ADAPTATION FUND

PROGRAMME ON INNOVATION: SMALL GRANT PROJECT PROPOSAL

PART I: PROJECT INFORMATION

Country: **United Republic of Tanzania**
Title of Project: **Piloting Climate Resilience Livelihood Systems in Runyinya Village, Kyerwa District**
National Implementing Entity: **National Environment Management Council (NEMC)**
Executing Entity/ies: **Agrodiamond Limited**
Amount of Financing Requested **250,000** (in U.S Dollars Equivalent)

Project Background and Context:

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

Project background and problem statement

Communities in Kyerwa district in western Tanzania derive their livelihood and income security from climate sensitive sectors like agriculture, water and natural resources. According to the vulnerability assessment study conducted in 2019[1], the district is among the vulnerable geographical areas in the United Republic of Tanzania already impacted by climate change. The vulnerability of the district and its communities is largely driven by overdependence to rainfall for agriculture and animal grazing. As a result, the currently released NAP stocktaking report signatures the district as a hotspot area, which needs adaptation intervention urgently. Furthermore, the Vulnerability and Adaptation Assessment study for the HNAP [2], indicates high malnutrition level due to climate induced food shortage, water scarcity and poverty in most villages of Kyerwa, particularly Runyinya village.

The current and projected climate change effects are therefore seen to deepen poverty, water scarcity and malnutrition levels in the district. Climate indices show that, rainfall amount, seasonality, trend and timing will continue to shift from the normal trend in the district3. For instance, the drought periods have been more common and severe in the area. In 2016, 2017 and 2018 alone the district experienced devastating drought periods which resulted into crop failures and drying of water sources. Food insecurity and hunger is now a great social and economic concern. Shrinkage of pastureland and disrupted grazing land is a challenge to livestock keepers in most village of the district. The 2017 district report indicated that, the drought event in 2017 destroyed over 18.27 ha of maize of which 8.7ha were at Runyinya village. Food production and income generation by communities in most villages which in most cases are already poor is severely affected. Unfortunately the ability of the district government budget to support these communities for food

[1] NAP Stocktaking report, 2019: United Republic of Tanzania
[2] V&A 2018: The vulnerability and Adaptation Assessment study for the Adaptation in the Health Sector (HNAP),
[3] TMA 2014: Climate projections in the United Republic of Tanzania

including financing various socio economic needs such as education, health and water supply is inadequate.

Projected climate scenarios by the Tanzania Meteorological Agency show that Lake Victoria regions in which Kyerwa district is located will experience even more temperature increase in the future while drought and dry spell periods will be intensified[4]. Future climate-change impacts are predicted to accelerate multiple challenges across villages in the district, affecting nearly all of the traditional water sources. Research suggests that by 2030, even if the drought frequency and intensity remain stable, 25% of the district's population will go hungry**Error! Bookmark not defined.**. The ecosystem resilience and capacity to support agriculture and safeguard human health will be jeopardized due to continued ecosystem and environmental degradation. The future decline in rainfall volume per season, coupled with increased variability in rainfall, is expected to cause serious water shortage, crop failures and reduced productivity of farming to about more than 30% of total food crop production in the District. Future climate change is projected to disrupt almost all life forms in the district and will intensify food insecurity and livelihood failures due to the reason that people and their life firms are heavily reliant on water resources and subsistence farming activities.

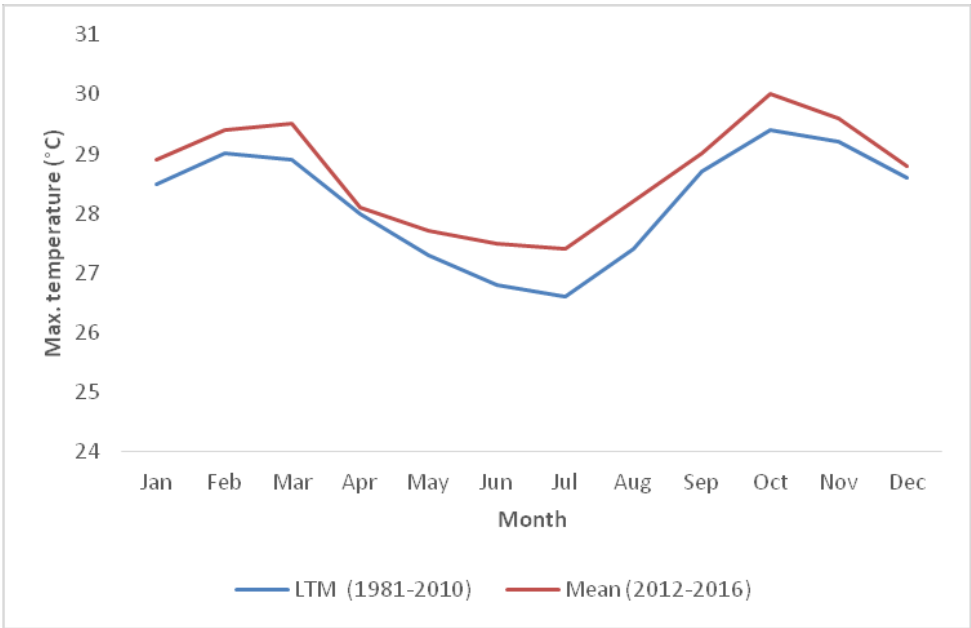

Figure 1: Monthly Mean Maximum Temperature from 2012-2016 compared to Long Term Mean Temperature (1981-2010) in Kyerwa District (Source: TMA, 2016)

More severe climate change would inevitably have far greater negative impacts to village population in Kyerwa, especially women and marginalised groups such as people with disabilities and elders. For instance, For instance, current evidence in Runyinya village already indicated that, women are forced to walk around bushes looking for water from unreliable water sources during dry periods. Consequently, they lose time and energy which could have been invested in productive activities; meanwhile children spend less time for schooling, and sometimes prompt them to drop from school completely. Unless novelty approaches which uses community based climate solutions be implemented to enhance water availability for domestic use and crop production in the area, the

[4] TMA 2014

trend will continue endlessly, with disastrous effect to the vulnerable community groups like women and children.

Figure 2: The photo taken from Runyinya village in 2015 illustrating the intensity of water scarcity.

Figure 2: Photo showing crop failures and bad yield in the larger area of Runyinya village Kyerwa district.

