

UNESCO Regional Office for Southern Africa

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12 April 2018

Adaptation Fund Board Secretariat c/o Global Environment Facility Mail stop: N 7-700 1818 H Street NW Washington DC 20433, USA

Subject: Pre-Concept Proposal for a National Project for Zimbabwe

Dear Sir/Madam,

Please find attached the official submission of UNESCO's Pre-Concept Proposal for a National Project for Zimbabwe entitled *Strengthening local communities' adaptive capacity and resilience to climate change through sustainable groundwater exploitation in Zimbabwe* developed in partnership with the Ministry of Environment Water and Climate (MEWC) and supported with a copy of the Ministry's endorsement for the proposal.

Zimbabwe, a landlocked water-scarce country in Southern Africa, has experienced recurring devastating droughts (2001 to 2007 and 2011 to date) thus impacting negatively on agriculture, food and water security on vulnerable rural communities. The proposal seeks to strengthen food and water security and build long-term resilience to climate change and variability in 4 poverty-stricken and most vulnerable sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi in Zimbabwe.

We look forward to a favourable response regarding the pre-proposal and a recommendation for submission of a full project proposal.

Yours sincerely

Prof. Hubert Gijzen, PhD

Regional Director and Representative



NATIONAL PROJECT CONCEPTNOTE TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:

Country:

Title of Project/Programme:

Type of Implementing Entity:

Implementing Entity:

Executing Entity:

Amount of Financing Requested:

Food Security and Water Management

Zimbabwe

Strengthening local communities' adaptive

capacity and resilience to climate change

through sustainable groundwater

exploitation in Zimbabwe

Multilateral Implementing Entity (MIE United Nations Education, Scientific and

Cultural Organisation (UNESCO)

Ministry of Environment, Water and Climate USD 9,873,500 (in U.S Dollars Equivalent)

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.

Introduction

Zimbabwe is a landlocked country which is located in Southern Africa with a total land area of 390,757km² and a population of about 14 million. Zimbabwe is generally a water-scarce country with an average annual rainfall of 657 mm, ranging from over 1,000 mm in the Eastern Highlands to around 300-450 mm in the lowveld in the south. Only 37% of the country receive rainfall considered adequate for agriculture. Some studies have suggested that average rainfall in Zimbabwe has declined by 10% or 100 mm during the last 100 years. The western side is generally arid, with little potential for dam sites because of the nature of soils and low rainfall. The country is prone to frequent droughts and flush flooding strongly correlated to El Niño events and this will be worsened by climate change. Around 80 percent of the population is concentrated in areas where rainfall is unreliable and previous studies and surveys have shown that those with limited access to productive water are extremely vulnerable to climate change impacts. The country has experienced recurrent devastating droughts (2001/02, 2002/03, 2004/05, 2006/07, 2011/12 and 2015/16 farming seasons) directly impacting agriculture, food and water security.

About 52% of Zimbabwe's population are females and about two-thirds of the population is below the age of 25. Poverty levels are very high in rural areas where about 70% of the population lives; the majority of whom are women. Gender inequality is evident in all spheres of life and it is supported and sustained by cultural and religious practices, patriarchal attitudes, power imbalances and lack of knowledge and skills on gender mainstreaming. Gender equality and empowerment is important to achieve socio-economic transformation of women in light of climate

change which widens the gaps and amplifies inequities between women and men and other vulnerable groups. About 85% of women in Zimbabwe depend on agricultural activities for their livelihoods and rural women make up the majority of smallholder farmers who are also dependent on rain-fed agriculture. Thus climate change negatively affects women smallholder farmers more than males because they have little or no adaptation capacity as they lack financial support and the available agriculture and irrigation technology is not gender-sensitive. In addition, rural women are poorly represented in water and irrigation management structures (irrigation committees, subcatchment and catchment councils) and this affects women's equitable access to water. Furthermore, when water is not accessible within shortest radius, women will be forced to walk long distances to fetch water at the expense of other productive activities.

The strategic importance of groundwater resources in climate adaptation in Zimbabwe

Groundwater storage in Zimbabwe is believed to be quite extensive, and could act as a natural buffer against climate change and variability. However, the quantities that can be sustainably abstracted are unevenly distributed, and yields vary. Groundwater is the main source of water for more than 70 percent of the population in rural areas. Sparsely populated areas are particularly reliant on groundwater, with hand dug wells historically playing a major role in rural and peri-urban areas. Groundwater supplies and boreholes in particular could play a tremendous role in achieving the following Sustainable Development Goals (SDGs) in Zimbabwe: 1) end poverty, 2) end hunger and promote sustainable agriculture, 6) sustainable water and sanitation, 8) inclusive sustainable economic growth, and 13) combating climate change impacts. As water supply coverage improves, new sources will be required in difficult-to-reach locations and tough hydrogeological conditions where the risks of drilling a dry borehole are high.

Over the past three decades, Zimbabwe has witnessed a significant increase in water wells and boreholes. These are financed by development programmes as well as investments by water users and local businesses. Not only do boreholes supply hand-pump water, but they also play a substantial role in small as well as larger rural piped water supplies. There are very promising for secondary uses such prospects for sustainable groundwater use production/processing and animal husbandry. More use of groundwater for agriculture will increase abstraction while the application of fertilisers, herbicides and pesticides is likely to affect its quality. Effective groundwater monitoring and management are thus essential to ensure that long-term domestic and agricultural demands can be met without depleting or damaging the resource. The lack of good scientific knowledge on groundwater resources in Zimbabwe, and Africa in general, undermines its potential to contribute to poverty reduction and economic development, and threatens its environmental sustainability. The required expertise and knowledge covers the extent and/or characteristics of shallow and deeper aquifer systems, including groundwater reserves in aquifer systems and the attendant pollution threats. It also includes recharge potential and dynamics and how these will be affected by climate change and landuse/landcover changes. How will these systems perform under unsustainable and increasing abstraction and climate change-induced changes in precipitation and changes in river flow regimes (natural or anthropogenic)?

In Zimbabwe, there is limited knowledge by policymakers on economic costs/benefits and potential contribution of groundwater to food security, health (domestic use), livelihoods and broader economic development. On the other hand, individual farmers are not well-positioned to address the wider implications of unsustainable use and groundwater depletion, and hence longer-term resilience. This project therefore seeks to demonstrate that knowledge-based and holistic catchment-based groundwater planning, sustainable use and management can overcome these constraints and significantly contribute to increased resilience. Sustainable groundwater

management therefore requires improved understanding of available resources, their vulnerabilities and resilience potential, detailed hydrogeological and geophysical investigations (supply) and sectoral groundwater use inventories (demand). There is very little groundwater monitoring in Zimbabwe, and hence no information systems and flow models, despite the existence of statutory instruments and financial mechanisms to do this. Robust monitoring networks and systems are required to monitor and track the resource status and trends, and form the basis for the implementation of resilience measures.

The Project

This Project seeks to develop human, technical and institutional capacity through a framework for sustainably utilising groundwater for productive use in vulnerable rural communities in Binga, Buhera and Mwenezi districts of Zimbabwe. The chosen communities have the worst poverty prevalence and food insecurity and live in the worst agro-ecological regions of the country. The Project will develop key capacities at national, district and sub-catchment levels and mainstream groundwater, climate change and gender in sustainable sub-catchment planning and carry out pilot and demonstrations at local levels. The Project will complement current government efforts to develop a national water masterplan and regional groundwater initiatives. The Project's national component will assess the groundwater resources in four sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi (these are related to the three districts mentioned above) and develop/tackle the critical shortage of skilled groundwater technicians, scientists and managers. The Project will establish a National Groundwater Development Centre with the primary function of training postgraduate and postdoctoral scientists in advanced hydrogeological sciences and related technologies, as well as improving knowledge of groundwater connectivity and policy, and management issues confronting water managers. At district and sub-catchment level, the Project will train extension workers, NGO and community leaders on adaptive groundwater management, climate resilient and gendered catchment planning and management. At local level, the Project will pilot and demonstrate differentiated solutions and best practices in climate-smart development using groundwater.

Project / Programme Objectives:

List the main objectives of the project/programme.

The ultimate goal of this Project is to increase local communities' adaptive capacity and resilience to climate change through increased groundwater exploitation for food security and other productive uses in rural areas of Zimbabwe. To sustainably achieve this, an array of actions are required starting at national to local levels and involving institutional reforms and modelling, resource characterisation and quantification, knowledge generation and capacity development, and awareness raising through piloting and demonstrations. Linked to this, the following specific project objectives are defined:

- 1. To strengthen technical, institutional and human capacity for improved and sustainable utilization of groundwater at national and local levels;
- To conduct comprehensive assessments of groundwater resources in four povertystricken and most vulnerable sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi and thus develop sample plans for sustainable groundwater utilization in improving climate resilience;
- 3. To strengthen the capacity of water and land management institutions in Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments in developing integrated catchment management plans that promote and protect groundwater use;

- 4. To pilot and demonstrate concrete climate change adaptation measures based on sustainable groundwater exploitation for diversifying and strengthening livelihoods of the most vulnerable population in Lower Gwayi, Upper Save, Lower Runde and Mwenezi subcatchments:
- 5. To compile and disseminate lessons learnt to facilitate future upscaling and replication of good practices in groundwater extraction and management.

These objectives are in line with those set by the Adaptation Fund aiming to "reduce the vulnerability and increase adaptive capacity to respond to climate change impacts, including variability at local and national level."

