Livestock Policy, 2004
- National Gender Policy, 2002
- Community Development Policy, 1996
- Water Supply and Sanitation Act, 2009
- The HIV and AIDS (Prevention and Control) Act of 2008
- Occupational Health and Safety Act, 2003
- National Climate Change Response Strategy, 2021
- National Biodiversity Strategy and 500 Action Plan (NBSAP) 2015–2020
- Water Safety Plan – Resilient to Climate Change for Rural Water Supply Services (WSP-RCC-RWS), 2015
- Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations, 2005
- Water Quality Management Standards Regulations, 2007

The National Environmental Management Act, 2004 has provisions that protect and enhance the quality of the natural and cultural environment of Tanzania for the benefit of both present and future generations, and assures all citizens a sound and safe environment adequate for their health and well-being. It is the overall guiding document on the administration and management of environmental matters and social safeguards. It provides the legal and institutional framework for the sustainable management of the environment in Tanzania. It outlines principles for environmental management, impact and risk assessment, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance, and enforcement.

Sections 82(1) and 230(2)(h) and (q) of EMA Cap. 191 of 2004, together with the EIA and Audit Regulations, 2005, provide for the procedures to conduct EIA and environmental audits, and identify/categorize projects which are mandatory or non-mandatory to conduct EIA.

According to the National Environmental Management Act (2004), the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations (2005), and sectoral regulations and guidelines of the United Republic of Tanzania, this project does not fall within the First Category of projects that require a full EIA, as the proposed interventions possess no significant negative impacts on the environment or the community. There is no activity under any component that requires a full EIA, as the magnitude of impacts is small and the locations of the interventions do not warrant further assessments.

However, the Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations (2005) will guide the implementation of the Environmental and Social Management Plan (ESMP) during the execution of project activities under Components 1 to 5.

The National Water Resources Management Act, 2009, the National Environmental Management Act, 2004, the National Water Quality Management Standards and Regulations, 2007, and the Water Safety Plan – Resilient to Climate Change for Rural Water Supply Services (WSP-RCC-RWS), 2015, provide for “Water Use Rights and Permit Standards”. The project shall comply with the relevant sections of these Acts, Standards, and Regulations to ensure sustainable utilization and conservation of water, particularly with regard to water supply and micro-irrigation-related activities under Component 2. Water supply activities will largely involve the construction of boreholes and the development of supply systems. It is expected that water use permits will need to be obtained. Probable project micro-irrigation-related activities may require letters and permits for water users, but these can be easily processed by the Karatu District Authority through the Karatu Rural Water Supply Agency (RUWASA).

Irrigation interventions in Tanzania are required to adhere to the National Irrigation Act, 2013 (No. 5 of 2013). The Act provides detailed standards and guidelines for farmers and block farming groups to form Water User Associations (WUAs), stressing the need for communities to work together and manage water resources sustainably. The project will abide by these standards and guidelines.

The project will also comply with the Forest Act, 2002 (Act No. 7 of 2002) and the Environmental Management Act, 2004, which provide guidance for reforestation, tree planting, restoration, reclamation, and rehabilitation of ecosystems, as well as all activities that involve planting trees and environmental conservation.

The project shall apply the standards under the Long-Term Perspective Plan 2010–2025 and its Five-Year Development Plans, particularly the Third National Five-Year Development Plan 2021/22–2025/26, the Community Development Policy, 1996, the National Water Policy, 2002, and the Cooperative Development Policy, 2002 for the establishment of community cooperatives, their operational procedures, and relevant gender policies, as well as other standards that protect women, the elderly, children, and the most vulnerable households. The project will also align with the financial planning, management, and audit guidelines of the United Republic of Tanzania.

Table below provides key policies, legislation and strategies which will guide the implementation of this ESMP.

Table1: National Policies, legislation and strategies which implementation of this ESMP

Name of Policy / Legislation	Relevance to the Proposed Project
National Environmental Policy, 1997	Although the proposed project promotes social and environmental integrity, its implementation will be guided by environmental management tools that promote environmentally friendly technologies. This will support actions under Components 1, 2, and 3, ensure meaningful stakeholder involvement, and fully integrate gender considerations.
National Water Policy, 2002	Identifies the importance of water resources for social and economic development, including irrigation and domestic supply. Emphasizes strong institutions to enforce standards in rural water supply construction and service delivery. Particularly relevant to activities under Components 1 and 2.
National Land Policy, 1997	Provides for strategic planning, rapid appraisal, identification of key issues in land and environmental management, and participatory provision of housing, infrastructure, and services. Relevant to all activities under Components 1, 2, and 3.
National Investment Promotion Policy, 1996	Requires all investment projects to subscribe to established environmental standards and conserve the environment for sustainable development.
National Energy Policy, 2003	Requires environmental impact assessments for all energy programmes/projects; promotes energy efficiency, conservation, cleaner production, pollution control, renewable energy, and efficient wood-fuel technologies to protect woodlands and biomass resources.
National Sustainable Industrial Development Policy, 1996	Advocates sustainable industrial production and waste minimization through cleaner production options.
National Strategy for Growth and Reduction of Poverty (MKUKUTA/NSGRP), 2008	Recognizes the role of industries in poverty eradication and recommends their strategic establishment with environmental considerations mainstreamed as a cross-cutting issue.
Tanzania Vision 2025	Recognises Tanzania's high climate dependence (especially agriculture), the major economic costs already caused by extreme weather events (droughts and floods), and the need for adaptation actions to protect growth and livelihoods.
Community Development Policy, 1996	Community development is achieved when people have strong, sustainable adaptive capacity to climate change, identify climate-related problems, and participate in planning, decision-making, and implementation of development and adaptation initiatives.
National Gender Policy, 2002	Provides guidelines for gender-sensitive plans and strategies in all projects and sectors, ensuring equal opportunities for men and women. The project will align with the policy and the Adaptation Fund's Environmental and Social Policy.
National Health Policy, 2003	Aims for universal access to safe water, reduction of malnutrition and disease burden, lower infant/maternal mortality, and increased life expectancy through improved environmental health, sanitation, cleanliness, and water-quality monitoring.
National Agriculture Policy, 2013	Seeks to improve food security, alleviate poverty, and promote integrated, sustainable use and management of natural resources (land,