According to reports available in the district, hunger pangs were equally felt more in the past three decades in most villages, in which more than 50% of people were reported to be facing starvation due to a poor harvest. The persistent food scarcity in most villages has led to a sharp rise in food prices in the district. For instance, traditional food inflation jumped from 6.9 per cent in 2016 to 17.4 per cent in July 2018, the highest since 2010. From 2016 up to now, prices of items such as beans have for instance peaked at Tsh 2700 for a kilogramme, twice the usual price of between Tsh 1000 and Tsh1400. These prices are not affordable to common and marginalized village communities such as those in Runyinya. This kind of weather related vagaries has sometimes

stemmed forced migration and school dropouts including deep income and food poverty5. The future decline in rainfall volume per season, coupled with increased variability in rainfall, is expected to cause serious crop failures. To reverse this situation and consequently improve life quality of people while achieving climate resilient livelihood improvements requires innovative, climate-centered solutions which will essentially address water scarcity and food insecurity and rural poverty. Therefore, this project will pilot community based climate-innovations to improve resilience of livelihood systems and build adaptive capacity of Runyinya villagers. The project will invest in climate smart rural water supply to improve water security, which in turn will promote small scale drip irrigation, forest and fruit trees planting, bee keeping and village environmental conservation activities. Furthermore, value addition to produces and linking farmers to internal and external market will be part and parcel of project activities. This will promote sustainability of multi-purpose climate actions, and climate resilience of the people in the pilot village.

Effects of climate change on gender issues in Kyerwa district

Research reports globally indicate that women are more vulnerable to the effects of climate change than men in most rural villages in Tanzania. Although they constitute the majority of population in villages, they still suffer high level of illiteracy. For instance, traditional systems in ethnical groups available in Kyerwa particularly Runyinya village, expose women to struggle mostly with domestic issues such as fetching water and cooking. They also surfer from myriad of social and economic barriers which contribute to their limited coping capacity6. The proposed project will integrate gender roles and special needs of marginalized groups in various activities/interventions.

Project objectives

The proposed project seeks to pilot practical and cost effective community rooted solution to improve livelihood of poor people, support water supply and agricultural production in Runyinya village. Hence, the overall objective of this project is to enhance resilience and adaptive capacity to effects of climate change while reducing income poverty among the selected community in Runyinya Village, Kyerwa District, Kagera Region. Specifically, the proposed project will address the following objectives:-

i) Enhance climate proof village water supply in Runyinya village;
ii) Implement Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village to increase community resilience and food security; and
iii) Enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping.

Project Components and Financing:

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (USD)
1. Enhance climate proof village water supply in Runyinya village	1.1.At least 2 boreholes drilled in Runyinya village and solar driven water pumps installed. 1.2. Water storage tanks and distribution network systems installed	Enhanced climate resilient rural water supply system in selected communities at Runyinya Village, Kyerwa district.	100,000

[5] Mkonda Y.M 2017. Are Rainfall and Temperature Really Changing? Farmer's Perceptions, Meteorological Data, and Policy Implications in the Tanzanian Semi-Arid Zone, Journal of sustainability 9: 1412;
[6] Kyerwa district Ciuncil,2017

	at selected sites 1.3. Community water drawing points constructed at selected sites. 1.4.Awareness raising meetings conducted with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Runyinya village in accordance with the Water supply and sanitation Act,2009 1.5. Water governance by laws formulated to regulate effective use of water and protection of water sources 1.6. Gender considerate water governance arrangements for COWSOs established at Runyinya village 1.7. Technical Trainings of Trainers conducted on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for Runyinya village	Reduced drudgery for women and children from long distance walk in search of water and firewood. Strengthened capacity on sustainable water resource management and utilization.	
2. Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village	2.1. Drip irrigation structures/schemes at Runyinya village established at selected sites 2.2. Selected members of farmer and women groups trained on Operation and Maintenance of drip irrigation facilities at Runyinya village 2.3. Tailored training on best farming practices and transformation of traditional farming system through using Farmer Field School Approach provided to farmers in the selected community of Runyinya village.	Number of farmers transformed from primitive agricultural practices to climate smart and sustainable agricultural practices in Runyinya village	70,000
3. Enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping.	3.1 conduct tree planting activities (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) in the village 3.2.Promote bee keeping activities as income diversification for vulnerable marginalized groups (such as women, girls, old people)	Improved ecological functions to sustain climate sensitive livelihoods in the village communities of Runyinya	30,000

	3.3 Improve ecosystem health and delivery of ecosystem goods and services		
6. Other Operating Project cost			5,000
7. Total Project Cost			205,00
8. Institutional Administrative Cost (9.5%)			23,750
9. Project Cycle Management Fee charged by the Implementing Entity (8.5%)			21,250
Amount of Financing Requested			**250,000**

Projected Calendar:
Table 2: Milestones for the proposed project/programme

Milestones	**Expected Dates**
Start of Project/Programme Implementation	Dec 2019
Mid-term Review (if planned)	Dec 2020
Project/Programme Closing	July 2021
Terminal Evaluation	May 2021

PART II: PROJECT JUSTIFICATION

A. *Project components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience..*

i. Project components focusing on the concrete adaptation activities

The proposed Project will comprise only three components focusing on the concrete adaptation activities

Project Component 1: Enhance climate proof village water supply in Runyinya village

Water availability is the key entry point in building livelihoods resilience in Runyinya village and other communities living in Kyerwa district, who entirely depends on rainfall for their traditional water sources. Water supply technology proposed in this component is the fundamental intervention where other project components will be anchored-on to build resilience of vulnerable villagers in the pilot village. The resultant outcomes from this component will lead into improved livelihoods and resilience of the villagers to climate change, improved food and nutrition security, and ecosystem services. In addition, the constructed climate proof water supply system will increase availability and access of water to village members as well as reduce labor for women and children from long distance walk in search for water. This will save time for women and children to venture into income generating activities and education respectively. To ensure sustainability of proposed water supply system, selected villagers and water committee will be trained on maintenance and operations. In addition, the local village and district authorities under the District Executive Director (DED) will be the overall authority and has the capacity to inject finances for maintenance costs of the dams after project closure.

The following are expected outputs to be achieved under this component:-
1.1. At least 2 boreholes drilled in Runyinya village and solar driven water pumps installed; 1.2. Water storage tanks and distribution network systems installed at selected sites; 1.3. Community water drawing points constructed at selected sites; 1.4.Awareness raising meetings conducted with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Runyinya village in accordance with the Water supply and sanitation Act,2009; 1.5. Water governance by laws formulated to regulate effective use of water and protection of water sources; 1.6. Gender considerate water governance arrangements for COWSOs established at Runyinya village; and 1.7. Technical Trainings of Trainers conducted on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for Runyinya village.

Component 2: Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village

Like in many other rural villages in Kerywa district farming system in Runyinya village is being challenged by several challenges including poor farming practices and reliance on rainfall. As already described above, now rain seasons are not reliable and unpredictable, they have shifted trends such that droughts and dry spell periods are more common than wet spells. Rains are more erratic, coming at unexpected times in and out of seasons. This causes farmers in Runyinya to suffer the most from food insecurity due to crop failures and reduced farm productivity. Therefore, under this output, the project intends to increase resilience of farmers to effects of climate change and variability by improving farming systems in pilot communities within the village. Indicative project outputs to be implemented under this component includes:- 2.1. Drip irrigation structures/schemes at Runyinya village established at selected sites; 2.2. Selected members of farmer and women groups trained on Operation and Maintenance of drip irrigation facilities at Runyinya village; and 2.3. Tailored training on best farming practices and transformation of traditional farming system through using Farmer Field School Approach provided to farmers in the selected community of Runyinya village

Project Component 3: Enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping.