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 | Activities | Expected Concrete Outputs | Expected Outcomes | Amount (US\$) |
|---|---|--|--|------------------|
| 1. To strengthen technical, institutional and human capacity for improved and sustainable utilization of groundwater at national and local levels | 1.1 Establish a National Centre for Groundwater Research and Training 1.2 Revamp local and national institutions for managing groundwater in particular, and water resources in general 1.3 Train at least 500 skilled groundwater technicians, scientists and managers at national and local levels in improved and sustainable utilization of groundwater 1.4 Develop practical guidelines and manuals for groundwater planning, development and management | Output 1.1 National Centre for Groundwater Research and Training Output 1.2 Revamped local and national institutions for managing groundwater in particular, and water resources in general Output 1.3 Skilled groundwater technicians, scientists and managers Output 1.4 Practical guidelines and manuals for groundwater planning, development and management | Improved knowledge and capacity at national and local levels on groundwater science, policy and participatory management issues | 1,500,000 |
| 2. To conduct comprehensive assessments of groundwater resources in four poverty-stricken and most vulnerable subcatchments of Lower Gwayi, Upper Save, Lower Runde and | 2.1 Develop four groundwater atlases for each of the four subcatchments 2.2 Develop four Groundwater Development Action Plan for each subcatchment | Output 2.1: Groundwater atlases for each of the four sub-catchments developed Output 2.2: Groundwater Development Action Plan for each sub-catchment developed | Sustainable utilisation of groundwater based on sound scientific resource inventory; science-based policy to better manage resources and further develop new groundwater-based resilience strategies | 1,600,000 |

| Mwenezi and thus develop sample plans for sustainable groundwater utilization in improving climate resilience | | | and practical interventions. | |
|--|---|---|---|-----------|
| 3. To strengthen the capacity of water and land management institutions in Lower Gwayi, Upper Save, Lower Runde and Mwenezi subcatchments in developing integrated catchment management plans that promote and protect groundwater use | 3.1 Revise existing catchment management planning guidelines to clearly mainstream gender, climate change and groundwater 3.2 Revise Sub-Catchment Management Plans of Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments through stakeholder participation to address climate change and groundwater issues 3.3 Establish and support six ward level community water management structures in the four sub-catchments (Lower Gwayi, Upper Save, Lower Runde and Mwenezi) 3.4 Strengthen capacities of extension services and institutions at catchment level to support communities in the four selected sub-catchments to undertake climate change adaptation activities 3.5 Train at least 3, 000 community members in project target areas on sustainable technologies 3.6 Identify six pilot climatesmart water and food security projects using groundwater and renewable energy | Output 3.1 Existing catchment management planning guidelines revised to clearly mainstream gender, climate change and groundwater Output 3.2 The Sub-Catchment Management Plans of Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments revised through stakeholder participation to address climate change and groundwater issues Output 3.3 Six ward level community water management structures established and supported in the four sub-catchments (Lower Gwayi, Upper Save, Lower Runde and Mwenezi) Output 3.4 Capacities of extension services and institutions at catchment level strengthened to support communities in the four selected sub-catchments to undertake climate change adaptation activities Output 3.5 Skills training for community members on sustainable technologies Output 3.6 Six pilot climatesmart water and food security project sites using groundwater and renewable energy | Increased participation by the wider stakeholder community, who are aware of water resource management issues and have access to tailored information and guidelines that support better catchment planning and sustainable use of groundwater. | 1,000,000 |
| 4. To pilot and demonstrate concrete climate change adaptation measures based on sustainable groundwater exploitation for diversifying and strengthening livelihoods of the most vulnerable population in Lower Gwayi, Upper Save, Lower Runde and Mwenezi subcatchments | 4.1 Look and learn visits to best practice projects in Zimbabwe or regionally 4.2 Formulate and develop six pilot climate-smart water and food security projects in three districts of Zimbabwe using groundwater and renewable energy 4.3 Establish a food security and livelihood enhancement revolving fund | Output 4.1 Look and learn visits to best practice projects in Zimbabwe or regionally Output 4.2 Six pilot climatesmart water and food security projects using groundwater and renewable energy Output 4.3 Food security and livelihood enhancement revolving fund established | Livelihoods of communities in demonstration wards improved and diversified, reducing vulnerability to impacts of climate change | 4,100,000 |

| 5. To compile and disseminate lessons learnt to facilitate future upscaling and replication of good practices in groundwater extraction and management | information exchange project pa 5.2 Docu | lish web-based on sharing and e platform for articipants ment and adopt ctices by key lers | Output 5.1 Web-based information sharing and exchange platform established for Project participants Output 5.2 Good practices documented and adopted by key stakeholders | A framework for improved groundwater utilisation to reduce vulnerability to climate change developed and adopted | 400,000 |
|--|---|--|--|--|-----------|
| *************************************** | | 6. Project/Progr | amme Execution cost | | 500,000 |
| | | | Programme Cost | | 9,100,000 |
| | | Implementing E | amme Cycle Management Fee ch ntity 8.5% - This total includes the ject Coordinating Units plus the M | e costs over the five | 773,500 |
| | | Amount of Fina | ancing Requested | | 9,873,500 |

Projected Calendar:

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

| Milestones | Expected Dates |
|---|----------------|
| Start of Project/Programme Implementation | January 2019 |
| Mid-term Review (if planned) | July 2021 |
| Project/Programme Closing | December 2023 |
| Terminal Evaluation | January 2024 |

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.

The project consists of five components reflecting actions to build capacity at national to local levels and concrete adaptation and resilience measures in four vulnerable sub-catchments (chosen because of highest food insecurity and poverty levels in the country and falling under worst agro-ecological regions IV and V). These sub-catchments fall under three administrative districts as follows: Wards 19 and 25 in Binga District both fall under Lower Gwayi sub-catchment, Wards 20 and 23 in Buhera District both fall under Upper Save sub-catchment, and Mwenezi District has Ward 6 in Mwenezi sub-catchment and Ward 13 in Lower Runde sub-catchment. Interventions in these areas can be easily up-scaled to other wards at district level and to other sub-catchments and catchments at hydrological level. Zimbabwe has seven catchments and 47 sub-catchments.

Component 1. To strengthen technical, institutional and human capacity for improved and sustainable utilization of groundwater at national and local levels

Output 1.1 National Centre for Groundwater Research and Training: This proposed Centre will build capacity in groundwater knowledge and tackle the shortage of skilled groundwater technicians, scientists and managers in Zimbabwe. The Centre will be established in collaboration with a state university and will be fully resourced by the Project. It will be linked to the Southern

Africa Development Community Groundwater Management Institute (SADC-GMI) for synergies and sustainability. The primary functions of the Centre will be to train postgraduate and postdoctoral scientists in advanced hydrogeological and related technologies, as well as improving knowledge on groundwater science, policy and management issues confronting water managers. The Centre will also train district groundwater technicians, who will in turn train their district personnel. National manuals and guidelines for groundwater development and implementation will be developed. The Centre will act as an entry for groundwater technologies in the country and advise the government on groundwater issues.

Output 1.2 Revamped local and national institutions for managing groundwater in particular, and water resources in general: The National Water Policy of 2013, the Water Act (Chapter 20:24), and the new National Water Masterplan currently being developed, cover issues of groundwater. However, these need to be revitalized in light of the current deficiencies in regulating and monitoring groundwater abstractions in view of climate change realities in the country. Groundwater regulation should go beyond boreholes and cover springs and wells as these are the predominant facilities in use in Zimbabwe. The aim will be to promote groundwater use not only for primary use, but also for secondary uses. The Project will deal with the current constraints that make groundwater expensive and unviable for secondary use through technological innovations such as riverbed filtration, solar pumping, sand dams, etc.

Output 1.3 Skilled groundwater technicians, scientists and managers: The Project will provide seed funding for purchasing state-of-the-art groundwater equipment for the training of groundwater technicians, scientists and managers. Although the whole country will benefit from this in the medium to long-term, Project efforts will emphasize on the target areas under the Project first.

1.4 Practical guidelines and manuals for groundwater planning, development and management: During the course of the implementation of the Project, several manuals and guidelines will be developed by the Centre in conjunction with the District Development Fund, the Zimbabwe National Water Authority, Ministry of Agriculture and the Ministry of Environment, Water and Climate. These will guide practitioners on groundwater planning and development, and the mainstreaming of gender and groundwater in climate resilient catchment development.

Component 2. To conduct comprehensive assessments of groundwater resources in four poverty-stricken and most vulnerable sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi and thus develop sample plans for sustainable groundwater utilization in improving climate resilience

Zimbabwe has a population of about 14 million, of which about 70% live in rural areas. Piped schemes in rural areas are very rare, with shallow and deep wells predominantly used in rural communal areas whilst in commercial farming areas boreholes are mostly used. The use of groundwater for productive purposes is not that prevalent although it is believed that some areas in Zimbabwe have high yielding boreholes (>20m³/hr). Recent challenges caused by frequent floods and droughts have shown that groundwater could be a viable alternative water supply in agriculture, especially during drought years. The maps that have been used for identifying groundwater potential areas are very old and not robust enough to represent a comprehensive picture of the situation on the ground. Modern technologies can now do this much better and cost-effectively (these include advanced geophysical equipment and remote sensing). Identifying and quantifying groundwater for different areas and providing for their sustainable exploitation is the first step in promoting increased exploitation of groundwater. Also required is the mapping of groundwater quality and Binga, with its unique geology and salinity challenges, will offer an interesting case study on groundwater quality.