	soil, water, vegetation) while building adaptation and resilience in the sector. Activities under Components 1, 2, and 3 align closely with this policy.
Livestock Policy, 2004	recognizes livestock's contribution to agricultural GDP and poverty reduction; notes that 99 % of livestock is owned by smallholder farmers and pastoralists who are highly vulnerable to climate change. Activities under Components 2 and 3 will follow this policy.
Forestry Policy, 2002 (under review)	Addresses climate-change impacts on forests; guides biodiversity protection, soil and water conservation, expansion of forest cover, use of adaptive species, corridor linkage, beekeeping, and tree planting as adaptation and livelihood measures.
National Climate Change Response Strategy, 2021	Vision: Enhance climate resilience and reduce vulnerability of natural and social systems. Mission: Establish effective adaptation and mitigation mechanisms with international cooperation to achieve sustainable development in line with Vision 2025, Five-Year Plans, and global frameworks.
Nationally Determined Contributions (NDCs) 2020-2025	Focuses on reducing climate vulnerability, enhancing long-term resilience, improving water access from 60 % to over 90 %, and establishing adaptation plans at all government levels, including villages.
National Environmental Management Act (EMA) Cap. 191 of 2004	Overall guiding law for environmental administration and social safeguards; establishes principles for impact assessment, pollution prevention, waste management, public participation, and enforcement. The project complies fully and will use EMA to guide climate-resilient actions.
National Biodiversity Strategy and Action Plan (NBSAP) 2015-2020	Highlights Tanzania's mega-biodiversity, its socioeconomic value, causes of loss, and five strategic goals (mainstreaming, reducing pressures, safeguarding ecosystems, enhancing benefits, and capacity building). The project will support biodiversity conservation under Components 1, 2, and 3.
Water Resources Management Act, 2009	Establishes integrated sustainable water management principles; requires Strategic Environmental Assessment and EIA; emphasises water's role in development and strong institutions for rural water supply. Highly relevant to Components 1 and 2.
Water Supply and Sanitation Act, 2009	Guarantees citizens' right to efficient, effective, and sustainable water and sanitation services while protecting water resources and combating climate-induced scarcity in vulnerable communities.
Employment and Labour Relations Act, 2004	Prohibits child labour, regulates contracts, protects core labour rights, and provides dispute-resolution mechanisms. Will be adhered to during community employment under Components 1–4.
Occupational Health and Safety Act, 2003	Protects workers from occupational hazards, mandates safety gear, clean drinking water, sanitary facilities, and washing facilities at workplaces. All relevant provisions will be followed.
National Land Act Cap. 113, 2002	Governs land administration and occupation. Defines hazardous land and rights of occupancy. The project will not acquire land or resettle anyone.
HIV and AIDS (Prevention and Control) Act, 2008	Requires workplace HIV/AIDS programmes and non-stigmatisation. The project empowers vulnerable groups (especially girls and women) and improves livelihoods, thereby reducing HIV vulnerability.
Workers Compensation Act No.	Provides compensation for work-related injury, disability, or death.

20, 2008	Relevant because workers may face hazards during implementation of Components 1, 2, and 3.
EIA and Audit Regulations, 2005	Made under EMA; sets procedures and categorisation of projects. Because the project has no significant negative impacts, full EIA is not required, but the regulations will guide ESMP implementation.
Environmental Hazardous Waste Regulations, 2009	Governs storage, packaging, transport, treatment, and disposal of hazardous waste. The project will not generate hazardous waste.
Water Quality Management Standards Regulations, 2007	Sets minimum water-quality standards, protects human health and the environment, and regulates pollutant discharges. All proposed water supplies will meet these standards.

Table3: Relevant regional and International Conventions

Name of International Convention / Protocol / Agreement	Relevance to the Proposed Project
United Nations Convention on Biological Diversity (UNCBD / CBD) Ratified by Tanzania in 1996	The CBD has three objectives: (i) conservation of biological diversity, (ii) sustainable use of its components, and (iii) fair and equitable sharing of benefits arising from the utilization of genetic resources. The Convention requires Parties to integrate biodiversity conservation into sectoral and cross-sectoral plans and to use environmental assessment as a key tool. Article 14 mandates impact assessment and minimization of adverse effects on biodiversity. Article 8(j) and related provisions call for respect, preservation, and equitable sharing of benefits from traditional knowledge, innovations, and practices of indigenous and local communities. Article 10(c) promotes the protection and encouragement of customary use of biological resources compatible with conservation needs. The project will conserve biodiversity, enhance ecosystem functions and services, and apply relevant traditional knowledge, particularly through activities under Components 3 and 4 .
United Nations Framework Convention on Climate Change (UNFCCC) Ratified by Tanzania in 1996	Establishes the global framework to protect the climate system for present and future generations by stabilizing greenhouse gas concentrations at a level that prevents dangerous anthropogenic interference with the climate system, while allowing ecosystems to adapt naturally, ensuring food security, and enabling sustainable economic development. The Convention promotes both adaptation and mitigation actions. The proposed project is fully aligned with the objectives and actions promoted under the UNFCCC.
United Nations Convention to Combat Desertification (UNCCD) Ratified by Tanzania in 1997	Aims to combat desertification and mitigate the effects of drought, particularly in Africa, through long-term integrated strategies that improve land productivity, rehabilitate, conserve, and sustainably manage land and water resources, leading to better living conditions at the community level. The project design directly implements the requirements of the UNCCD through land and water conservation measures and community-level resilience-building activities.
The Paris Agreement entered into force 2016; Tanzania's	Acknowledges climate change as a common concern of humankind and obliges Parties to respect, promote, and consider human rights, the

updated NDC submitted 2021	rights of indigenous peoples and local communities, gender equality, empowerment of women, and intergenerational equity when taking climate action. It establishes Nationally Determined Contributions (NDCs) and promotes enhanced adaptation, mitigation, and resilience. The project fully reflects the spirit and guidance of the Paris Agreement through climate-resilient water supply, sustainable agriculture, ecosystem restoration, and community empowerment activities under Components 1, 2, 3, 4, and 5, thereby contributing to both national and global adaptation and mitigation efforts.
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4.0 GUIDANCE FOR IMPLEMENTING ENTITIES ON COMPLIANCE WITH THE ADAPTATION FUND ENVIRONMENTAL AND SOCIAL POLICY

The Adaptation Fund (AF) Environmental and Social Policy (ESP), originally approved in November 2013 and revised in March 2016, ensures that all projects and programmes supported by the Fund deliver positive environmental and social benefits while avoiding, minimizing, or mitigating adverse environmental and social risks and impacts. Effective management of these risks is considered fundamental to achieving successful and sustainable project outcomes.