This component will support climate change vulnerable farmers to manage their resources in ways, which protect ecosystems and increase resilience to climate change. Widespread degradation of forest and agro-ecosystems in the pilot village has reduced capacities for resilience and adaptation to climate change. A range of technical prototypes will be devised to address sustainable harvesting and use of resources. They will include integrated apiary sites, improved harvesting and processing of non-wood products. Encouraging ecosystem-based interventions (integrated activities) will help to improve the resilience, adaptation capacities of the villagers and for the well-being of the natural habitat. This component will lead into following expected outputs outcomes: 3.1 conduct tree planting activities (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) in the village; 3.2.Promote bee keeping activities as income diversification for vulnerable marginalized groups (such as women, girls, old people); and 3.3 Improve ecosystem health and delivery of ecosystem goods and services

ii. Contribution to Climate Resilience

The proposed project see building climate resilient livelihood systems as a powerful adaptation practices for the pilot project to improve people's life quality at village levels. This project strives to improve water availability, income diversification and access to ecosystem services by human communities in the area through the three project components to enhance communities' adaptive capacity and contribution climate change mitigation measures. Measures proposed under the current project will directly contribute to household and community income generation through increased water security, increased productivity of cash and food crops from small drip irrigation schemes, selling products and services from bee-keeping, fruits with high value plants, selling products from home gardens and reduced poverty of various groups including the majority young women who are currently vulnerable to HIV/AIDS because of high levels of poverty and unemployment. Throughout the above mentioned concrete adaptation activities, there will be elements of capacity building to local communities, improved access to technical information, change of behaviour and practice, improved infrastructure, improved resource governance, enhanced ecosystem health, improved knowledge for resource management, utilisation, and market access. All these will contribute to increased capacity of rural communities for adaptation and resilience to climate change.

B. *Project's economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Strategy to avoid or mitigate negative impacts, in compliance with the* ***Environmental and Social Policy of the Adaptation Fund.***

All three components of this project will considerably contribute to economic, social and environmental benefits at village, district, national and at the international level. The proposed interventions under this project will improve adaptive capacity of the most vulnerable communities in Tanzania. Each component activities are well linked to both environmental and socio-economic to improve the wellbeing of the people and their supporting natural ecosystems. Equally, the project is well informed by the Environmental and Social Policy of the Adaptation Fund to avoid and mitigate unseen negative impacts including considering gender issues. The following description below entails how economic, social and environmental benefits have been integrated in the designing of this project: **a) Social benefits** - The project inspires to improve rural water systems, foster food security, and transform farming practices and improved livelihood systems. All these have multiple benefits and positive contribution to the existing social systems in the project site including solving climate driven social and gender related problems. For instance, gender based challenges linked to climate change effects such as water scarcity, food shortage and challenges for drop out of school girls due to inadequate water supply and food insecurity; **b) Economic benefits** -The proposed project will extensively contribute to economic benefits as it is design to promote transformation of livelihood systems and quality of life among villagers through stimulating drivers of key economic activities the pilot project site. In particular, the activities outlined in each output of the components will lead to increased water security and agriculture production and move vulnerable communities beyond subsistence farming to selling excess crops and fruits and bee keeping products. This project will also build sustainable market and will link villagers to financial services as well as promoting credit cooperatives (SACCOs); and **c) Environmental benefits** – The project will have several environmental benefits, including contribution to climate change mitigation, ecosystem management, biodiversity conservation, land management and conservation agriculture. This project have special component on promoting tree planting, ecosystem restoration and bee keeping. Environmental benefits of this project is also expected to contribute to climate resilience of rural communities through improved ecological functions and services, reversed land degradation weather amelioration, creation of alternative income of vulnerable communities specially women and girls through selling bee keeping products such as honey, timber, fruits from fruit plants and other forest products. environment including climate change mitigation potentials, biodiversity and human communities.

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

In 2007 under NAPA and 2019 under the NAP stack taking and the NDC development in the United Republic of Tanzania multiple climate change vulnerable sectors analysis to prioritize adaptation actions were conducted according to their potential for positive effects on economic development, social capital and environmental management. Cost-effectiveness of the interventions was a criterion used to measure their contributions to adaptation and economic development. As such, the interventions proposed under NAPA, INDC and the NDC are the most urgent and were assessed to be cost-effective. The activities proposed in the current project to be funded by the AF is well in line with those priorities identified under NAPA, INDC and in the NAP stock taking report as described in Part II.D and as such are already identified as cost-effective by the United Republic of Tanzania. The proposed project addresses the water, agriculture and forestry and natural resource sectors which were identified as the most vulnerable to climate change; ranking number 1, 2 and 4 respectively being the priority areas for adaptation interventions by NAPA and recently by the NDC and the NAP stock taking report. The proposed interventions in this project are also of top priority for each of the 3 sectors mentioned above. NAPA and the NGD emphasize establishment and development of small scale drip irrigation systems and innovation of alternative farming systems as the top priorities in the agriculture sector. In the water sector, priority is on drilling boreholes to established village water schemes and promotion of water harvesting interventions. Afforestation, which is also a component in this project, is given top priority in the forestry sector by these policy documents. Also, due to the fact that

this project will implemented in one village, its operational costs will also be reduced through the involvement of the local villagers, government authorities where the interventions will be implemented to support in some aspects of the project including Monitoring and evaluation.

D. *Project consistency with national or sub-national 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 **National Climate change Strategy (2012) priorities and objectives:**
Water is conceived being among the main source of livelihoods, harnessed for domestic, agriculture, industrial use. Climate change is negatively impacting water sources, therefore addressing these climate change induced impacts will allow continuous availability for these elements which are important for sustaining livelihoods, economic growth and social development. In response, as due to the growing concerns over negative climate changes and climate variability, Tanzania like many other countries has vested into several initiatives to curb the situation include developing the National Climate Change Strategy[7]. National Climate Change Strategy was devised seeking for enhancing the technical, institutional and individual capacity of the country to address the impacts of climate change. In order to achieve this, the National Climate Change Strategy has identified several strategic interventions (SI), among which are proposed by this project: G) – facilitate access to water resources; J)– enhancing decentralization of water sources management.

Agriculture: In Tanzania, the agricultural sector is reckoned being among the economic development pillars of which more than 80% of population within the country depending on climate sensitive rain-fed agriculture as source of livelihood[8] . However, adverse effects of climate change have also been recorded within different government reports[9] [10] as cited from CIAT and World Bank. The dependence of agriculture on rainfall increases risks of droughts and floods. Therefore, reducing vulnerability of the sector to climate change will significantly contribute to socio-economic development and ensure food security. Cognizant of the situation, Tanzanian government has set several priorities, of which the current project will also thrive to make its contribution to enhance the resilience of the communities to climate change induced impacts, through: a) Assessing crop vulnerability and suitability (cropping pattern) for different Agro-ecological zones; c) Promoting appropriate irrigation systems; d) Promoting early maturing and drought tolerant crops; e) Enhancing agro-infrastructural systems; f) Promoting appropriate indigenous knowledge practices; i) Strengthening post harvest processes and promote value addition; j) Addressing soil and land degradation by promoting improved soil and land management practices/techniques; k) Strengthen integrated pest management techniques; l) Promote use of pest/disease tolerant varieties; and m) Strengthen early warning systems for pest surveillance.