Output 2.1 Groundwater atlases for each of the four sub-catchments developed: In line with the current Water Resources Masterplan for Zimbabwe, the Project proposes to use modern technology to carry out an extensive study and mapping of groundwater potential in the four proposed sub-catchments. Considering the huge costs for a national campaign, starting small will give an insight into the complexity of the task before scaling up the exercise. This part will be carried out through international competitive bidding and will be supervised by the Ministry of Environment, Water and Climate and the respective ZINWA sub-catchment councils. The results will enable catchment authorities to properly plan and regulate the use of groundwater as an adaptation measure against climate change whilst also avoiding over-exploitation of the resource. On the mitigation side, this component will look at various catchment management strategies for recharging shallow and deeper aquifers and develop guidelines for sustainable utilization. The Zimbabwe Government is already in the process of encouraging the use of irrigation through its Command Agriculture project and this Project will also help to extend and promote the use of groundwater for productive purposes by peasant farmers in arid and semi-arid areas.

Output 2.2 Groundwater Development Action Plan for each sub-catchment: This is essentially an integrated land and water resources management plan. Knowing the quantity and quality of groundwater is not enough if there is no action plan and policy position on how it will be utilized. To support the National Water Masterplan, a Groundwater Development Action Plan which mainstreams gender, youth empowerment and climate change will be developed for each sub-catchment through comprehensive stakeholder consultations. This plan will provide for the technical and financial resourcing of the programme and provide solutions and models for use in different areas. Local community leadership: including councillors, chiefs, headmen, headmasters, etc, will be trained in practical skills for developing groundwater management plans and building climate resilience. Emphasis will also be on the targeted inclusion of women and youth leaders as these are more vulnerable to climate change and water scarcity. This process will be led by consultants and government officials.

Component 3. To strengthen the capacity of water and land management institutions in Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments in developing integrated catchment management plans that promote and protect groundwater use

This component will focus on actions at district and sub-catchment levels, aiming to build capacity of selected four sub-catchments so that they can upscale activities to other sub-catchments that will not be covered under this project. The actions will be centred on six pilot projects in selected wards, under the four sub-catchments, that will be led by the Ministry of Environment, Water and Climate through the Zimbabwe National Water Authority (ZINWA).

Output 3.1 Existing catchment management planning guidelines revised to clearly mainstream gender, climate change and groundwater: Consultants will be engaged to facilitate the revision of the catchment management planning guidelines by incorporating aspects of gender and climate change. Stakeholder consultative workshops will be conducted during revision of guidelines which will be printed and disseminated. The revised catchment management planning guidelines will be disseminated to the different stakeholders through training workshops. Five workshops are planned including one national and four sub-catchment level workshops.

Output 3.2 The Sub-Catchment Management Plans of Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments revised through stakeholder participation to address climate change and groundwater issues: In this Project, a consultant will be hired to facilitate the process of integrating climate change aspects and giving prominence to the role of groundwater in catchment outline plans. Stakeholder consultation workshops will be organised during the revision

of the catchment outline plans, which will be printed and shared with all stakeholders. The plans will cover innovative systems and technologies such as: water chain approaches, water use efficiency, groundwater treatment, groundwater recharge, catchment protection, soil conservation, reduction of land degradation through supporting terraces, afforestation, etc.

Output 3.3 Six ward level community water management structures established and supported in the four sub-catchments (Lower Gwayi, Upper Save, Lower Runde and Mwenezi): The management structures will be in line with Government structures for Ward Water Supply and Sanitation Committee (WWSSC). The emphasis will be on the gender inclusiveness, groundwater, indigenous knowledge, water for increased food security and innovative technologies. Quarterly meetings of sub-catchment and ward committees and forums will be conducted to review progress of execution of their roles and responsibilities in catchment management activities.

Output 3.4 Capacities of extension services and institutions at catchment level strengthened to support communities in the four selected sub-catchments to undertake climate change adaptation activities: Capacity needs assessments will be conducted for key stakeholders (regional and local government staff, extension workers, catchment management councils, ward water committees). A consultant will be hired to determine the capacity gaps among the different stakeholders to inform their training. A detailed training plan will be developed to guide the capacity building program for the Project. The consultant will also develop a detailed training plan highlighting the specific content with relevant examples to the prevailing conditions in each of the six wards. Training modules for the training-of-trainers (TOT) and field level trainings to build capacity of stakeholders on a continuous basis will be conducted. TOT trainings will be undertaken to create a critical mass of trainers in prioritized adaptation and mitigation actions at community level. Information, Education and Communication (IEC) materials for awareness raising will be developed and disseminated.

Output 3.5 Skills training for community members on sustainable technologies: In each of the selected 6 project wards, gendered groups will be trained on groundwater technologies such as borehole maintenance, deep well digging and protection, technologies for water abstraction, spring capture, basic irrigation systems design and construction, solar pump installations, windmill pumps, etc. The emphasis will be on women and youth trainees so as to empower vulnerable groups in society and thus increase their resilience. For easier upscaling and sustainability, the training will also be extended to other non-participating wards.

Output 3.6 Six pilot climate-smart water and food security projects using groundwater and renewable energy: Model groundwater management and utilisation plans, developed through local stakeholder dialogue and focusing on women and youth empowerment, will be developed for each sub-catchment and this will be used to design specific ward pilot schemes. Proposals will be called to address specific ward groundwater issues, exposure risks and food security, and proposals should show innovation in approaches and technologies and show direct links to community livelihood enhancement and improved food security.

Component 4. To pilot and demonstrate concrete climate change adaptation measures based on sustainable groundwater exploitation for diversifying and strengthening livelihoods of the most vulnerable population in Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments

This component will focus on six wards in Binga, Buhera and Mwenezi districts which also coincide with the selected sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi where groundwater is available and communities are considered very vulnerable to

climate change. Water development NGOs will be selected through competitive bidding to carry out the actual work. Expected actions will be groundwater development, installation of watersaving irrigation techniques and cultivation of high value crops for income diversification.

Output 4.1 Look and learn visits to best practice projects in Zimbabwe or regionally: Farmers understand better by practical demonstration. Four gendered members from each proposed ward demonstration project will be sponsored to visits best practice and pilot projects locally or regionally.

Output 4.2 Six pilot climate-smart water and food security projects using groundwater and renewable energy: Six demonstration projects will be formulated and developed in six wards to showcase good practice – Wards 19 and 25 in Binga District, Wards 20 and 23 in Buhera District, and Wards 6 and 13 in Mwenezi District. These will address technologies and systems covered in Output 3.6. The demonstration projects will target vulnerable groups such as women, youths, child-headed families, and the disabled. These interventions will be diversified depending on specific needs and circumstances of each ward, e.g, sand dams in Mwenezi, spring capture and protection in Binga, and agroforestry in Buhera.

Output 4.3 Food security and livelihood enhancement revolving fund established: The population in the six Project wards is 62,000, consisting of more than 13,000 households. A revolving fund will be established for farmers using groundwater for productive purposes and financial experts will guide on the amount per family, repayment period, and grant/loan apportionment. Agronomists and extension workers will guide the farmers on good practice farming so that they will be able to pay back the loan. The revolving fund will ensure sustainability of project actions beyond the Project lifetime.

Component 5. To compile and disseminate lessons learnt to facilitate future upscaling and replication of good practices in groundwater extraction and management

Lessons learnt and good practices will be continuously documented and field shows conducted to share experiences among the demonstration projects. Multimedia and written documents/manuals will be prepared, validated and disseminated to key stakeholders. Professional multimedia personnel and authors will be hired to do this.

Output 5.1 Web-based information sharing and exchange platform established for Project participants: A web administrator will design an internet-based platform for Project participants to upload information for sharing.

Output 5.2 Good practices documented and adopted by key stakeholders: Good practices and lessons from project interventions will be identified, documented (case studies, bulletins, drama, poems, videos, etc) and disseminated. The knowledge and information will also be shared through the use of existing and popular platforms e.g. social media, SMS platforms and other forms that are easily accessible by the stakeholders.

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 of the Adaptation Fund.

This Project will seek to train community members on climate change impacts and the whole array of actions they can take at personal and community levels to reduce their vulnerability. It will use role plays, scenario developments and group discussions to explain and demonstrate the phenomenon of climate change and thus encourage communities to take appropriate action. Well-trained social scientists will be used for the training. The rate of poverty in Zimbabwe more than double from 25 percent to 63 percent when the political and economic climate began to decline. Since then poverty levels in Zimbabwe have reached alarming proportions, with a recent authoritative survey revealing that in some parts of the country as many as 96 percent of villagers live on less than a dollar a day. According to the Zimbabwe Poverty Atlas for 2015 - a research carried out by Zimstat, the World Bank and the United Nations Children's Fund (UNICEF) - areas such as Nkayi in Matabeleland North Province have a shocking poverty prevalence of 95.6 percent. The other districts with highest poverty prevalence rates were Lupane (92.9%), Gokwe South (90.9%) and Mudzi (90.0%). The cause of this can be traced back to the many problems plaguing the agricultural industry.

The Project will provide additional water supply to the targeted communities and thus reduce the time they spend fetching for water. This time could be used for productive purposes and increased water availability will be used for productive purposes. This way, the communities will be able to diversify their income, thus building more resilience to climate effects. The anticipated productive uses of water include cultivation of high value crops, fruit trees, animal husbandry, poultry farming, market gardening, etc. A revolving fund will be set up to kick-start these activities, with the Project catering for offsite investments such as drilling boreholes, irrigation canals, etc. Based on experiences elsewhere, this should improve income levels and reduce poverty levels.