The ESP is structured around **15 principles**. After screening, **11 principles** have been identified as relevant to the proposed project, namely:

1. Compliance with the Law
2. Access and Equity
3. Marginalized and Vulnerable Groups
4. Gender Equality and Women's Empowerment
5. Involuntary Resettlement
6. Protection of Natural Habitats
7. Conservation of Biological Diversity
8. Climate Change
9. Pollution Prevention and Resource Efficiency
10. Public Health
11. Physical and Cultural Heritage
12. Lands and Soil Conservation

This Environmental and Social Management Plan (ESMP) demonstrates how the project will fully comply with these 11 principles throughout its lifecycle. A detailed description of each applicable principle, the associated risks (if any), and the specific mitigation and enhancement measures incorporated into the project design and implementation arrangements is provided in **Table 4**.

Table 4: Principles to Guide screening and Management of Environmental and Social Impacts of planned activities for the proposed activities

Principle	Description and Compliance Measures
Principle 1: Compliance with the Law	Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law. In this regard, the Implementing Entity (IE) will ensure that the project/programme complies with applicable domestic and international law as described in Section 2 above. In support of the Proposal, the IE will provide, when relevant, a description of the legal and regulatory framework for any project activity that may require prior permission (such as planning permission, environmental permits, construction permits, permits for water extraction, emissions, and use or production or storage of harmful substances). For each such requirement, the IE will describe the current status, any steps already taken, and the plan to achieve compliance with relevant domestic and international laws.
Principle 2: 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. The process of allocating access to project/programme benefits should be fair and impartial. A fair process treats people equally without favoritism or discrimination, and an impartial process treats all rivals or disputants equally. Furthermore, the project/programme will be designed and implemented in a way that will not impede access of any group to the essential services and rights mentioned in the Principle. Possible elements that may be considered: The IE can demonstrate compliance of the project/programme by describing the process of allocating and distributing project/programme benefits, and by showing how this process ensures fair and impartial access to benefits. It may also state clearly that there will be neither discrimination nor favoritism in accessing project/programme benefits. The IE may demonstrate that the project/programme does not impede access of any group to the essential services and rights indicated in the principle. In addition, the project/programme can use a risk analysis to identify and assess the risk of impeding access to essential rights and services, and of exacerbating existing inequalities. The IE may conduct stakeholder mapping in order to identify the potential beneficiaries, rivals, disputants, marginalized, or vulnerable people.
Principle 3: 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

	<p>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. Impacts on marginalized and vulnerable groups must be considered so that such groups do not experience adverse impacts from the project/programme that are disproportionate to those experienced by others. Marginalized groups are groups of people who are excluded from the normal economic and social fabric of societies, thus lacking access to basic essential services and facilities. Furthermore, they lack the means to improve themselves (motivation, social capital, skills and knowledge) and have low resilience. Vulnerable groups are groups of people unable or with diminished capacity to anticipate, cope with, resist, and recover from the impacts of (external) pressures, facing a higher risk of poverty and social exclusion than the general population. Vulnerability can stem from belonging or being perceived to belong to a certain group or institution, and is a relative and dynamic concept. Using accepted methods based on disaggregated data, where possible, the IE should identify and quantify the groups mentioned in the principle (children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS) as well as any groups identified additionally such as seasonal migrants or illegal aliens. If any are present, the IE should: - Describe the characteristics of the marginalized or vulnerable groups. - Identify adverse impacts that each marginalized and vulnerable group are likely to experience from the project/programme, taking into consideration the specific needs, limitations, constraints and requirements of each group. For example, a small detour or the construction of a minor obstacle for most able-bodied people could be an insurmountable obstacle to wheelchair users or persons with certain disabilities. These are examples of disproportionate adverse impacts. - Describe how the impacts are not disproportionate compared to non-marginalized and non-vulnerable groups, or how they can be mitigated or prevented so as not to be disproportionate. These mitigation measures could be design or operational features of infrastructure, or access guarantees to project benefits for those without complete administrative files such as refugees and internally displaced persons or tribal groups. - Describe monitoring that may be needed during project/programme implementation for the possible occurrence of disproportionate adverse impacts on marginalized and vulnerable groups, as situations may change over time (e.g., the arrival of refugees or internally displaced persons).</p>
<p>Principle 4: Human Rights</p>	<p>Projects/programmes supported by the Fund shall respect and where applicable promote international human rights. The Universal Declaration of Human Rights (UDHR) of 10 December 1948 provides a common standard of achievements for all peoples and all nations by setting out fundamental human rights to be universally protected. A number of human rights bodies were created based on the UN Charter,</p>

	<p>including the Human Rights Council, and under the international human rights treaties to monitor their implementation. The Office of the High Commissioner for Human Rights (OHCHR) supports the different human rights monitoring mechanisms in the United Nations system. Promotion of human rights in the project/programme will be achieved by creating awareness with all involved in the project/programme operations, including design, execution, monitoring, and evaluation, about the Universal Declaration of Human Rights as an overarching principle in the implementation of the project/programme. The text of the UDHR is freely available in 438 languages. Possible elements that may be considered: Information that the IE may consider when assessing the project/programme potential risks with regard to this principle: - When the host country or countries of the project/programme are cited in any Human Rights Council Special Procedures, be they thematic or country mandates, the IE may provide an overview of the relevant human rights issues that are identified in the Special Procedures and describe how the project/programme will address any such relevant human rights issues. - Human rights issues should be an explicit part of consultations with stakeholders during the identification and/or formulation of the project/programme. The findings on human rights issues of the consultations should then be included in the project/programme document, and details of the consultations added as an annex. - The Human Rights Council uses so-called Special Procedures, which are mechanisms to address either specific country situations or thematic issues in all parts of the world. Special Procedures' mandates usually call on mandate-holders to examine, monitor, advise and publicly report on human rights situations in specific countries or territories, known as country mandates, or on major phenomena of human rights violations worldwide, known as thematic mandates. There are 30 thematic mandates and 8 country mandates. All report to the Human Rights Council on their findings and recommendations. - Even if the country or countries where the project/programme will be implemented is not a Party to any of the nine core international human rights treaties, compliance with UDHR, at a minimum, will be monitored.</p>
<p>Principle 5: Gender Equality and Women's Empowerment</p>	<p>Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men: 1) have equal opportunities to participate as per the Fund gender policy; 2) receive comparable social and economic benefits; and 3) do not suffer disproportionate adverse effects during the development process. In many societies, different roles are allocated to men and women based on cultural, traditional, religious, or other grounds. Gender equality refers to the equal rights, responsibilities, opportunities and access of women and men and boys and girls as well as the equal consideration of the respective interests, needs, and priorities. To ensure gender equality, measures often need to be taken to compensate for or reduce disadvantages that prevent women and men from otherwise operating</p>