Forestry: With regards to the forestry sub-sector, climate change is reported to have affected many of forest and ecosystem processes. Expanding forest cover and use of adaptive species as well as linking conservation areas is pivotal in adapting to climate change and ensuring continuity in the availability of ecosystem goods and services hence improving the livelihoods of rural communities. All the same, the proposed project will further strengthen efforts invested by the Government particularly on the following areas of emphasis: a) Enhancing control of forest fire, disease and pest breakout; b) Enhancing conservation of forests

[7] UNDP (2007). Human Development Report 2007/2008: Fighting climate change: human solidarity in a divided world. Palgrave Macmillan, New York

[8] United Republic of Tanzania - URT (2009a). Climate change and agriculture policy brief. Vice President's Offi ce, Division of Environment, Dar es Salaam

[9] United Republic of Tanzania - URT (2008). State of the environment report 2008. Vice President's Offi ce, Division of Environment, Dar es salaam.

[10] CIAT; World Bank. 2017. Climate-Smart Agriculture in Tanzania. CSA Country Profiles for Africa Series. International Center for Tropical Agriculture (CIAT); World Bank, Washington, D.C. 25 p.

biodiversity and control of invasive species; c) Supporting alternative livelihood initiatives for forest dependent communities; d) Promoting establishment of woodlots; and f) Strengthening and up scaling of community based forest management best practices.

NAPA: Similarly, the Government further recognizes the extreme vulnerability of communities to climate change as the aspect of poverty, which needs to be addressed from different perspectives include instituting the National Adaptation Programme of Action (NAPA) in 2007. NAPA underscores that Agriculture, Water and Forestry are of high priority sectors that requires interventions for adaptation to climate change. The proposed project is in consistent with the NAPA as it is contributing to the following NAPA emphasized activities in order to enhance climate resilience to the vulnerable rural communities in Tanzania.
***Agriculture Sector*:** i) Increase irrigation to boost crop production in all areas; ii) Introduce alternative farming systems; iv) Create awareness on the negative effects of climate change; v) Increase the use of manure and fertilizer; vi) Range management for livestock production; and vii) Control pests, weeds, and diseases.

***Water Sector*:** i) Develop alternative water storage programs and technology for communities
Promote water harvesting and storage facilities; ii) Develop reservoirs and underground water abstraction; iii) Community based catchments conservation and management programs – partially addressed; iv) Develop new water serving technologies in irrigation.

***Forestry sector*:** i) Increase irrigation by using appropriate water efficient technologies to boost crop production in all areas; iii) Develop water harvesting and storage programs for rural communities particularly those in dry lands; vii) A forestation programmes in degraded lands using more adaptive and fast growing tree species; and xii) Water harvesting and recycling. Based on this, the proposed project project recognizes remarkable efforts made by the Tanzanian Government, include other stakeholders, whereas these initiatives must be sustained and deepened by enhancing resilient capacities of communities to climate change across all targeted areas of intervention, and the nation at large.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

Executing Agency: Agrodiamond Limited will be the overall executor of the project, through the services of a Project Management Unit, which will be staffed with a Project Coordinator, an Assistant Project Coordinator, and a Project Accountant who will also serve as Project Administrative Support Staff. The Project Coordinator, the Assistant Project Coordinator, the Accountant are referred here as project personnel. The executor will work in close collaboration with the village and district government where necessary deploy the service of district professionals in the necessary fields such as agriculture, apiculture etc.

Implementing Entity: National Environment Management Council (NEMC), which is also, the National Implementing Entity (NIE) of the Adaptation Fund (AF) in Tanzania will be responsible for the overall management of the project and monitoring of project outcomes/outputs.

Description: The project shall be implemented for the period of two and half years (30 Months) from Dec 2019 to June 2022.

Procedures			
Phase	**Steps**	**Start Date**	**Completion Date**
First: Before the Project	Submission of the Concept Note to NEMC	08/07/2019	19/07/2019
	To introduce the project to the Government Institutions/Agencies and other stakeholders for collaboration initiatives.	09/08/2019	10/10/2019
	To conduct feasibility studies in order to collect data for Construction and establishing drip irrigation structures/schemes and preparation of project work plan	15/10/2019	15/11/2019
	To invite and provide parts of project works to Sub Contractors	25/11/2019	31/11/2019
Second: During the Project	To conduct advocacy campaigns to selected communities who shall participate in the implementation of the project	15/12/2019	05/01/2020
	Construction and establishing drip irrigation structures/schemes	15/01/2020	15/05/2020
	To construct water storage facilities for vulnerable small scale farming communities	01/06/2020	30/12/2020

	To train community for improving farming knowledge for various small scale farming options	02/01/2021	02/03/2021
	To promote bee keeping activities in woodland, hills and mountainous systems and fruit plants as improved ecosystem based income generating activities	15/03/2021	15/05/2021
	To engage farmers in fruit plants and timber-tree planting in residential areas, along streets and roadsides and degraded landscapes and establish ecological schools in selected villages	01/06/2021	30/07/2021
	To install surface and subsurface irrigation systems including overhead galvanized storage tanks and pumping facilities.	09/08/2021	09/12/2021
Third: After Completion of the Project	To conduct monitoring, coaching and mentoring for the project sustainability involving neighboring communities of the project.	10/01/2022	Continuous
	To conduct evaluation sessions of project to determine its relevance and value for money	01/05/2022	Quarterly
	Finally to hand over the project to the village and district authorities.	15/10/2022	31/12/2022

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

Precautionary measures for financial and project risk management will be formulated to foresee those risks before they happen. The risk categories on delayed fund disbursement for project implementations and procurement processes are pertinent risks of the proposed project, which all together have mitigation measures. The table below summarizes mitigation measures for financial and project/programme risk management.

SN	FINANCIAL AND PROJECT RISKS	MITIGATION MEASURES
1.	Delay of fund	Submit funds in time (NEMC)
2.	Reluctance of some community members and stakeholders to cooperate among themselves	Involvement of all stakeholders from the beginning and improving the individual involvement in terms of personal values, connectivity between community members, enhancing social relations and new skills and knowledge.
3,	Destruction of projects infrastructures	Proper construction and installations Provision of security systems and guards
4	Procurement processes	Public Procurement procedures should be clearly adhered
5	Exchange rates fluctuations	Bank of Tanzania rates will be followed
6	Reluctance of stakeholders to adopt ecological based and climate resilient livelihood systems and conservation practices	Sensitization of communities to influence peoples knowledge and attitudes and, hence the actions they take to adapt to climate change impacts and define their contribution to global mitigation efforts.