The Project will also include environmental conservation activities that will improve the natural-resource base of the communities, which are still the main assets for income generation of many livelihoods. The activities proposed in this Project for enhancing groundwater recharge and inground rainwater harvesting will help to make water available even in times of droughts. The availability of food will thus be improved by increased availability of water for irrigation systems and this will also enable crop cultivation throughout the year. The irrigation systems will also aim at cost-effectiveness and productivity enhancement by providing low-cost but efficient technologies to beneficiary families. The selection of beneficiaries will also ensure the poorest and most vulnerable in society are properly selected and targeted. The project will improve access to food by focusing on enhanced productivity and promotion of climate-friendly crops for different regions. It will work with organisations working on producing drought-tolerant maize and other crop varieties such as sorghum, millet and rapoko. Farmers will also be trained on post-harvest loss management to maximise their profits.

The use of food will be improved by promoting better sanitation, especially in view of the availability of water for personal hygiene. Extension workers will be trained to ensure dissemination of good practices. Improved incomes from irrigation will also be used to finance household water supply and sanitation. Irrigation projects at schools will be used to finance sanitation and hygiene improvements in schools. The losses suffered by farmers due to

exposures to droughts will be greatly reduced by irrigation using groundwater and rainwater harvesting. The use of drought-tolerant varieties will also improve harvests. These varieties should be broadly tolerant to diseases but the need for additional pests and weeds control will be catered for by proceeds from irrigation and improved productivity in other project action areas. Awareness raising campaigns will be used to reduce veld fires and land degradation.

Zimbabwe's environmental situation in rural areas has continued to deteriorate over the past two decades due to poor land husbandry practices. Challenges relate to lack of proper soil and water management especially in newly resettled areas. Poor soil management techniques also result in loss of fertile top soils, further impacting on agricultural productivity. In some cases, over-grazing is prevalent. Wetlands have been invaded for crop cultivation, affecting water flows and water quality. Veld fires are quite common and illegal mining rampant. A lot of mines have also closed without following appropriate mine closure procedures. The Project areas are faced with rampant ecosystem and environmental degradation, soil loss, and reduction in biodiversity, which contribute to low resilience to climate change with high risk floods. There is therefore an urgent need for good land and water management strategies.

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

The general problem in Zimbabwe on groundwater utilisation is lack of technical and institutional capacity. The project will therefore use a portion of Project funds to address this under Components 1 and 2, which together are allocated US\$3.1 million. This will build critical mass at national level that will be able to take the Project forward beyond the requested funding period. Using the Project funding and government allocations, two Post-docs, 5 PhDs and ten MPhils will be trained and these would form the nucleus to train more people in future. Project Component 3 will build capacity at local level and will train about 500 people, who will in turn train about 2,500 people in the next ten years based on demand and government funding. About US\$0.6 million will be allocated to Component 3 which will also establish robust frameworks for climate resilient catchment management. Furthermore, US\$0.4 million will be allocated to Component 3, for building capacities of institutions and communities and for knowledge management.

The Project will allocate about US\$4.1 million to Component 4 for implementing concrete adaptation actions for resilient and sustained ecosystems, groundwater development, improving agricultural productivity and hedging it against climate change and other livelihood systems. Component 4 is the most critical as it will ensure that concrete investments in climate change adaptation are implemented in the four sub-catchments. The benefits of these investments would include improved economic productivity and better livelihoods as a result of sustainable groundwater development, reduced catchment degradation, good agricultural practices, improved water infiltration and water harvesting.

A simple economic analysis was done to examine the benefits and costs of investments in climate change adaptation actions in order to assess the economic benefits and justify the costs. This analysis demonstrates that the economic internal rate of return (EIRR) of the investments included in the project is approximately 15%, against a government projected rate of 10% in the Climate Change Response Strategy. Furthermore, the sensitivity analysis demonstrates that if the main outcomes are underachieved, the project will still be viable.

D. Describe how the project / programme is consistent with national or subnational sustainable development strategies, including, where appropriate,

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 Government of Zimbabwe (GoZ) has established a five-year economic plan (2013 - 2018) called the "Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZimAsset)". The plan's vision is to move "towards an empowered society and a growing economy", execution of which is "to provide an enabling environment for sustainable economic empowerment and social transformation to the people of Zimbabwe". These points affirm an integrated, holistic approach to raising productivity, increasing food security and diversifying income in recognition of the complexity of rural development. It is important to note that ZimAsset identifies agriculture as a key sector for economic growth and employment creation. Value addition activities should be implemented to revitalize the agricultural sector and grow the economy rapidly; as such, agriculture is tasked with a 12.5% growth target for 2018. Additionally, an Agriculture Investment Plan and an Irrigation Development Master Plan, intended to reduce national dependence on rain-fed agriculture for sustained food security, have been developed by the Ministry of Agriculture, Mechanization and Irrigation Development.

To respond to and manage growing climate risks and hazards, the Government of Zimbabwe has formulated a number of key policies and plans, as well as strengthened the corresponding institutional frameworks. The GoZ has submitted an Intended Nationally Determined Contribution (INDC) to the UNFCCC that summarizes climate vulnerabilities and identifies long-term and near-term adaptation visions, goals and targets. In its INDC, Zimbabwe commits to promoting adapted crop and livestock development and climate-smart agricultural practices; strengthening management of water resources and irrigation in the face of climate change; and promoting practices that reduce risks of losses in crops, livestock and agricultural incomes, among other priorities.

The GoZ has developed a National Climate Policy (2016) and a costed National Climate Change Response Strategy (2015) and has established a Climate Change Management Department in the Ministry of Environment, Water and Climate to coordinate and guide the national response to climate change. In light of the climate change impact on water resources, Zimbabwe is also receiving support from the World Bank to develop a National Water Master Plan. Zimbabwe is currently developing a National Adaptation Plan (NAP) with readiness funding from the Global Climate Fund. The GoZ has initiated a stocktaking exercise supported by UNDP for the National Adaptation Plan, which it expects to finalise in 2018. This will inform the development of the NAP. Zimbabwe is also planning the formulation of a Low Emission Development Strategy for 2018, supported by the UNDP-Russia Trust Fund for Development.

The proposed Project has a very high level of support from the Zimbabwean government as the proposed interventions are an integral part of GoZ priorities as outlined above. Zimbabwe identified water resources management and climate change adaptation as key priority areas in its national policies or program documents. To address the various water resources related challenges, Zimbabwe adopted the principle of Integrated Water Resources Management (IWRM) which will be the basis for interventions underpinning this proposal. The GoZ has also developed several guiding policies that are aimed at mitigating the adverse impacts of climate change and variability and to achieve reduction in poverty through environmentally sustainable development.

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 project meets important environmental standards such as the Environmental Impact Assessment (EIA) and Ecosystem Protection Regulations (2007). Since the project is mainly aiming at improving the state of the environment of the Gwayi, Mzingwane, Runde and Save catchments, it will not generally have negative environmental impacts. It is clearly expected to have positive environmental impacts by improving the ecosystem of the areas, through improving sustainable management of water and other natural resources, addressing issues of community resilience to climate change and improving community livelihoods.

The project will be implemented following the national standards of Zimbabwe related to environmental, water, and ecosystems management. Some project resources will be used to meet relevant standards for the management of critical natural resources taking into account the threats to critical ecosystems, water quality and quantity and also land degradation.

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

The Project design and consultative processes have ensured that the project is not duplicating current efforts in Zimbabwe. Instead, the Project seeks to complement other projects, including those by GoZ, UNDP, UNICEF, FAO, Plan International, *etc.* The Project also recognises that the Zinwa Act provides for the preparation of River System Outline Plans by each catchment and that these were prepared nearly a decade ago. It therefore supports the revision of these at subcatchment level in four main catchments with targeted inclusion of groundwater and climate change resilience.

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

The Project has considered capacity building and knowledge management and learning as one of its main components as demonstrated by Components 1, 2 and 5. Important processes and lessons from project implementation will be properly documented and shared among stakeholders. These activities will be included as regular part of M&E and will be used in adjusting future project implementation. This component will also facilitate joint learning and experience sharing among various stakeholders. Moreover, selected wards falling under Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments will be used as demonstration sites for others to learn from experiences of the Project. The Project design is such that the participating wards will be backed by their district superiors for upscaling to other wards, whilst the sub-catchments will also be backed by their superiors at catchment levels for upscaling to other sub-catchments. There are operational lessons the project can learn through other on-going and past projects. This includes projects on rural livelihoods, on-farm improvements, afforestation, wood-efficient cooking stoves, sanitation and hygiene improvements, etc. The project will also look up to gap analysis studies from such projects and build a library of knowledge on good practices.

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 of the Adaptation Fund.

Responding to impacts of climate change requires a multi-disciplinary, multi-sectoral and multi-institutional approach because climate change is cross-cutting, affecting various sectors and groups of societies. The adopted project design facilitates multi-stakeholder participation and collaboration starting right from its development up to its implementation. It promotes consultations, participatory processes and dialogues among the various stakeholders of central government, NGOs, CBO, private sector, development partners, research/academics, catchment and Subcatchment councils, and local communities at ward and village levels. The project development will be based on long and wide consultative and participatory processes at various levels, including national stakeholders in the capital Harare, Binga, Buhera and Mwenezi district key informants, and local stakeholders at ward and catchment/sub-catchment levels. The main proposal design and development committee will be composed of experts from UNESCO, Chinhoyi University of Technology, University of Zimbabwe, Ministry of Environment, Water and Climate, Ministry of Agriculture, Zimbabwe National Water Authority and Upper Manyame Subcatchment Council.