on an equitable basis. Gender equality and women’s empowerment must be applied in the project/programme design and its implementation regardless of the legal and regulatory framework in which the project/programme is set. Principle 5 is guided by Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), which refers to “anthropogenic interaction” — therefore interaction of women and men — within the climate system. The UNFCCC has adopted a number of decisions on gender since 2001. The Paris Agreement acknowledged that Parties in their climate actions should be guided by respect for human rights, gender equality and the empowerment of women in its Preamble while stressing the importance of following “a country-driven, gender-responsive, participatory and fully transparent approach” for adaptation action in Article 7(5). Principle 5 is intended to be consistent with other international conventions, in particular with the Universal Declaration of Human Rights (UDHR), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the International Labour Organization (ILO) core conventions, the Millennium Development Goals (MDGs) and follow-up Sustainable Development Goals (SDGs), and the 2030 Agenda for Sustainable Development. The design and implementation of the project/programme should ensure that it: 1) Does not include elements that are known to exclude or hamper a gender group based on legal, regulatory, or customary grounds; 2) Does not maintain or exacerbate gender inequality or the consequences of gender inequality. For example, unequal access to education based on gender may result in lower literacy rates among the disadvantaged group. This lack of literacy may, as a secondary effect of gender inequality, limit access to benefits or increase adverse effects of the project for that particular group. **Possible elements that may be considered:** Information that may be considered by the IE when assessing the potential risks with regard to this principle:

- An analysis of the legal and regulatory context with respect to gender equality and women’s empowerment in which the project/programme will take place will identify any obstacles to compliance. In addition, analysis of the cultural, traditional, religious, or any other grounds that might result in differential allocation of benefits between men and women, or of the disproportionate adverse impacts from the project/programme may be appropriate.
- Actively pursue equal participation in project/programme activities and stakeholder consultation. Ensure that all positions in the project/programme are effectively equally accessible to men and women, and that women are encouraged to apply and take up positions.
- The project/programme design and implementation arrangements will ensure equal access to benefits and that there are no disproportionate adverse effects. This may be achieved by any appropriate means, including, e.g.:
 - Conducting a gender analysis of the sector the project/programme will support;
 - Describing the current situation of the allocation of roles and responsibilities in the project/programme sector

	<p>or area; - Showing how the project/programme will pro-actively take measures to promote gender equality e.g. by organising separate working groups or conducting separate stakeholder consultations at times and locations conducive to soliciting opinions of all.</p>
<p>Principle 6: Core Labour Rights</p>	<p>Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labour Organization. The ILO core labour standards are stated in the 1998 ILO Declaration of Fundamental Principles and Rights at Work. The Declaration covers four fundamental principles and rights, which are further developed in eight fundamental rights conventions: - Freedom of association and the effective recognition of the right to collective bargaining (conventions ILO 87 and ILO 98); - Elimination of all forms of forced or compulsory labour (conventions ILO 29 and ILO 105); - Elimination of worst forms of child labour (conventions ILO 138 and ILO 182); - Elimination of discrimination in respect of employment and occupation (conventions ILO 100 and ILO 111). Regardless of whether the countries where Fund's projects/programmes are implemented have ratified the conventions, in the context of the Fund's project/programme operations the IE will respect, promote, and realize in good faith the principles mentioned above and ensure that they are respected and realized in good faith by the EE and other contractors. Where applicable, the project/programme will incorporate the ILO core labour standards into the design and implementation of the project/programme and create awareness with all involved on how these standards apply. The IE will summarize in the Proposal how they are ensuring that the EE is implementing the ILO core labour standards. Possible elements that may be considered: Information the IE may consider when assessing the project/programme potential risks with regard to this principle: - If the project/programme host country has ratified the eight ILO core conventions, the risks involved may be smaller. National compliance makes it more likely that a project/programme can and will achieve compliance. - The latest ILO assessments of application of the standards in the project/programme country is available in the reports of the two ILO bodies, The Committee of Experts on the Application of Conventions and Recommendations and The International Labour Conference's Tripartite Committee on the Application of Conventions and Recommendations. Other assessments by reputable sources (e.g. the World Bank or regional development banks) may also be used. - Past/present/planned ILO assistance to meet the standards through social dialogue and technical assistance. - Information on any ILO Special procedures relevant to the Member nation or to the project/programme, including details on the triggering representation or complaints. - Demonstration on how the ILO core labour standards will be incorporated into the design and the implementation of the project/programme, as appropriate. - In the case of problematic assessments by ILO of compliance or in the case of Special procedures</p>

	<p>at the national level, the IE will provide information on how these issues will be addressed, if they are relevant to the project/programme. Reference may be made to a monitoring process during project/programme implementation for future possible problematic ILO assessments or new Special procedures.</p>
<p>Principle 7: Indigenous Peoples</p>	<p>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 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP) has its legal foundation in ILO Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries. As part of the system of thematic Special Procedures, the Human Rights Council has appointed a Special Rapporteur on the rights of indigenous peoples. The Special Rapporteur promotes good practices, reports on the overall human rights situations of indigenous peoples in selected countries, addresses specific cases of alleged violations of the rights of indigenous peoples, and conducts or contributes to thematic studies. “Other applicable international instruments relating to indigenous peoples” means any treaties, conventions, protocols, or other international instruments related to indigenous peoples to which the project/programme country is a party and that are currently in force. These include but are not limited to the following United Nations (UN) conventions: - Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment; - Convention on the Elimination of All Forms of Discrimination against Women; - Convention on the Rights of the Child; - International Covenant on Civil and Political Rights; - International Covenant on Economic, Social, and Cultural Rights; - International Convention on the Elimination of All Forms of Racial Discrimination. If indigenous peoples are present in the project/programme implementation area the IE will: 1) Describe how the project/programme will be consistent with UNDRIP, and particularly with regard to Free, Prior, Informed Consent (FPIC) during project/programme design, implementation and expected outcomes related to the impacts affecting the communities of indigenous peoples. 2) Describe the involvement of indigenous peoples in the design and the implementation of the project/programme, and provide detailed outcomes of the consultation process of the indigenous peoples. 3) Provide documented evidence of the mutually accepted process between the project/programme and the affected communities and evidence of agreement between the parties as the outcome of the negotiations. FPIC does not necessarily require unanimity and may be achieved even when individuals or groups within the community explicitly disagree. 4) Provide a summary of any reports, specific cases, or complaints that have been made with respect to the rights of indigenous peoples by the Special Rapporteur and that are relevant to the project/programme. This summary should include information on</p>