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

Kyerwa District Council will address both social and environmental opportunities and risks in an integrated manner, recognizing the interrelatedness of social and environmental issues at early stages during the designing and implementation phases. This project is designed in consistence with Environmental and Social Policy of the Adaptation Fund. Proposed activities will be reviewed at every stage for potential social and environmental risks and will ensure that potential adverse impacts are assessed and avoided, or where avoidance is not possible, minimized, mitigated, and managed.

SN	ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT	MITIGATION MEASURES
1.	Willingness of the communities to engage in the project	Involvement of the community in project design and implementation to realize tangible benefits.
2.	Lack of understanding of the project details	Awareness Creation

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

NEMC will be responsible for managing the mid-term review/evaluation and the terminal evaluation. The Project Coordinator and his Team will participate actively in the process. The project will be reviewed or evaluated on bi-annual basis (mid-year and end of the year basis). The purpose of the review/evaluation is to provide an independent assessment of project performance at mid-term, to analyse whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes in the most efficient and sustainable way. In addition, it will verify information gathered through the Adaptation Fund tracking tools. An independent terminal evaluation (TE) will take place at the end of project implementation. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process. The direct costs of reviews and evaluations will be charged against the project evaluation budget.

Activity	Responsible person	Timeframe
Inception meeting	Executing entity project coordinator	Within 2 months of project starting
Baseline survey	Executing entity project coordinator	Within 2 months of project starting
Mid-term review	NIE/ External consultant	15 months
NIE annual visits	NIE project coordinator	Annual
Annual meetings	Executing entity project coordinator	Annual
Final evaluation report	External consultant	30 months
Audit reports	External auditor	Annual
TOTAL		

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

Expected results	Indicators	Baseline	Targets	Means of verification	Milestone
The overall objective is to enhance resilience and adaptive capacity to effects of climate change while reducing income poverty among the selected communities in Runyinya Village.					
Resilience and adaptive capacity to effects of climate change while reducing income poverty in the selected communities of Kyerwa District Council enhanced.	Percentage of people with improved livelihoods and resilient to climate change Number of households disaggregated by gender with improved food and nutrition security. Number of people adopted diversified sources of income generation activities Number of female and male headed HHs having access to water supply	To be established during the baseline study	At least 30% increase in crop and livestock productivity at the end of the project. At least 50 ha of land planted with adapted fruits/forest tree by the end of the project. At least 50% of adopted diversified sources of income generation activities 60 female and 40 male headed HHs having access to water supply	• End of project M&E reports • Journal articles published • Quarterly, annual, Mid-term and final project evaluation reports	Within and beyond the project life
Component 1: To enhance climate proof village water supply in Runyinya village					
Climate proof village water supply in Runyinya village enhanced.	1.1. At least 2 boreholes drilled in Runyinya village and solar driven water pumps installed. 1.2. Water storage tanks and distribution network systems installed at selected sites 1.3. Community water drawing points constructed at selected sites. 1.4. Number of constructed water supply channels . 1.5. Awareness raising meetings		At least 10 irrigation schemes established in Runyinya Village Increased agroforestry trees, crop, fish and livestock productivity, biodiversity and vegetation cover. Improved governance on water use rights and management of forest resources. Reduced drudgery and time for women	Periodic project reports. Project annual impact assessment reports. Mid-term project reports final project evaluations.	Within year one of the project implementation

Expected results	Indicators	Baseline	Targets	Means of verification	Milestone
	conducted with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Runyinya village in accordance with the Water supply and sanitation Act,2009 1.6. Water governance by laws formulated to regulate effective use of water and protection of water sources 1.7. Gender considerate water governance arrangements for COWSOs established at Runyinya village 1.8. Technical Trainings of Trainers conducted on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for Runyinya				
Component 2: Implement Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village to increase community resilience and food security					
Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village to increase community resilience and food security implemented.	2.1. Drip irrigation structures/schemes at Runyinya village established at selected sites 2.2. Selected members of farmer and women groups trained on Operation and Maintenance of drip irrigation facilities at Runyinya village	To be established during the baseline study	- Number of farmers transformed from primitive agricultural practices to climate smart and sustainable agricultural practices in Runyinya village	Periodic project reports surveys, studies Project annual impact assessment reports Mid-term project reports final project evaluations	At the end of the project implementation

	2.3. Tailored training on best farming practices and transformation of traditional farming system through using Farmer Field School Approach provided to farmers in the selected community of Runyinya village			Village data	
Component 3: Enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping.					
Expected results	**Indicators**	**Baseline**	**Targets**	**Means of verification**	**Milestone**
Nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping enhanced.	-3.1 conduct tree planting activities (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) in the village 3.2.Promote bee keeping activities as income diversification for vulnerable marginalized groups (such as women, girls, old people) 3.3 Improve ecosystem health and delivery of ecosystem goods and services	To be established during the baseline study	-Twelve model vegetable gardens with diversified vegetable crops established -At least 30% of households within target community are integrated in aquaculture, horticulture, livestock and apiculture. Improved ecological functions to sustain climate sensitive livelihoods in the village communities of Runyinya	Periodic project reports. Project annual impact assessment reports Mid-term project reports final project evaluations Village data	At the end of the project implementation

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

Project Objective(s)	*Project Objective Indicator(s)*	*Fund Outcome*	*Fund Outcome Indicator*	*Grant Amount (USD)*
To enhance Climate proof village water supply in Runyinya village.	1.1. At least 2 boreholes drilled in Runyinya village and solar driven water pumps installed. 1.2. Water storage tanks and distribution network systems installed at selected sites 1.3. Community water drawing points constructed at selected sites. 1.4. Number of constructed water supply channels . 1.5. Awareness raising meetings conducted with community stakeholders to facilitate formulation of stable, effective and efficiency COWSOs at Runyinya village in accordance with the Water supply and sanitation Act,2009 1.6. Water governance by laws formulated to regulate effective use of water and protection of water sources 1.7. Gender considerate water governance arrangements for COWSOs established at Runyinya village 1.8. Technical Trainings of Trainers conducted on maintenance and operations; management of finance, accounting and group dynamics issues to selected community members of COWSOs for Runyinya	Outcome 1: Increased adaptive capacity within relevant development and natural resource sectors	-Physical infrastructure improved to withstand climate change and variability-induced stress. Enhanced climate resilient rural water supply system in selected communities at Runyinya Village, Kyerwa district. Reduced drudgery for women and children from long distance walk in search of water and firewood. Strengthened capacity on sustainable water resource management and utilization.	***100,000***
To Implement Climate	2.1. Drip irrigation structures/schemes at Runyinya village established at	Outcome 2: Increased	-Ecosystem services and natural	*70,000*

Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village to increase community resilience and food security .	selected sites 2.2. Selected members of farmer and women groups trained on Operation and Maintenance of drip irrigation facilities at Runyinya village 2.3. Tailored training on best farming practices and transformation of traditional farming system through using Farmer Field School Approach provided to farmers in the selected community of Runyinya village	ecosystem resilience in response to climate change and variability-induced stress Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level Outcome 4: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	assets maintained or improved under climate change and variability-induced stress Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses Modification in behavior of targeted population	
To enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping	3.1.Conduct tree planting activities (trees with both environmental and socio economic values in mid-and long-term such as fruit plants and wood plants for timber) in the village 3.2.Promote bee keeping activities as income diversification for vulnerable marginalized groups (such as women, girls, old people) 3.3 Improve ecosystem health and delivery of ecosystem goods and services	Outcome 5: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas Outcome 6: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	Percentage of households and communities having more secure (increased) access to livelihood assets Percentage of targeted population with sustained climate-resilient livelihoods Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses Modification in behavior of targeted population	*30,000*

Project Outcome(s)	*Project Outcome Indicator(s)*	*Fund Output*	*Fund Output Indicator*	*Grant Amount (USD)*
1.1 Improved livelihoods and resilience to climate change of the rural communities, improved food and nutrition security, and ecosystem services *1.2* Reduced drudgery for women and children from long distance walk in search of water and firewood 1.3 Strengthened capacity on sustainable water resource management and utilization	• Number of people with increased resilience to climate change • Number of households with increased food and income security • Proportion of people with enhanced social security (by improved literacy and health) • Increased number of people with knowledge on sustainable management and utilization of water resources	Output 4: Vulnerable physical, natural, and social assets strengthened in response to climate change Impacts, including variability Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types) 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	*100,000*
1.1 Improved ecosystem health and delivery of ecosystem goods and services *1.2* Increased sources of employment opportunities resulting from fruits and forestry venture *1.3* Reduced land and forest degradation in the community	• Percentage increase in forest resources for resilience to climate change • Number of people sustainably using fruits and forest products • Proportion of land and forest rehabilitated • Increased number of people with knowledge on establishment,	Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability Output 3: Targeted population groups participating in	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) 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	*70,000*

landscape 1.4 Strengthened knowledge and skills on establishment, propagation and management of fruits and forest tree species	propagation and management of fruits and forest tree species (1000 farmers per village anchored on 50 focus youths)	adaptation and risk reduction awareness activities	media that have covered the topic	
3.1 Improved household livelihoods and income generation of local communities from crop, livestock and domestic water use. *3.2* Improved equitable water use for multiple agroecological needs by the community; *3.3* Improved governance of water and use of forest resources for climate resilience in target village communities 3.4 Improved capacity on governance of water and use of forest resources for climate resilience in target village communities 3.5 Enhanced capacity of people with knowledge on integrated and	• Percent increase in income, • Reduced nutrition related illness • Increased number of households in food and nutrition security n face of climate change • Number of farmers, students and policy makers with improved capacity in strategies in climate change adaptation • Number of people adopted to technologies for adaptation and mitigation of impacts of climate change • Increased number of people with knowledge on integrated and diversified technologies for fish, crops and livestock production	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 7: Improved integration of climate-resilience strategies into country development plans	3.1.2 No. of news outlets in the local press and media that have covered the topic 7.1. No., type, and sector of policies introduced or adjusted to address climate change risks 7.2. No. or targeted development strategies with incorporated climate change priorities enforced 3.1.1 No. and type of risk reduction actions or strategies introduced at local level	*30,000*

diversified technologies for crops and livestock production				

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

Component Budget	**Personnel**	Consumable	Equipment(Solar pump ,pipes etc)	Transport	Consultancy	Bore holes and water storage tanks establishments	Maintenance costs	M&E	Training	**Total Cost (USD)**
Component 1 Enhance Climate proof village water supply in Runyinya village	9,880.00	400	15000	4,000.00	5,600.00	50,490.00	5,000.00	1,500	3,630.00	95,500
Component 2: Implement Climate Smart-Community-Based (CSCB) - small scale irrigation scheme at Runyinya village to increase community resilience and food security	9,800.00	2,500.00	9,920.00	5,223	4,220.00		15,757.00	2,900.00	25,080.00	75,400
Component 3: Enhance nature based climate actions in local communities at Runyinya village through forest and fruit tree planting and bee keeping.	5600.00	1,800.00	2600.00	3000.00	3,600.00	0.00	1,000.00	4210.00	16,000.00	37,810
Total Project operation costs	25280.00	4,700.00	27,520.00	12,223.00	13,420.00	50,490.00	21,757.00	8,600	44,710.00	208,710.00
Administrative cost of NIE (8.5%)										23,750
Institution Administrative costs (9.5%)	22,727.00	0	0	0	0	0	0	1,000	2,080.00	21,250
Total Fund request										250,000

Personnel: Per diem during travels, Coordination allowance, Special task honoraria, secretary and attendance, financial and admin assistance, Supporting staff, dissemination, Staff time, farmer and local GOVT facilitation and Research assistants time

Consumables: Fuel and lubricants, Stationery, Printing and publication, animal feeds, tree seeds, scions and rootstocks, fertilizers, approved natural pesticides

Equipment: irrigation, livestock infrastructure, shade screen nets, nursery equipment

Transport and Vehicle: Fuel

Consultancy: Irrigation structures designing, construction, nursery establishment, surveys,

Contractors and service providers: construction and commissioning of water irrigation structures, nursery and screen houses and irrigation infrastructures

Maintenance Costs: Materials, labour, irrigation facilities and replacement of defaulted facilities

Monitoring & Evaluation: Field visits per diems, facilitation for local government, farmers, and VEO special task allowance,

Training: Technical staff, local government, farmers and VEO facilitation allowance,

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

A. Record of endorsement on behalf of the government[11] *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:*

Ambassador Joseph E. Sokoine Deputy Permanent Secretary Vice President's Office	*Date: 31st July 2019*

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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (National Strategy for Growth and Reduction of Poverty 2010-2015; National Climate Change Strategy 2012, Tanzania Vision 2025 and in the National Adaptation Programme of Action (NAPA) 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.
 ***Fredrick F. Mulinda*** Implementing Entity Coordinator

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.

Date: *3rd August 2019*	Tel. and email: **+255 753 240 517**, nieaf@nemc.or.tz / kasigazi.koku@gmail.com
Project Contact Person: Denis Kiwali	
Tel. And Email: +255 756 444 133, deniskiwali@gmail.com	

UNITED REPUBLIC OF TANZANIA

Telegraphic address: **"MAKAMU"**,
Telephone: **+255 -26-2329006**
Fax. No.: **+255 -26-2329007**
E-mail: **ps@vpo.go.tz**

In reply please quote:

Government City,
Mtumba Area,
Vice President's Office
Building,
Ihumwa,
P. O. Box 2502,
DODOMA

Our Ref: BA. 90/201/01/3

31st July, 2019

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

Re: Endorsement for Piloting Climate Resilience Livelihood Systems in Runyinya Village, Kyerwa District

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

Accordingly, I am pleased to endorse the above proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Environment Management Council and executed by Agrodiamond Limited.