The following issues, among others, will be comprehensibly covered during consultations:

- The nature of the project and its specific role in enhancing climate resilience of the most vulnerable communities
- The activities focusing on adaptation measures to be included by the project
- Defining key stakeholders, their roles, responsibilities and contribution during Project implementation
- Project management structures
- Issues of sustainability and ownership, especially by communities and local government
- Recognition of the role of women and youth in the implementation of the project
- Issue of coordinating and collaborating with other existing projects
- Identification of priority problems/issues and possible solutions
- · Identification of risks and/or possible conflicts and resolution mechanisms
- Identification of projects/initiatives for possible synergies.

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

The Climate Change Response Strategy of Zimbabwe makes an initial attempt to estimate the cost of national adaptation strategies to climate change, which is estimated at US\$10 billion. However, there generally is limited detailed data for Zimbabwe on the projected economic costs of climate change and the additional costs and benefits of adaptation. Assessments undertaken so far in Africa indicate high benefits incurred by adaptation compared to costs. For example, appropriate adaptation measures could reduce the economic costs of climate change in Africa from ~2 to 1% of GDP by 2040 and from 10 to 7% of GDP in Zimbabwe by 2100 (GoZ, 2015). Adaptation measures need to be carefully planned for and managed to reduce the negative effects of climate change on socio-economic returns in Zimbabwe. It is estimated that in Zimbabwe, climate change, water-related disasters, such as floods, landslides, windstorms and hailstorms, contribute well over 80% of the natural disasters and destroys many hectares of crops annually, resulting in huge economic losses.

The Project targets building adaptive capacity and enhancing climate resilience of local communities through implementing concrete adaptation and mitigation actions. Unlike the usually sectoral oriented projects, the proposed Project is designed to employ a more integrated and holistic approach of supporting communities in Binga, Buhera and Mwenezi districts in their efforts to increase their resilience to droughts and improve their adaptation capacity to those risks while at the same time improving their livelihoods strategies and enhancing food security. Community-based climate adaptive actions on the ground will improve sustainable natural resources management and hence agricultural productivity by these communities. Climate-responsive agronomic practices such as conservation agriculture and water harvesting schemes will not only improve agricultural productivity, but also make production more reliable, contributing to household food security. The adaptation activities of Component 4 therefore do not only increase the resilience of ecosystems and agricultural production systems to the risk of droughts, but also enhance the food security of the livelihoods in the catchments.

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

A project risk assessment exercise will be carried out and this will also cover environmental impact assessment of proposed project activities in line with environmental regulations of Zimbabwe. The Project will consider monitoring and evaluation of environmental changes as part of the regular project M&E system. The economic sustainability of the Project will be hinged on the participatory and consultative process to build ownership of the Project by communities, local authorities and other key stakeholders. This process is expected to mobilize some resources for the implementation of the Project (including in-kind) and the continuity of the activities after the end of the Project. Technical, logistical, material and political support is expected from the different stakeholders and will be ensured through the various stakeholder coordination and collaboration structures that will be created by the Project. Project interventions such as irrigation schemes, water harvesting structures and technologies to reduce firewood usage (land degradation) will continue to provide benefits to communities beyond the Project lifespan so as to meet their current and future demands. Investment plans and budgets developed will ensure future investments are implemented with ease based on available financial information and costing of investments.

The creation of stakeholder coordination and collaboration structures will ensure that technical expertise and experiences are continuously shared and utilized during implementation of activities in the sub-catchments, hence contributing to technical and technological sustainability. The introduction of some technologies will be undertaken through a credit arrangement (revolving funds) linked to catchment management that contributes to better technology adoption by communities while ensuring environmental protection. Communities will also be engaged in the local production of introduced technologies for easy dissemination.

Issues of social, cultural and other social values of local communities will be considered in proposing interventions. Recognition of the role of women and youth in the implementation of the project by all stakeholders is also expected to contribute to sustainability. The Project appreciates the differences in livelihoods, social systems and identified interventions in response to those differences. The project activities will be further refined by communities through consultation and participatory processes before full scale implementation is undertaken. This will create ownership by communities to project interventions and also to their sustainability.

Institutional sustainability will be achieved through the management structure included in the project design. The project will be executed through already existing government structures at national, catchment, and local levels. The structures and personnel will ensure sustainability of the project results beyond project lifecycle because institutions are permanent and will continue to execute their mandates after the Project and their capacities would have been built by the Project. Lastly, the Project Monitoring and Evaluation system, including mid-term review and phasing out strategy, will also contribute to sustainability of Project interventions.

All relevant national social and environmental standards of Zimbabwe, such as borehole drilling standards, river protection, irrigation policy, water policy, climate change policy and water quality regulations will be respected while implementing the Project. The monitoring system of the project will therefore include monitoring environmental performance of the project through conducting environmental audits and reviewing project reports. It is also envisaged that for some specific interventions of the project at the initial phase of the project, some project resources will be used to undertake environmental and social impact assessments for selected project activities, based on the guidance obtained from the Environment Management Agency (EMA) of Zimbabwe.

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

| Checklist of environmental and social principles | No further assessment required for compliance | Potential impacts and risks – further assessment and management required for compliance |
|--|---|--|
| Compliance with the Law | Yes. The project complies with domestic law and policies and meets important environmental standards such as the Environmental Impact Assessment (EIA) and Ecosystem Protection Regulations (2007) | No negative impacts are anticipated but the project is expected to have positive environmental impacts. Where Project interventions are large enough to warrant an EIA, this will be done to comply with the law. |
| Access and Equity | Yes. The project promotes fair and equitable access to benefits of the project, although it tries to promote women, youths and marginalised groups in communities. | Further assessment is required as the project may not be sufficiently accessible to all groups The project will closely monitor the targeting of all project beneficiaries to assure equal access of men, women youth and the most vulnerable. Indicators in this regard are included in the M&E scheme. |
| Marginalized and Vulnerable Groups | No initiatives are identified with orientation or execution that could generate a negative impact on marginalized and/or vulnerable groups. Project interventions are actually targeted at the vulnerable and marginalised groups and the activities do not have any negative impacts on these groups | The Project intervention activities other conservation methods need to be monitored closely in order to assure that these measures are accompanied with livelihood improvement projects. Indicators in this regard will be included in the M&E scheme. |

| Human Rights | No activities are identified whose execution is not in line with the established national and international human rights. Project objectives promote basic human rights for equitable access to services and groundwater for irrigated agriculture and capacity building as well as access to information. The Project will be guided by the Zimbabwean constitution and other relevant laws which protect human rights. | |
|--|--|---|
| Gender Equity and Women's Empowerment | The activities of the project deliberately promote a fair and equal access of men and women. The project promotes equal participation in decision-making processes by assuring women representation in all water-related committees, establishing participatory platforms for all stakeholders, balancing representation in the forums. | All project activities will be screened and analysed in order to take gender aspects into consideration. An in depth gender analysis of the involvement of men and women in the in options proposed as concrete adaptation activities will be undertaken in the initial project phase. |
| Core Labour Rights | The project respects the Zimbabwe Labour Relations Act (xxx) and international labour standards as identified by ILO. | Further assessment is required, to ensure that the labour rights are strictly protected. This will be included in the M&E scheme. |
| Indigenous Peoples | The Project promotes and respects the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples. | Further assessments will be done to ensure that the culture and traditions of the indigenous people in the project areas such as the Tonga and Shangani people are respected |
| Involuntary Resettlement | Generally the Project interventions do not require any resettlement of the target population. | The project will closely monitor the targeting of the project beneficiaries, particularly to assure that those people who have encroached on protected natural resources have access to the revolving fund and are involved in income generating activities. Indicators in this regard are included in the M&E scheme. |
| Protection of Natural Habitats | Project activities will not generally have negative impacts. It is clearly expected to have positive environmental impacts by improving the ecosystem of the areas. | During the implementation of the all activities related to protection and management of wetlands, grasslands, forests shall be closely monitored to evaluate if the expected impact is achieved or if any unexpected negative side effects turn up. Indicators in this regard will be included in the M&E scheme. |
| Conservation of Biological Diversity | Project activities will not have a negative impact on biodiversity conservation as the project interventions are aimed at conserving biodiversity | |
| Climate Change | The project does not have any negative impact on climate change. The project interventions are actually aimed at addressing adverse effects of climate change | |

| Pollution Prevention and Resource Efficiency | Project is aimed at environmental conservation activities that will improve the natural-resource base of the communities. Thus the project will not generate any pollution. | |
|--|---|--|
| Public Health | No adverse impact on public health is envisaged as the project interventions are expected to contribute to improvement of public health. | |
| Physical and Cultural Heritage | The project aims to protect physical and cultural heritage thus activities will not be implemented in such sites where there are physical and cultural heritages | |
| Lands and Soil Conservation | Project interventions aimed at conserving the land and soil thus no negative impacts are expected | |

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

The project will be implemented by UNESCO and executed by the Ministry of Environment, Water and Climate (Zimbabwe) in close collaboration with key stakeholders such as the National Committee of the International Hydrological Programme, and other relevant government ministries in charge of gender, youths, agriculture, and local government. The role of the UNESCO as the implementing entity of the project is to bear full responsibility for the overall management of the project, including the financial, monitoring, and reporting responsibility. UNESCO will receive the funds and channel them to the Ministry of Finance and Economic Development. The Ministry of Environment, Water and Climate (MoEWC) in Zimbabwe will be responsible for project management and execution. The MoEWC through its Directorate of Water Resources Planning and Development and ZINWA will take the lead in executing the project. ZINWA will coordinate local activities through the catchment and sub-catchment councils selected for this Project. ZINWA, through the various catchment councils, has already established governance structures in the four sub-catchments that will be strengthened and used for coordination of project implementation. At the local level, four project execution offices will be based at the respective sub-catchment council offices. The project execution offices will closely collaborate with local district structures in the execution of the project in line with the catchment planning guidelines.