	<p>subsequent actions, and how the project/programme will specifically ensure consistency with the UNDRIP on the issues that were raised. Possible elements that may be considered: Information that the IE may consider when assessing the project/programme potential risks: - Status of ratification of ILO Convention 169 by the country or countries in which the project/programme will be implemented. - Project/programme alignment with UNDRIP and FPIC principles.</p>
<p>Principle 8: Involuntary Resettlement</p>	<p>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 principle refers to any physical or economic displacement that is caused by the project/programme, whether voluntary or involuntary. If any physical or economic displacement is required by the project/programme and if it is voluntary or involuntary, the IE will: 1) Provide justification for the need for involuntary resettlement by demonstrating any realistic alternatives that were explored, and how the proposed involuntary resettlement has been minimized and is the least harmful solution. 2) Describe in detail the extent of involuntary resettlement, including the number of people and households involved, their socio-economic situation and vulnerability, how their livelihoods will be replaced, and the resettlement alternatives and/or the full replacement cost compensation required whether the displacement is temporary or permanent. 3) Describe in detail the involuntary resettlement process that the project/programme will apply, and the built-in safeguards to ensure that displaced persons shall be informed of their rights in a timely manner, made aware of the grievance mechanism, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. This also should include an overview of the applicable national laws and regulations. 4) Justify the conclusion that the involuntary resettlement is feasible. 5) Describe the adequacy of the project/programme organisational structure to successfully implement the involuntary resettlement as well as the capacity and experience of the project/programme management with involuntary resettlement. 6) Build awareness of involuntary resettlement and the applicable Principles and procedures of the project/programme.</p>
<p>Principle 9: Protection of Natural Habitats</p>	<p>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. The Convention on Biological Diversity defines a ‘habitat’ as the place or type</p>

	<p>of site where an organism or population naturally occurs. “Critical natural habitat” refers to habitats that are not man-made and that fulfil a critical role for an organism or a population that in the absence or disappearance of that habitat might be severely affected or become extinct. Specific knowledge about a habitat (either common knowledge, traditional insights, or the result of formal scientific research) is always the basis for identifying critical natural habitats. Often, but by no means always, this has resulted in assigning a protected status to such a critical habitat. The principle refers to legal protection at all levels of governance. The absence of legal protection alone cannot be used to conclude that a habitat is not to be considered a critical natural habitat. Reference is made to knowledge about the importance and intrinsic value of a habitat. The precautionary principle prevails where such knowledge is inadequate or inconclusive. The IE will identify: 1) the presence in or near the project/programme area of natural habitats, and 2) the potential of the project/programme to impact directly, indirectly, or cumulatively upon natural habitats. If such habitats exist and there is a potential of the project/programme to impact the habitat, the IE will: 1) Describe the location of the critical habitat in relation to the project and why it cannot be avoided, as well as its characteristics and critical value. 2) For each affected critical natural habitat, provide an analysis on the nature and the extent of the impact including direct, indirect, cumulative, or secondary impacts; the severity or significance of the impact; and a demonstration that the impact is consistent with management plans and affected area custodians. Possible elements that may be considered: Information that may assist the IE in decision-making include: - The laws and regulations within the country that protect natural habitats, including the different forms of protection, and the institutional arrangements for their implementation and enforcement that apply to the habitat. - The critical natural habitats nationwide, their location, characteristics and critical value. These areas may be identified based upon their actual or proposed legal protection status, on common knowledge or traditional or indigenous knowledge, or on scientific information on their value. The legal protection refers to all levels of government, as well as international conventions and agreements like the Convention on Wetlands (Ramsar, Iran, 1971). Scientific knowledge may be in the form of peer-reviewed, published scientific research, or inventory lists prepared by authoritative sources like the UNESCO Man and the Biosphere Programme, the International Union for Conservation of Nature (IUCN) and the United Nations Environment Programme (UNEP). Large non-governmental conservation organizations like the World Wide Fund for Nature, BirdLife International, and Conservation International may also be sources of useful information.</p>
<p>Principle 10: Conservation of Biological Diversity</p>	<p>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</p>

	<p>species. The Convention on Biological Diversity (CBD) defines biological diversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” This definition implies that biological diversity concerns not only living organisms of all taxa but also ecosystem processes, habitats, hydrological cycles, processes of erosion and sedimentation, landscapes, etc. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. The IE will identify: 1) the presence in or near the project/programme area of important biological diversity; 2) potential of a significant or unjustified reduction or loss of biological diversity, and 3) potential to introduce known invasive species. If important biological diversity exists and will be significantly or unjustifiably impacted or if the project/programme will introduce known invasive species, the IE will: Biological diversity: - Describe the elements of known biological diversity importance in the project/programme area, using any relevant sources of information, such as protection status, status on the IUCN Red List of Threatened Species and other inventories, recognition as a UNESCO Man and the Biosphere Programme reserve, Ramsar site, etc. - Describe why the biological diversity cannot be avoided and what measures will be taken to minimize impacts. Invasive Species: - Describe the invasive species that either may or will be introduced and why such introduction cannot be avoided. Provide evidence that this introduction is permitted in accordance with the existing regulatory framework and the results of a risk assessment analysing the potential for invasive behaviour. - Describe the measures to be taken to minimize the possibility of spreading the invasive species.</p>
<p>Principle 11: Climate Change</p>	<p>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 main drivers of climate change that are considered here are the emission of carbon dioxide gas from the use of fossil fuel and from changes in land use, methane and nitrous oxide emissions from agriculture, emission of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, other halocarbons, aerosols, and ozone. Compliance with the principle may be demonstrated by a risk-based assessment of resulting increases in the emissions of greenhouse gasses or in other drivers of climate change. Projects/programmes in the following sectors require a greenhouse gas emissions calculation using internationally recognized methodologies: energy, transport, heavy industry, building materials, large-scale agriculture, large-scale forest products, and waste management. The calculations will be used as a basis for a substantiated evaluation of the significance and justification of any increase. Other</p>