Sincerely,

Ambassador Joseph E. Sokoine
For Permanent Secretary

All correspondences should be Addressed to ***Permanent Secretary,***

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular Project
Title of Project/Programme:	**Enhancing Climate Change Resilience of Coastal Communities of Zanzibar**
Type of Implementing Entity:	National Implementing Entity (NIE)
Implementing Entity:	
Executing Entity/ies:	**Ministry of Agriculture, Natural Resources, Livestock and Fisheries, Zanzibar**
Amount of Financing Requested	**US$ 1,000,000**

1.0 Project Background and Context

Zanzibar is one of the two countries that form the United Republic of Tanzania (URT). Located in the Indian Ocean, just south of the Equator, the Zanzibar archipelago comprises two major islands - Unguja and Pemba - and more than 50 other small and remote islets. In the last census, of 2012, Zanzibar had 1,303,569 inhabitants. The population had increased by 33% since the previous census of 2002, with an average annual growth rate of 2.8. Population growth rates are projected to be high.

While Zanzibar is working towards alleviating abject poverty, climate change is yet another bottleneck to its socio-economic development. Climate variability has caused prolonged dry periods and unpredictable rainfall patterns making crop cultivation unproductive. Freshwater resources are also in limited supply mainly dependent on seasonal rains that store water in inefficient groundwater aquifers consisting of freshwater lenses floating on the underlying seawater[1].Furthermore, increasing temperatures have occasionally caused seal level rise leading to saltwater intrusion in low-lying farm fields, notably rice farms. To this end, the Revolutionary Government of Zanzibar in consultation with stakeholders and guided by Zanzibar's development Vision 2020 and the MKUZA-III development plans, has developed a Zanzibar Climate Change Strategy (ZCCS) in 2014. The Strategy has been developed to spearhead the development of climate change interventions in Zanzibar. The ZCCS provides strategic priorities and prioritized sectors for implementation. Among the strategic priorities include the building adaptive capacity and intervention for Resilient Coastal and Marine Areas and Ecosystems. A broad set of potential adaptation options has been identified in the Zanzibar Climate Change Action Plan (2016). These have been prioritized in a short and long-term priority plan, built around an adaptation pathway that maximizes economic opportunities whilst building information to help decisions in the future, especially in the face of uncertainty. However, the island is inadequately adapted to the current climate stress, and there is an urgent need to curb the existing adaptation shortfall.

1.1Socio-economic context

[1]Gössling, S. (2001). The consequences of tourism for sustainable water use on a tropical island: Zanzibar, Tanzania. Journal of Environmental Management 61 (179 – 191)

The economy of the islands is very dependent on climate with reliance on agriculture, natural resources and ecosystems exploitation. Agriculture sector has direct contribution to the livelihoods of many people, providing more than 75% of the foreign exchange earnings. However, the coastal climate regime of Zanzibar is changing, and increasing wave activity and wave heights are a factor in recent increase in salt water intrusion on the islands. In recent decades, Zanzibar has seen rising temperature, increased rainfall variability, higher wind speed and extreme weather events. Around 150 sites on the islands have been identified as being affected by salt water intrusion and are now not suitable for agriculture. This has contributed to food insecurity whereby 26% of Zanzibaris are food insecure and 3.6% are facing chronic food insecurity. Overall, the frequency and intensity of extreme events (e.g. drought and floods) are expected to increase. Negative impacts will include reduced water availability, vegetation and land degradation, and ecosystem and biodiversity destruction, as well as negative impacts on poverty eradication, economic development, food production and health. The country's rural poor, particularly subsistence farmers who are mostly women and pastoralists, will be affected the most. Indeed, Zanzibar is at risk in terms of agricultural productivity loss due to climate change impacts. Livelihood enhancement through application of innovative adaptation mechanisms in the agricultural sector is urgently needed to improve food production and support livelihood activities especially in coastal rural communities.

This project will be implemented in selected two districts of NorthB in Unguja and Wete district in Pemba. North B and Wete are poor districts in Zanzibar where majority of the inhabitants practice small scale businesses. The most important economic activity of the community is agriculture followed by fishing and other small enterprises for income generation. The communities face a number of challenges such as low crop production, minimum fish catch, high temperatures and low rainfall periods, beach erosion, long periods of droughts and sea water rise, encroaching most of paddy farming areas along the coastal belts. To ensure their food security, the communities have decided to engage into other income generating activities such as sea-weed farming, stone and bricks mining, charcoal and small-scale enterprises aimed at boosting their income for livelihood development. Climate change impacts have the potential to undermine and even undo progress made in improving the socio-economic well-being of these people from low production rate of agricultural products. The negative impacts associated with climate change are also compounded by many factors, including widespread poverty, human diseases, and high population dynamics, which could be exacerbated by migration of farmers from place to place as a result of salt water intrusion on crop fields. Sea-level rise and unexpected rainfall patterns represent important components of climate change for these districts, with significant implications to deterioration and degradation of natural resources of coastal environments. Subsistence agriculture is dramatically affected by the stress of climate change and farmers will be left extremely impacted without many other options to turn to.

Figure 1: Farm affected by salt water intrusion in Zanzibar

1.2 Development context

Like any other country, agriculture is vital for the economy of Zanzibar and is accorded high priority in the government policy and planning as it contributes to food security and food self-sufficiency. Furthermore, Agriculture is the main economic activity accounting for more than 70 percent of merchandise export earnings. Zanzibar agriculture is smallholder, largely dependent of rainfall. The Revolutionary Government of Zanzibar (RGZ) had envisioned eradicating abject poverty and attaining sustainable human development by 2020. This vision is also reflected in the Zanzibar Strategy for Growth and Reduction of Poverty III (ZSGRP III also known as MKUZA III in Swahili) 2016- 2020 which carries an overall theme "Economic Growth and Social Development for the Well-Being of All". While the RGZ had put forward strategies to bring about economic and social development, climate change seems to impede the development efforts especially in the agriculture and water sectors. The erratic rainfall patterns have caused low agriculture production leading to food shortage. For example during the period 2016 -2017 there were prolonged dry spell which left smallholder farmers severely affected. Zanzibar experienced prolonged dry spell from July to October 2016 following delayed and below normal rainfall which resulted into crop failure and reduced harvest in all districts of Zanzibar. Moreover, in the period March to May 2017 during the rainy season, the rains were far above the normal resulting into flooding which affected planted crops, damaged infrastructure and caused the outbreak of cholera which all together disrupted the livelihood of many population especially farming households[2]. Saltwater intrusion is another challenge affecting the economic development of Zanzibar due to sea level rise. Sea level rise leads to increased tides and thus flooding the low-lying areas including the crop fields. This reduces crop yield, notably rice which is grown in flood plains. The reduction of rice production has economic implication as some rice will have to be imported and thus increasing the price or government expenditure by subsidizing the imported rice.