A Project Manager will be appointed and stationed at the MoEWC and ensure liaison on project activities among and between the government ministries, the Project sub-catchment councils, the field offices, local governance structures and other stakeholders. The project will be guided by various committees including the Project Coordination Unit, Project Execution Teams, and Focal Persons at sub-catchment councils, and Support Team at the Ministry. In addition, existing structures such as the ward councillors, the catchment and sub-catchment council structures and Zimbabwe IHP Committee will provide the necessary guidance to the project and ensure that the needs for the local communities are met.

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

A number of financial and project risks are anticipated in this project and measures will be taken to manage the identified risks. The risks and mitigation measures are described in the table below.

| Identified Risks | Level (H, M, L) | Risk Management Measures |
|---|--------------------|--|
| Change in government or responsible Minister may result in delay in implementation of project | М | The project team will engage the new government or Minister so that they understand the need to carry out the project and its associated benefits. |
| Communities fail to support project activities and they are not informed | М | The project will carry out awareness campaigns and hold stakeholder meetings to explain the project to the communities. |
| Inadequate funding to complete the project (e.g. due to costs increases) | L. | The project will explore various channels to secure resources, consider alternative implementation approaches or restructure the project. |
| Changes in the political environment | Н | The project might defer project activities until conditions are suitable or restructure project and choose areas which are least affected priority areas. |
| Human capacity | М | The project will make use of expertise from UNESCO's Centres of Excellence in cases where available human capacity is not sufficient. |
| Climate change | H | Effects of climate change such as flooding may make some areas in accessible. The project will be designed in such a way that activities in flood prone areas will be carried out before or after the rainy season. |
| Competing interests between different stakeholders regarding accessing and use of water and other natural resources | L | Establish multi-stakeholders' forum. |
| High expectations by communities and local government for quick investments on the ground | Н | More awareness raising programs for understanding the policy-practice linkage helps. |
| Mismatch between the catchment and administrative boundaries | L | Promote catchment-based management and development. |
| Inadequate baseline data/resource potential | M | Establish baseline situation during implementation. |
| Low technology adoption rate by communities | L | Promotion and demonstration of new technologies and practices. |
| Local communities with limited participation and willingness to promote project initiatives | L. | Increase sensitization at local community level, working with available set up local structures, active involvement of community organizations in project implementation. |
| Collaboration amongst the relevant technical institutions | М | The relevant institutions should be involved right from the project inception and continuously be involved in planning, implementation, Project review, and reporting. |
| Project resource capture | L | Follow transparent and participatory process (using catchment management structures) in selecting beneficiaries of the project using some agreed criteria. E.g., defining criteria and process to select community members that are eligible to access the revolving fund. |
| Project financial management | L | The project will have clear separation of roles and strengthen accountability and auditing |
| Delay in project implementation due to government bureaucracy, long and inefficient procurement processes. | L | Do proper planning (including developing a procurement plan). Negotiate with Government to get a special support or treatment that can facilitate implementation. |

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

As shown before, the Project complies with domestic law and policies. In general the Project promotes fair and equitable access to benefits of the project. No initiatives are identified with orientation or execution that could generate a negative impact on marginalized and/or vulnerable groups. Some activities, such as the livelihood improvement projects, irrigation and animal husbandry are targeting women, single headed households and marginalized groups. No activities are identified whose execution is not in line with the established international human rights. Project objectives promote basic human rights for equitable access to service and water for irrigated agriculture and capacity building as well as access to information. The Project promotes equal participation in decision-making processes by assuring women representation in all committees, establishing participatory platforms for all stakeholders, balancing representation in the forums.

The Project respects the labour standards as identified by ILO. The Project promotes and respects the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples. In some local communities exist different tribes, but no sharp distinction between indigenous and non-indigenous people can be made. The Project does not only increase the adaptation capacity of the local population and the resilience of the ecosystems, but also reduces greenhouse gas emissions through the introduction of improved stoves and reforestation initiatives. The Project will contribute to energy efficiency (e.g. solar pumping, introduction of cooking stoves), efficient use of water, prevention of water pollution, monitoring water quality. Furthermore the Project will minimize material resource use. The Project will not have negative impacts on public health, but will actually contribute to improved health conditions of the communities by reducing smoke out of traditional cooking stoves, improving living environment (healthy surroundings). The Project will not have any activity that affects physical and cultural heritages. Their protection/conservation will rather be promoted by the project. Soil conservation, reduction of land degradation through supporting terraces, afforestation and catchment management are covered in Component 3 of the Project.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

The M&E system for the project will be developed and used to closely monitor and evaluate the project. Monitoring and evaluation will be done through production of annual reports, quarterly implementation reviews, technical reports and regular supervision missions to enhance success. A baseline survey will be carried out at the beginning of the project to prepare a detailed M&E plan that will streamline project objectives, indicators and methodologies of data collection. A joint review mission to the project sites will also be planned to be conducted twice in a year. UNESCO as implementing entity supervises the M&E activities of the project, ensuring that the Ministry of Ministry of Environment, Water and Climate and its agencies undertake the evaluation and prepare the yearly reports. The MoEWC will set up Project structures headed by a Project Manager. Quarterly Progress Reports will be prepared by the Project team and verified by the UNESCO. Annual Project Reports will be prepared to monitor progress covering:

 Progress made towards project objectives and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);

- Project outputs delivered per project outcome (annual);
- Lessons learned/good practices;
- Annual expenditure reports;
- · Reporting on project risk management.

In terms of financial monitoring, the Project Team will provide UNESCO with certified periodic financial statements. Audits on the project will follow UNESCO finance regulations and rules as well as applicable audit policies. Annual Work Plans and Quarterly Work Plans will be used to refine project delivery targets and re-align project work in close consultation and endorsement by UNESCO. An independent Mid-Term Review is planned for June 2021, midway through project implementation, to determine progress made in achieving outcomes and identify any adjustments required. An independent terminal evaluation will also be conducted.

E. Include a results framework for the project proposal, including milestones, targets and indicators.

The Results Framework of the project is shown below and defines success indicators for project implementation and the respective means of verification. An M&E system for the project will be established, based on the indicators and means of verification. This Results including its indicators, targets and means of verification, will be reconfirmed during the Inception Phase of the Project. Any changes to the Results Framework require approval by the Project Steering Committee.

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| Project Strategy | Indicator | Baseline | Target | Source of Verification | Risk and Assumptions |
|---------------------------|--------------------------------|-------------------------------|-----------------------------|----------------------------------|-----------------------------|
| The ultimate goal of this | % of households | The communities | By the end of the project | Baseline survey report | Climate-smart |
| Project is to increase | exploiting groundwater | currently lack the | cycle. 4,000 out of the | Annual report | interventions introduced |
| local communities' | for food security and | capacity to adapt and | 13,000 households in the | End of project reports | by the project will result |
| adaptive capacity and | other productive uses | resilience required to | project areas will have | | in greater difference |
| resilience to climate | - | overcome impacts of | increased their adaptive | | compared to |
| change through | | climate change | capacity and resilience to | | conventional practices |
| increased groundwater | | | climate change | | |
| exploitation for food | | | | | |
| security and other | | | | | |
| productive uses in rural | | | | | |
| areas of Zimbabwe | | | | | |
| Outcome 1: | Number of technical, | The current knowledge | The knowledge and | Annual and end of | Beneficiaries interested |
| Improved knowledge | institutional and human | and capacity on | capacity on groundwater | project reports | in training and willing and |
| and canacity at national | capacities etrenothened | groundwater science | science policy and | Technical reports | Canable to absorb and |
| and local locals on | for improved and | policy and participatory | socioci, poicy and | Implementation regions | capable to absolut alla |
| and local toyets on | Containable utilization of | monogeneration in | monogomont incline | and the second second | approy training and |
| groundwater science, | sustaillable utilization of | Illallagement issues is | manayement issues at | | capacity suciding ing |
| policy and participatory | groundwater at national | weak and Inadequate at | national and local levels | | |
| managementissues | and local levels | both national and local | will be improved | | |
| Output 1.1 | A National Centre for | There is currently no | By the end of the project | Annual and end of | All the required technical |
| | Groundwater Research | centre dedicated for | cycle, a fully functional | project reports | expertise and financial |
| | and Training established | groundwater research | National Centre for | Technical reports | resources are available |
| | | and training in Zimbahwe | Groundwater Research | Implementation reviews | |
| | | מווס המווווופ זוו ליוווופטאיכ | Ologicamatel Mesearch | in picture nation leviews | |
| | | | and Iraining will be | | |
| | | | established | | |
| Output 1.2 | Number of revamped | The current local and | By the end of the project | Annual and end of | There is cooperation |
| | local and national | national institutions for | cycle, all the local and | project reports | from the responsible |
| | institutions for managing | managing groundwater | national institutions for | Technical reports | authorities to implement |
| | groundwater in particular, | are weak and inefficient | managing groundwater | Implementation reviews | identified changes |
| | and water resources in general | | will be revamped | | |
| Output 1.3 | Number of skilled | There is lack of human | By the end of the project | Implementation reviews | Beneficiaries interested |
| • | groundwater technicians, | capacity in groundwater | cycle at least 500 | End of year reports | in training and willing and |
| | scientists and managers | management | groundwater technicians, | Training manuals | capable to absorb and |
| | trained | | scientists and managers | Training reports | apply training and |
| | | | will be trained | | capacity strengthening |
| Output 1.4 | Number of practical | There is no | A set of practical | Annual and end of | Expertise is available to |
| | guidelines and manuals | comprehensive | guidelines and manuals | project reports | develop the manuals and |
| | for groundwater planning, | guidelines and manuals | will be developed and | Technical reports | guidelines |
| | development and | on groundwater planning, | distributed to all relevant | Implementation reviews | |
| | management developed | development and | institutions | Practical guidelines and manuals | |
| | | 0 | | | |