	<p>projects/programmes may demonstrate compliance by carrying out a qualitative risk assessment for each of the mentioned drivers of climate change, plus any impact by the project/programme on carbon capture and sequestration capacity.</p>
<p>Principle 13: Public Health</p>	<p>Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health. Possible public health impacts of a project/programme can be determined by assessing its impact on a range of so-called determinants of health. Public health is determined not just by access to medical care and facilities and lifestyle choices, but also by a much broader set of social and economic conditions in which people live. Possible elements that may be considered: The project/programme may demonstrate that it will not cause potentially significant negative impacts on public health by screening for possible impacts and including the results of the screening in the Proposal. Health impact screening is a process of rapidly and systematically identifying the project/programme’s potential impacts on public health. It will typically also elucidate the risk of such effects and determine if a further thorough public health impact assessment and the development of a management plan is needed to prevent potentially significant impacts and to demonstrate compliance with the principle. This screening can thus be the first step in a full health impact assessment, depending on the outcome of the screening. A range of health impact assessment and screening tools exist. For the purpose of demonstrating compliance, a checklist for health impact assessment screening may be used. Such a checklist considers the potential impact of the project/programme on a comprehensive range of health determinants for the population as a whole and for groups within the population. A health impact-screening checklist should include at least the following sections: 1) a section on the background and context of the project/programme; 2) a section with an adequate list of health determinants, with space for a nuanced assessment, for each determinant, the likelihood of impact occurring; and 3) a section identifying the group(s) most likely to be affected by each health determinant. If the outcome of the screening is that no potentially significant negative impacts on public health are likely, then the screening may be used to demonstrate compliance. If on the other hand the screening concludes that further health impact assessment is needed, then the outcome of that process may be used to demonstrate compliance. Both screening and possibly health impact assessments must comply with the relevant WHO recommended practices.</p>
<p>Principle 14: Physical and Cultural Heritage</p>	<p>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</p>

	<p>resources. The reference for international recognition of physical and cultural heritage is the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage. Convention Articles 1 and 2 provide definitions of what is considered cultural and natural heritage. The List of World Heritage in Danger (Article 11 (4) of the Convention) also provides a reference. The IE will identify the presence of cultural heritage in or near the project/programme. If cultural heritage exists, the IE will: - Describe the cultural heritage, the location and the results of a risk assessment analyzing the potential for impacting the cultural heritage; and - Describe the measures to be taken to ensure that cultural heritage is not impacted, and if it is being accessed by communities, how this access will continue. Possible elements that may be considered: Information that may assist the IE when assessing the project/programme potential risks include: - Status of ratification and entry into force of the Convention Concerning the Protection of the World Cultural and Natural Heritage by the country or countries in which the project/programme will be implemented. - National legal and regulatory framework for recognition and protection of physical and cultural heritage in the country or countries where the project/programme is implemented. - Inventory of the physical and cultural heritage present in the wider project/programme area that enjoys recognition at community, national, or international levels.</p>
<p>Principle 15: Lands and Soil Conservation</p>	<p>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. Principle 15 concerns the stewardship of land to either be maintained in its natural state, where possible, or if it is converted to promote and protect its functioning. Soil conservation refers to a set of measures to prevent, mitigate or control soil erosion and degradation. There are two aspects to the principle: promotion of soil conservation and avoidance of degradation or conversion of valuable lands. This applies to soils and lands directly affected by the project/programme as well as those influenced indirectly, or as a secondary or cumulative effect. Soil conservation should be incorporated in project/programme design and implementation. Soil conservation: The IE will identify: 1) the presence of fragile soils (e.g. soils on the margin of a desert area, coastal soils, soils located on steep slopes, rocky areas with very thin soil) within the project area or 2) project/programme activities that could result in the loss of otherwise non-fragile soil. If such soils exist and potential soil loss activities will take place, the IE will: - Identify and describe: o Soils that may be impacted by the project/programme; o Activities that may lead to loss of soils; o Reasons why soil loss is unavoidable and o Measures that will be taken to minimize soil loss. - Describe how soil conservation has been promoted to the EE. Valuable lands: The IE will identify: 1) productive lands and/or lands that provide valuable ecosystem services within the</p>

	project/programme area. If such lands exist, the IE will: - Identify and describe: o The lands; o Project/programme activities that may lead to land degradation; o Reasons why using these lands is un-avoidable and the alternatives that were assessed, and o Measures that will be taken to minimize productive land degradation or ecosystem service impacts.
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5.0 THE ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK

KARATU CLIMATE RESILIENCE AND ADAPTATION PROJECT FOR HADZABE AND DATOGA COMMUNITIES (KARAHADA)

The Environmental and Social Management Plan (ESMP) outlined below consists of a set of measures for: (a) screening (i.e. determination of potential adverse environmental and social impacts); (b) mitigation; (c) monitoring; and (d) institutional arrangements to be undertaken during the planning, design, procurement, and implementation stages of the planned activities to be financed out of the proceeds of the project, so as to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

Some of the project interventions/investments to be supported may have adverse environmental and social impacts that must be addressed before they are implemented. This ESMP is necessary to prescribe clear project arrangements for the preparation, review, approval, and implementation of activities in order to adequately address both Adaptation Fund (AF) and national environmental and social safeguards issues and principles. It provides distinct arrangements for addressing environmental and social issues associated with project implementation. Table 5 provides a template for developing the detailed ESMP, including the actions needed to implement the proposed mitigation and enhancement measures.

OBJECTIVES OF THE ESMP FOR THE KARAHADA PROJECT

The overall objective of this ESMP is to provide an environmental and social screening framework for the project. It is intended to be used as a practical tool during project formulation, implementation, and monitoring. It explicitly describes the steps to be undertaken in the implementation of planned sub-projects under the project.

This will ensure that the implementation of sub-projects is carried out in an environmentally and socially sustainable manner. It will also provide a framework to enable communities/beneficiaries to screen sub-projects, identify potential impacts, and implement measures to address adverse environmental and social impacts.

Specifically, the ESMP aims to: i) Establish clear procedures and methodologies for the environmental and social planning, review, approval, and implementation of activities to be executed under the project; ii) Assess the potential environmental and social impacts of envisaged project activities; iii) Propose mitigation measures that will effectively address identified negative impacts; iv) Specify appropriate roles and responsibilities, and outline the necessary reporting procedures for managing and monitoring environmental and social concerns related to the project; and v) Determine the training, capacity-building, and technical assistance needed to successfully implement the provisions of the ESMP by the various stakeholders.