| Outcome 2: Sustainable utilisation of groundwater based on sound scientific resource inventory; science-based policy to | Number of sub- catchments where comprehensive assessments of groundwater resources are carried | The assessments of groundwater resources are not comprehensive in the project target areas | Four comprehensive assessment reports on groundwater resources will be produced in the four target sub-catchments | Annual and end of project reports Technical reports Implementation reviews Assessment reports | Human capacity and expertise is available to carry out the groundwater assessments |
|---|--|---|--|---|--|
| resources and further develop new groundwater-based resilience strategies and practical interventions | Number of sample plans for sustainable groundwater utilization in improving climate resilience developed | Currently, there are no plans for sustainable groundwater utilization in the project target areas | Four sample plans for sustainable groundwater utilization will be developed in the project target areas | Annual and end of project reports Technical reports Implementation reviews Sample plans | Human capacity and expertise is available to carry out the groundwater assessments |
| Output 2.1 | Number of groundwater atlases for each of the four sub-catchments developed | There are no groundwater atlases available for the four subcatchments | Four groundwater atlases will have been developed for the four sub-catchments | Annual and end of project reports Technical reports implementation reviews Groundwater atlases | Human capacity and expertise is available to develop the groundwater atlases |
| Output 2.2 | Number of Groundwater Development Action Plans developed | There is currently no comprehensive Groundwater Development Action Plans | Four Groundwater Development Action Plans will be developed for Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments | Annual and end of project reports Technical reports Implementation reviews Groundwater Development Action Plans | Human capacity and expertise is available to develop the Groundwater Development Action Plans |
| Outcome 3: Increased participation by the wider stakeholder community, who are aware of water resource | % of beneficiaries who participate in water resource management issues | The current level of participation by stakeholders in water resource management issues in target areas is low | Level of participation by stakeholders in water resource management issues in target areas will improve by 80% | Annual and end of project reports Technical reports Implementation reviews Training reports | Beneficiaries are willing to participate in water resource management issues |
| and have access to tailored information and guidelines that support better catchment planning and sustainable use of groundwater. | % of beneficiaries who have access to information and guidelines that support better catchment planning and sustainable use of groundwater | % of target beneficiaries in project target areas who have access to information and guidelines that support better catchment planning and sustainable use of groundwater is very low | All the beneficiaries will have access to information and guidelines that support better catchment planning and sustainable use of groundwater | Annual and end of project reports Technical reports Implementation reviews Assessment reports | Beneficiaries are interested in accessing the information and guidelines that support better catchment planning and sustainable use of groundwater |

| Output 3.1 | Number of catchment management planning guidelines revised | The current catchment management planning guidelines are outdated and do not reflect the emerging issues of climate change, gender | Four catchment management planning guidelines will be revised for Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments | Annual and end of project reports Technical reports Implementation reviews Catchment management planning guidelines | Human capacity and expertise is available to revise the catchment management planning guidelines |
|--|--|--|--|---|--|
| Output 3.2 | Number of Sub- Catchment Management Plans revised | The sub-catchment management plans are outdated and do not reflect the emerging issues of climate change, pender and organization | Four sub-catchment management plans will be revised for Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments | Annual and end of project reports Technical reports Implementation reviews Sub-catchment | Human capacity and expertise is available to revise the catchment management planning guidelines |
| Output 3.3 | Number of ward-level community water management structures established and supported in the four sub-catchments | There are no ward level community water management structures | Six ward level community water management structures will be established and supported in the four sub-catchments | Annual and end of project reports Technical reports Implementation reviews Minutes of meetings | There is cooperation from beneficiaries |
| Output 3.4 | Number of extension services and institutions with strengthened capacities | Capacities of extension services and institutions at catchment level are inadequate to support communities in the four selected sub-catchments to undertake climate change adaptation activities | Capacities of extension services and institutions at catchment level will be strengthened to support communities in the four selected sub-catchments to undertake climate change adaptation activities | Annual and end of project reports Technical reports Implementation reviews Training manuals Training reports | Human capacity and expertise is available to build and strengthen capacities of extension services and institutions |
| Output 3.5 | Number of community members trained on sustainable technologies | Awareness and knowledge about sustainable technologies is very low | At least 3,000 community members will have received training on sustainable technologies | Annual and end of project reports Technical reports Implementation reviews Training manuals | Beneficiaries interested in training and willing and capable to absorb and apply training and capacity strengthening |
| Output 3.6 | Number of pilot climate- smart water and food security projects using groundwater and renewable energy identified | The exploitation of groundwater and renewable energy in climate-smart water and food security projects is very low | Six pilot climate-smart water and food security projects using groundwater and renewable energy will have been identified | Annual and end of project reports Technical reports Implementation reviews Photos of projects Videos | Beneficiaries are interested in carrying out climate-smart water and food security projects |
| Outcome 4: Livelihoods of communities in | Number of pilot and demonstration projects established in project | Livelihood options of communities in target areas are limited and not | Six pilot water and food security demonstration projects using | Annual and end of project reports Technical reports | Beneficiaries are interested in carrying out |

| demonstration wards improved and diversified, reducing vulnerability to impacts of climate change | target areas in order to demonstrate concrete climate change adaptation measures | resilient to effects of climate change | groundwater and renewable energy for climate-smart irrigation projects established | Implementation reviews Photos of projects Videos | the pilot and demonstration projects |
|---|--|--|---|--|--|
| Output 4.1 | Number of look and learn visits to best practice projects in Zimbabwe or regionally made | Few look and learn visits to best practise projects in Zimbabwe and in the region have been made | At least three look and learn visits will have been made in Zimbabwe and two in the region | Annual and end of project reports Technical reports Implementation reviews | Authorization is given to visit the different places |
| Output 4.2 | Six pilot climate-smart water and food security projects formulated and developed | The exploitation of groundwater and renewable energy in climate-smart water and food security projects is very low | Six pilot climate-smart water and food security projects using groundwater and renewable energy will have been formulated and developed | Annual and end of project reports Technical reports Implementation reviews Photos and video clips | Beneficiaries are interested in carrying out climate-smart water and food security projects |
| Output 4.3 | Amount of money set aside for the food security and livelihood enhancement revolving fund established | There is currently no revolving fund targeted for food security and livelihood enhancement programmes | Revolving fund will be established | Annual and end of project reports Technical reports Implementation reviews Bank account | Beneficiaries identify viable projects and there is buy-in from financial service providers |
| Outcome 5: A framework for improved groundwater utilisation to reduce vulnerability to climate change developed and adopted | A sustainable framework for improved groundwater utilisation to reduce vulnerability to climate change developed and adopted | Currently there is no framework for improved groundwater utilisation to reduce vulnerability to climate change | A framework for improved groundwater utilisation to reduce vulnerability to climate change will be developed | Annual and end of project reports Technical reports Implementation reviews Framework | Human capacity and expertise is available to develop the framework |
| Output 5.1 | An information sharing exchange platform established | Information sharing mechanisms are very weak | A web-based information sharing and exchange platform will be established | Annual and end of project reports Technical reports Implementation reviews Web-based information exchange platform | Human capacity and expertise is available to develop the platform and beneficiaries are keen to access information |
| Output 5.2 | Number of good practices documented and adopted by key stakeholders | Documentation of good practices in groundwater extraction and management is poor | Good practices in groundwater extraction and management will be documented and adopted | Annual and end of project reports Technical reports Report on good practices | Stakeholders are willing to adopt the good practices |

Project Milestone Time Framework

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| | | Inception Workshop | To strengthen technical, institutional and human capacity for improved and sustainable utilization of groundwater at national and local levels | Improved knowledge and capacity at national and local levels on groundwater science, policy and participatory management issues | Establish a National Centre for Groundwater Research and Training | Revamp local and national institutions for managing groundwater in particular, and water resources in general | Train at least 500 skilled groundwater technicians, scientists and managers at national and local levels in improved and sustainable utilization of groundwater | Develop practical guidelines and manuals for groundwater planning, development and management | To conduct comprehensive assessments of groundwater resources in four poverty-stricken and most vulnerable sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi and thus develop sample plans for sustainable groundwater utilization in improving climate resilience |
| | | | Component 1 | Expected Outcome 1 | Activity 1.1 | Activity 1.2 | Activity 1.3 | Activity 1.4 | Component 2 |

| Sustainable utilisation of groundwater based on sound scientific resource inventory; science-based policy to better manage resources and further develop new groundwater-based resilience strategies and practical interventions. | Develop four groundwater atlases for each of the four sub-catchments | Develop four Groundwater Development Action Plans for each sub-catchment | To strengthen the capacity of water and land management institutions in Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments in developing integrated catchment management plans that promote and protect groundwater use | Increased participation by the wider stakeholder community, who are aware of water resource management issues and have access to tailored information and guidelines that support better catchment planning and sustainable use of groundwater. | Revise existing catchment management planning guidelines to clearly mainstream gender, climate change and groundwater | Revise Sub-Catchment Management Plans of Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments through stakeholder participation to address climate change and groundwater issues | Establish and support six ward level community water management structures in the four sub-catchments (Lower Gwayi, Upper Save, Lower Runde and Mwenezi) | Strengthen capacities of extension services and institutions at catchment level to support communities in the four selected sub-catchments |
|---|--|--|--|---|---|---|--|--|
| Expected Sustaina Outcome 2 sound sc based pc further de | Activity 2.1 Develop four sub- | Activity 2.2 Develop Plans for | Component 3 To streng manager Save, Lo in develo plans the | Expected Increased pa Outcome 3 community, w management information a catchment pla groundwater. | Activity 3.1 Revise e guideline change & | Activity 3.2 Revise S Lower G Mwenezi participa groundw | Activity 3.3 Establish water ms catchme Runde a | Activity 3.4 Strength institution commun |

| Expected Outcome 5 | A framework for improved groundwater utilisation to reduce vulnerability to climate change | | | | | | |
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| Activity 5.1 | Establish web-based information sharing and exchange platform for project participants | | | | | | |
| Activity 5.2 | Document and adopt good practices by key stakeholders | | | | | | |
| End of year project evaluation | ject evaluation | | | | | | |
| Mid-term project evaluation | t evaluation | | | | | | |
| End of project evaluation | evaluation | | | | | | |

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

Project Alignment with the Results Framework of the Adaptation Fund

| Project Objective(s) ¹ | Project Objective Indicator(s) | Fund Outcome | Fund Outcome Indicator | Grant Amount (USD) |
|---|--|---|---|--------------------|
| | | | | |
| To strengthen technical, institutional and human capacity for improved and sustainable utilization of groundwater at national and local levels | 3.1. Fully functional National Centre for Groundwater Research and Training will be established 3.2. All local and national institutions for managing groundwater revamped 3.3. At least 500 groundwater technicians, scientists and | P | 2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks | 1,500,000 |
| | managers trained 3.4. A set of practical guidelines and manuals on groundwater use developed and distributed to all relevant institutions | Outcome 7: Improved policies and regulations that promote and enforce resilience measures | Climate change priorities are integrated into national development strategy | |
| 2. To conduct comprehensive assessments of groundwater resources in four povertystricken and most vulnerable sub-catchments of Lower Gwayi, Upper Save, Lower Runde and Mwenezi and thus develop sample plans for sustainable groundwater utilization in improving climate resilience | 2.1. Four groundwater atlases developed for the four sub- catchments 2.2. Four Groundwater Development Action Plans developed for Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments | Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress | 5. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress | 1,600,000 |
| 3. To strengthen the capacity of water and land management institutions in Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments in developing integrated | 3.1. Four catchment management planning guidelines revised for Lower Gwayi, Upper Save, Lower Runde and Mwenezi subcatchments | Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level | 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses | 1,000,000 |

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

| | 4,100,000 | 400,000 |
|---|--|---|
| 3.2. Modification in behavior of targeted population | 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress 6.1 Percentage of households and communities having more secure (increased) access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient livelihoods | 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 3.2. Modification in behaviour of targeted population |
| | Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas | Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level |
| 3.2. Four sub-catchment management plans revised for Lower Gwayi, Upper Save, Lower Runde and Mwenezi sub-catchments 3.3. Six ward level community water management structures established and supported in the four sub-catchments 3.4. Capacities of extension services and institutions at catchment level strengthened to support communities in the four selected sub-catchments to undertake climate change adaptation activities 3.5. At least 3,000 community members received training on sustainable technologies 3.6. Six pilot climate-smart water and food security projects using groundwater and renewable energy have been identified | 5.1. At least three look and learn visits made in Zimbabwe and two in the region 5.2. Six pilot climate-smart water and food security projects using groundwater and renewable energy formulated and developed 5.3. Revolving fund established and functional | 5.1. A web-based information sharing and exchange platform established 5.2. Good practices in groundwater extraction and management documented and adopted |
| catchment management plans that promote and protect groundwater use | 4. To pilot and demonstrate concrete climate change adaptation measures based on sustainable groundwater exploitation for diversifying and strengthening livelihoods of the most vulnerable population in Lower Gwayi, Upper Save, Lower Runde and Mwenezi subcatchments | 5. To compile and disseminate lessons learnt to facilitate future upscaling and replication of good practices in groundwater extraction and management |

| Project Outcome(s) | Project Outcome Indicator(s) | Fund Output | Fund Output Indicator | Grant Amount (USD) |
|--|---|---|--|--------------------|
| | | | | |
| Improved knowledge and capacity at national and local levels on groundwater science, policy and participatory management issues | The knowledge and capacity on groundwater science, policy and participatory management issues at national and local levels improved | Output 2.1: Strengthened capacity of national and regional 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 | 1,500,000 |
| | | Output 7: Improved integration of climate-resilience strategies into country development plans | 7.1. No., type, and sector of policies introduced or adjusted to address climate change risks | |
| 2. Sustainable utilisation of groundwater based on sound scientific resource inventory; science-based policy to better manage resources and further develop new groundwater-based resilience strategies and practical interventions. | 2.1 Four comprehensive assessment reports on groundwater resources produced in the four target subcatchments 2.2 Four sample plans for sustainable groundwater utilization developed in the project target areas | Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability | 5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets) | 1,600,000 |
| 3. Increased participation by the wider stakeholder community, who are aware of water resource management issues and have access to tailored information and guidelines that support better catchment planning and sustainable use of groundwater. | 3.1 Level of participation by stakeholders in water resource management issues in target areas improve by 80% 3.2 All the beneficiaries have access to information and guidelines that support better catchment planning and sustainable use of groundwater | Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities | 3.1.1 No. and type of risk reduction actions or strategies introduced at local level | 1,000,000 |
| 4. Livelihoods of communities in demonstration wards improved and diversified, reducing vulnerability to impacts of climate change | Six pilot water and food security demonstration projects using groundwater and renewable energy for climate-smart irrigation projects established | Output 4: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability Output 6: Targeted individual and community livelihood strategies strengthened in relation to | 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types) | 4,100,000 |

| Γ | I |
|--|---|
| | 400,000 |
| 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual-or community-livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenario | 3.1.1 No. and type of risk reduction actions or strategies introduced at local level 3.1.2 No. of news outlets in the local press and media that have covered the topic |
| climate change impacts, including variability | Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities |
| | 5. A framework for improved groundwater utilisation to reduce vulnerability to climate change developed |
| | 5. A framework for improved groundwater utilisation to reduce vulnerability to climate change developed and adopted |

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.

The project is still at conceptual stage, so a detailed budget is not yet available.

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

The project is still at conceptual stage, so a disbursement schedule is not yet available.

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:

Mr. Washington Zhakata Director, Climate Change Management Department Ministry of Environment, Water, & Climate Government of Zimbabwe

Date: April 10, 2018

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 (ZimAsset) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

(Implementing Entity Coordinator)

Professor Hubert Gijzen Regional Director and Representative UNESCO Regional Office for Southern Africa

Date: April 11, 2018 Tel.:+263-4-776775/9

Email: h.gijzen@unesco.org

Project Contact Person: Dr Peggy Oti-Boateng

Tel.: +263-4-776775/9

Email: p.oti-boateng@unesco.org

^{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.

All communications should be addressed to "The Secretary for Environment, Water and Climate"

ZIMBABWE

MINISTRY OF ENVIRONMENT WATER AND CLIMATE Kaguvi Building, 11th Floor Corner 4th Street/Central Avenue

P Bag 7753 Causeway, Zimbabwe Telephone: 701681/3, 701691/2, Fax:

Our Ref.: NRB/53

10 April 2018 The Adaptation Fund Board

c/o Adaptation Fund Board Secretariat Email: Secretariat@Adaptation-Fun Lorg

Fax: 202 522 3240/5

The Adaptation Fund Board c/o Adaptation Fund Board Secretariat Email: Secretariat@Adaptation-Fund.org

Fax: 202 522 3240/5

SUBJECT: ENDORSEMENT OF 'INCREASING LOCAL COMMUNITIES' ADAPTIVE CAPACITY AND RESILIENCE TO CLIMATE CHANGE THROUGH INCREASED GROUNDWATER EXPLOITATION IN ZIMBABWE' PROPOSAL

In my capacity as the Designated National Authority for the Adaptation Fund in Zimbabwe, I confirm that the above national project concept 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 the country.

Accordingly, I am pleased to enderse the above project concept to the Adaptation Fund. If approved, the project will be implemented by UNESCO Regional Office for Southern Africa and executed by Ministry of Environment, Water and Climate.

W. Zhakata

Director, Climate Chaugga change mans Marching All Adaptation Fund Focal Marint: 04-701681-2/701691-3

For: Secretary for Environment, Water and Climate

DRECTOR-CLIMATE CHANGE
MANAGEMENT
Min. of Environment, Water & Chinak
10 APR 2019

c/o afbsec@adaptation-fund.org