6.0 GENERAL VIEW OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

a) Positive Impacts

Implementation of the proposed project is expected to generate the following positive environmental and social impacts:

- i. Integration of livelihood systems (small animal keeping, improved agricultural crop varieties, modern beekeeping, improved jewelry and blacksmith activities, and reliable water supply and access) will profoundly

reduce the supply-and-demand pressure on natural resources. ii. Establishment of a Farmer Field and Food Systems (FFFS) demonstration center will facilitate learning and experience-sharing across all project components, thereby increasing the capacity of extension services and rural institutions in the long term while promoting decentralized service provision and innovation. iii. Provision of water supply and improved access will contribute to climate resilience, sustainable diversified livelihood strategies, and better management of natural resources. iv. Rehabilitation of fragile areas such as degraded lands, forests, and riverbanks will contribute to ecosystem and ecological restoration, thereby increasing resilience to climate change events. v. Provision of health services to vulnerable communities will contribute to increased resilience against climate-related health problems. vi. Training and awareness-raising on environmental and climate-change issues will contribute to better environmental management for both communities and Karatu District Council staff.

b) Negative Impacts

The following negative environmental and social impacts are likely to occur if the project is implemented without proper safeguards:

- i. Delineation of degraded areas for rehabilitation may shift pressure to adjacent non-degraded areas.
- ii. Inadequate management of new or improved water points at household or community level may lead to stagnant water and an increase in malaria or other water-borne disease cases.
- iii. The presence of a large and diverse spectrum of project beneficiaries may cause conflicts if beneficiary selection and benefit-sharing are not handled transparently and equitably.
- iv. Promotion of exotic tree species in natural forest thickets could negatively affect local biodiversity.
- v. Overall project implementation activities (construction, movement of people and materials, vegetation clearing, etc.) may temporarily disturb natural systems.

Enhancement and Mitigation Measures

While measures will be taken to maximize and enhance the positive impacts of the proposed project, equal attention will be given to minimizing or eliminating the identified negative impacts. The Environmental and Social Management and Monitoring Matrix (Table 5 below) provides detailed mitigation and enhancement measures, responsible parties, timelines, and budgets.

Table4: Enhancement and mitigation measures

Item	Potential Positive Impact	Enhancement Measure	Responsibility (Implementation)	Site of Implementation	Timeline	Responsibility (Monitoring)	Indicator / Means of Verification
1	Increased alternative livelihood opportunities	Introduce diversified livelihood systems (improved crops, small livestock, modern beekeeping, jewelry/blacksmith, reliable water access) that reduce pressure on natural resources	TAEPO, Kongwa District Council, Project Management Unit	All project sites associated with beneficiary communities	Throughout the project cycle	Project Management Unit, TAEPO, Karatu District Council	Number of households adopting new/diversified livelihoods; reported reduction in resource extraction
2	Enhanced availability and access to water sources	Construct/rehabilitate water supply infrastructure to improve livelihood systems and food security	Karatu District Council, TAEPO, NEMC	All villages involved in the project	Throughout the project cycle	Project Management Unit, District Environmental, Water and Agricultural Officers	Number of functional water points established; volume of water supplied; % of target population with improved access
3	Rehabilitation of degraded environmental systems	Rehabilitate degraded forests, wetlands, riverbanks, and hillsides to restore ecosystems and reduce risk of floods and landslides	Karatu District Council, TAEPO, NEMC	Designated project rehabilitation sites	Throughout the project cycle	Project Management Unit, District Environmental, Water and Agricultural Officers	Hectares/acres of degraded areas restored and rehabilitated; survival rate of planted trees/vegetation
4	Reduction of deforestation	Implement area closures, community-managed reforestation, and agroforestry initiatives	Karatu District Council, TAEPO, NEMC	Project sites with forest/thicket restoration	Throughout the project cycle	Project Management Unit	Number of hectares under closure/restoration; number of trees planted and surviving; reported decrease in illegal logging/firewood

							collection
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Table5: Environmental and social impacts of the different activities under project has been identified as summarized in the table below.

PROJECT COMPONENTS/ACTIVITIES	EXPECTED IMPACTS ON THE EFP PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
Component 1. Enhancing integrated climate change resilient livelihood diversification system in the selected sites in three wards of Baray, Endamaghan and Mang'ola in Karatu District												
Outcome 1. Increased food security, income and resilience to climate change impact through Climate Smart practices in selected wards												

Output1.1. Sustainable bee keeping initiative for food security and increased household income in selected village of the three wards of Baray, Endamaghan and Mang'ola improved

1.1.1 Training hunters and gatherers on sustainable bee keeping practices	√	X	X	X	N/A	√	√	X	X	√	X	√ X
1.1.2 Provision of at least 1500 modern beehives and related equipment.	√	X	X	X	N/A	√	√	X	X	√	X	√
1.1.3 Building capacity on honey marketing	√	X	X	X	N/A	√	√	X	X	√	X	√ X
1.1.4 Building capacity for communities to establish honey producer's cooperative society	√	X	X	X	N/A	√	√	X	X	√	X	√

Output 1.2 Use alternative source of biomass energy promoted for Datoga (Blacksmith) communities in the three wards of Baray, Endamaghan and Mang'ola

1.2.1 Training Datoga (blacksmith) communities on the use of sustainable source of energy	√	X	X	X	N/A	X	X	X	X	X	X	X
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PROJECT COMPONENTS/ACTIVITIES	EXPECTED IMPACTS ON THE EF PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Land and Soil Conservation
1.2.2. Training Datoga on how to make energy saver cooking stoves for cooking and forging tools	√	X	X	X	N/A	X	X	X	X	X	X	X
1.2.3. Training Datoga (blacksmith) on making alternative energy products e.g briquettes	√	X	X	X	N/A	X	X	X	X	X	X	X
1.2.4 Facilitating Datoga (blacksmith) communities to engage into a business venture for selling energy saver cooking stoves and briquettes	√	X	X	X	N/A	X	X	X	X	X	X	X

1.2.5 Supporting Datoga (blacksmith) to establish and operate energy saver community group	√	X	X	X	N/A	X	X	X	X	X	X	X	X
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Output 1.3 Use of local and improved breeds of rabbit and poultry for food security and income generation for selected villages three wards of Baray, Endamaghan and Mang'ola improved

1.3.1 Training women men and youth on Poultry and rabbit production	√	X	X	X	N/A	X	X	X	X	X	X	X	X
1.3.2 Construction of simple poultry and rabbit houses	√	X	X	X	N/A	X	X	X	X	X	X	X	X
1.3.3 Provision of startup capital in form of local pullet, cocks, does and buck to the communities	√	X	X	X	N/A	X	X	X	X	X	X	X	X
1.3.4 Provision of feed, supplements, veterinary drugs and equipment/utensils	√	X	X	X	N/A	X	X	X	X	X	X	X	X

Output 1.4 Production of diversified cultural and nature-based tourism products for Hadzabe (hunters and gatherers) and Datoga (blacksmith) women, men and youth improved.

1.4.1 Train women and youth on jewelry and leather quality and marketing	√	X	X	N/A	X	X	X	X	X	X	X	X
1.4.2 Promote the jewelry and leather business amongst women and youth	√	X	X	N/A	X	X	X	X	X	X	X	X
1.4.3 Provide support and capacity for women and youth to form jeweler's and leather makers groups	√	X	X	N/A	X	X	X	X	X	X	X	X

1.5 Output Identification and production of suitable traditional and modern crops for enhanced food security and increased household income in selected villages of Baray, Endamaghan and andMang'ola promote

1 .5.1 Training of men, women and youth on production of selected traditional and modern crops	√	X	X	N/A	X	X	X	X	X	X	X	X
1.5.2 Establishment of at least 10 acres as demonstration farms (Field Farm School-FFS) across 8 villages within the targeted three wards	√	X	X	N/A	X	X	X	X	X	X	X	X
Component2 Enhancing climate resilient rural water infrastructure and supply system in vulnerable Hadzabe (hunters and gatherers) and Datoga (blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu												
Outcome2 Enhanced climate resilient rural water supply system in vulnerable communities of Hadzabe (gathers and hunters) and Datoga (Blacksmith) at Baray and Endamaghang Wards												
Output2.1 At least 10 boreholes drilled in Hadzabe (gathers and hunters) and Datoga(blacksmith) communities at Baray, Mang'ola and Endamaghang Wards in Karatu District for improved water availability												
2.1.1 Conducting hydro geological survey	√	X	X	X	X	√	√	X	X	X	X	X
2.1.2 Drill boreholes in drought prone and water scarce villages and install solar driven water pumps at Baray, Mang'ola and Endamaghang Wards	√	X	X	X	X	√	√	X	X	X	X	X
Output2.2 Water supply systems constructed in Hadzabe (gathers and hunters) and Datoga (blacksmith) communities at Baray, Mang 'ola and Endamaghang Wards in Karatu District for improved water quality												

2.2.1 Design and Construct water storage tanks, distribution network systems and pump system at Baray, Mang'ola and Endamaghang Wards	√	X	X	X	X	√	√	X	X	X	X	X
2.2.2 Construct community water points/ community water Kiosks for network systems	√	X	X	X	X	√	√	X	X	X	X	X
Output2.3 Hadzabe (hunters and gathers) and Datoga (blacksmith) facilitated, trained and supported to operate and maintain the water infrastructure.												
2.3.1 Conduct awareness raising meetings with community stakeholders on operation and maintenance of water infrastructure and supply	√	X	X	X	X	√	√	X	X	X	X	X
X Output 2.4 Climate resilient behavioral change and water governance for Hadzabe and Datoga communities in the three wards of Baray, Endmagahan and Mang'ola enhanced												
2.4.1 Conduct awareness raising meetings with community stakeholders on behavior change and water governance	√	X	X	X	X	√	√	X	X	X	X	X

PROJECT COMPONENTS/ACTIVITIES	EXPECTED IMPACTS ON THE EF PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
Component 3. Improving climate change resilience of forests and non-timber products for selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District												
Outcome 3. Improved forests services and functions to sustain climate change resilient livelihoods at selected villages in baray, Endamaghan and Mang'ola wards												
Output 3.1. Adoption of integrated climate smart forest management practiced for selected villages of Baray, Endamaghan and Mang'ola wards promoted.												
3.1.1 Creating awareness and training on integrated forest management	√	X	X	X	X	X	X	X	X	X	X	X
3.1.2. Support the establishment and maintenance of tree nurseries by communities	√	X	X	X	X	X	X	X	X	X	X	X

PROJECT COMPONENTS/ACTIVITIES	EXPECTED IMPACTS ON THE EFP PRINCIPLES											
	Compliance with the Law	Access and Equity	Marginalized and Vulnerable Groups	Gender Equality and Women's Empowerment	Involuntary Resettlement	Protection of Natural Habitats	Conservation of Biological Diversity	Climate Change	Pollution Prevention and Resource Efficiency	Public Health	Physical and Cultural Heritage	Lands and Soil Conservation
3.1.3 Tree planting and maintenance	√	X	X	X	X	X	X	X	X	X	X	X
3.1.4 Establishment and building capacity for communities to form and operate tree planting group	√	X	X	X	X	√	√	X	X	X	X	X
Component 4..Promoting climate change resilience of health systems at three wards of Baray, Endamaghan and Mang'ola in Karatu District												
Outcome 4. Health and sanitation infrastructure and services for Hadzabe (hunters and gatherers) and Datoga (blacksmith) in selected villages of the three wards of Baray, Endamaghan and Mang'ola in Karatu District improved												
Output 4.1 Climate Vulnerability assessment for a comprehensive action plan in health sector at Karatu District Council conducted												

Annex 5: USP Screening Form

USP Screening Form for Unidentified Subprojects (USPs)

This USP Screening Form must be completed for all micro-activities (borehole siting, beehive placement, restoration sites, water harvesting structures) whose exact locations are identified during implementation. The form ensures compliance with the Adaptation Fund Environmental and Social Policy (ESP), Gender Policy, and the FPIC requirements for Indigenous Peoples.

1. Subproject Title

2. Subproject Type (tick one)

- Borehole
- Beehives / Honey Processing
- Restoration Site
- Rainwater Harvesting Structure
- Alternative Livelihood Micro-Infrastructure
- Other (specify): _____

3. Proposed Village / Ward

Village: _____ Ward: _____

4. GPS Coordinates (if available)

Latitude: _____ Longitude: _____

4 Description of Proposed Activity

Provide a brief description of the micro-activity, purpose, and expected outputs.

6. Community Consultations Conducted

- Yes No

If YES, describe:

- Consultation method (FGD, PRA, FPIC, household visits):
- Number of participants (Men: ____ Women: ____ Youth 15–24: ____):
- Key issues raised:

7. FPIC Required for Hadzabe/Datoga Communities?

- Yes No

If YES, attach FPIC approval or minutes of consent.

8. Potential Environmental Impacts

Describe any potential impacts on vegetation, water, soils, wildlife, or habitats.

9. Potential Social Impacts

Describe potential impacts on women, youth, Indigenous Peoples, vulnerable groups, or land use.

10. Environmental & Social Risk Level

Low Medium High

Provide justification:

11. Required Mitigation Measures

List required ESMP actions based on Category B safeguards.

12. Screening Decision

- Approved
- Approved with Conditions
- Not Approved (requires redesign)

Conditions (if any):

13. Signatures

Village Chairperson: _____

District Environmental Officer: _____

Project Safeguards Lead: _____

⁶ 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.