The UKAID funded study on Economics of Climate Change in Zanzibar demonstrated that a large proportion of Zanzibar's economy is associated with climate sensitivity activities such as agriculture,

[2]https://reliefweb.int/sites/reliefweb.int/files/resources/1_IPC_Tanzania_Zanzibar_AcuteFI_Report_2017JulySept.pdf

tourism and through the use of natural resources. Thus, the economy of the islands, and the livelihoods of the people, depends on weather and the climate. In the report published in 2012 and available on the website[3] it can be found that Zanzibar already suffers major impacts from current climate variability. It is periodically affected by the extremes associated with El Niño and La Niña years, which leads to floods and droughts. Such extreme events have major economic costs on Zanzibar, which are significant at the macro-economic level, as well as affecting many livelihoods. Therefore, the islands have an adaptation deficit. Considering the role of agriculture in providing food to the people of Zanzibar and supporting the livelihoods of smallholder farmers many of whom are still poor, it is imperative that some interventions are implemented to enhance their resilience to climate change impacts. By addressing water shortage in the climate stricken semi-arid areas and saltwater intrusions, agriculture production will be improved and thus building climate resilient economy of Zanzibar.

1.3Environmental context

Both MKUZA III and Zanzibar Environmental Policy 2013 recognize the fact that the islands have experienced economic growth and social development which came at a cost of environmental degradation. This is influenced by population growth, expanding tourism industry, rising energy demand and depletion of natural resources. Urbanization and tourist industry have led to increased degradation of vegetation and wetlands thus putting pressure on fresh water resources which are scarce. The scarcity of freshwater in Zanzibar is attributed to limited rainfall and its geographical location; it consists of two islands found in the Indian Ocean which contain saltwater. Generally, the groundwater in the islands contains salt and may be easily affected by sea water intrusion even under minimum pressure. Thus, piped water is normally supplied from distant sources[4]. The hydrological cycle of oceanic islands like Zanzibar suggests that the depth of water lenses decreases as distance increases from the central, hence making the shorelines less resilient to sea level rise and associated sea water intrusion[5]. The rapidly growing tourism industry consumes a large amount of freshwater and the fixed tariff allows for unrestrained use of freshwater by hotels at a minimal cost[6]. Groundwater which is the main source of freshwater has been utilized at rate higher than its recharge rate leading to the movement of saltwater towards the freshwater aquifers and hence reducing freshwater. To date many ordinary households in Zanzibar struggle to find water for domestic use. To recover freshwater, the Zanzibar Water Authority has to apply desalinization technology. Moreover, population growth has led to increase in energy demand for cooking. Since fuelwood is largely used, a sizeable forest area has been deforested as a result of charcoal production. Generally, destruction of forests along the coast of Zanzibar is a result of limited livelihood activities, population increase and high demand of wood-based products. Forest clearing is usually for agriculture, settlements and development projects[7]. In particular, rice farms were created by clearing of mangrove forests. The farmers could grow rice throughout the year owing to water availability in the freshwater frontier of the mangrove ecosystem. However, currently the rice farms are no longer suitable for rice production due to saltwater intrusion which is partly attributed to sea level

[3] http://www.economics-of-cc-inzanzibar.org

[4] Hansson, E. (2010). Groundwater on Zanzibar - use and pollutants, Institutionenförväxt- ochmiljövetenskaper, Göteborgsuniversitet. Retrieved July1 8, 2019, from http://www.bioenv.gu.se/digitalAssets/1322/1322530_erik-hansson.pdf

[5] Halcrow. (1994). The development of water resources in Zanzibar. Final report. Revolutionary Government of Zanzibar, Zanzibar, Tanzania.

[6] Slade, Lorna, Ali Thani, Hajj M. Hajj and Salum N.Mbaruok. 2012. "Water Equity In Tourism: Zanzibar Case Study". Mwambao Coastal Community Network

[7] Nordic Development Fund (2014). Coastal Profile for Zanzibar

rise, an impact of global warning and climate change. The clearing of mangroves for construction of tourist hotels and agricultural expansion have had detrimental environmental effects, notably increased beach erosion owing to sea waves which were in the past absorbed by mangroves.

Zanzibar is dominated by a tropical low land humid type of climate with an average annual rainfall of 1700mm and mean maximum temperature of 26^0C. The cropping calendar is influenced by rainfall which is bimodal, i.e. the long rains (Masika) from March to June and the short rains (Vuli) from October to December. Generally, Pemba Island receives more rainfall than Unguja with Unguja receiving more rainfall during the short rainy season, while Pemba receives more long rains than Unguja[8] (see Figure 2). The rain-dependent crop cultivation is highly affected by climate variability characterized by erratic rainfall and increasing dry periods. Sea level rise and prolonged dry periods are two main climate issues affecting the livelihoods of people of Zanzibar. The prolonged dry periods make agriculture production impossible as it is dependent on rainfall. No irrigation schemes are in place to cope with dry conditions.

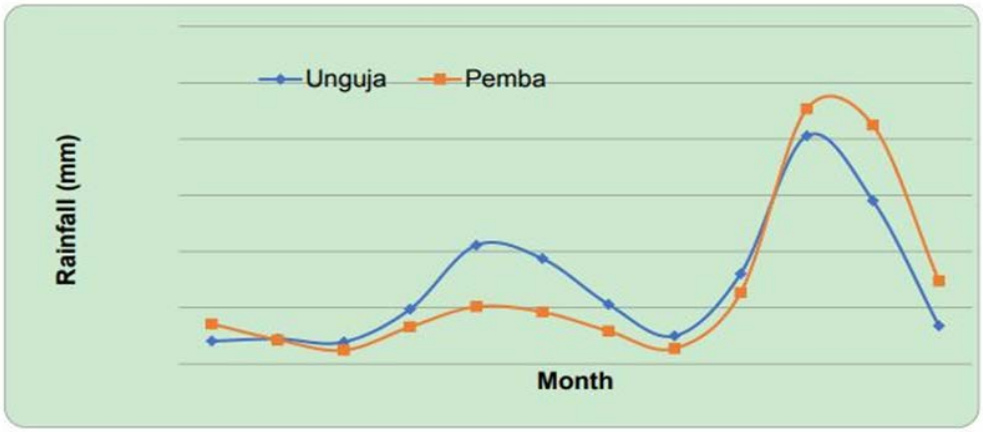

Figure 2:Monthly rainfall showing the two rainfall peaks for Zanzibar during the Vuli (left) and Masika (right) rains[9]

The tide measurements for Zanzibar indicate some increasing inter-decadal trends, with some variations over time. In particular, alongside increasing wind speeds on the islands, there have been increases in wave heights and high-water levels (see Figure 3a). This suggests that the wave climate regime could be changing, and increasing wave activity contributes to enhanced coastal erosion, especially in areas without natural protection[10].

[8]Makame, O.M and Kangalawe, R.Y.M. (2018). Water Security and Local People Sensitivity to Climate Variability and Change Among Coastal Communities in Zanzibar

[9] Makame, M. O., Kangalawe, R. Y. M., & Salum, L. A. (2015). Climate change and household food insecurity among fishing communities in the eastern coast of Zanzibar. Journal of Development and Agricultural Economics, 7(4), 131-142.

[10]http://www.economics-of-cc-inzanzibar.org

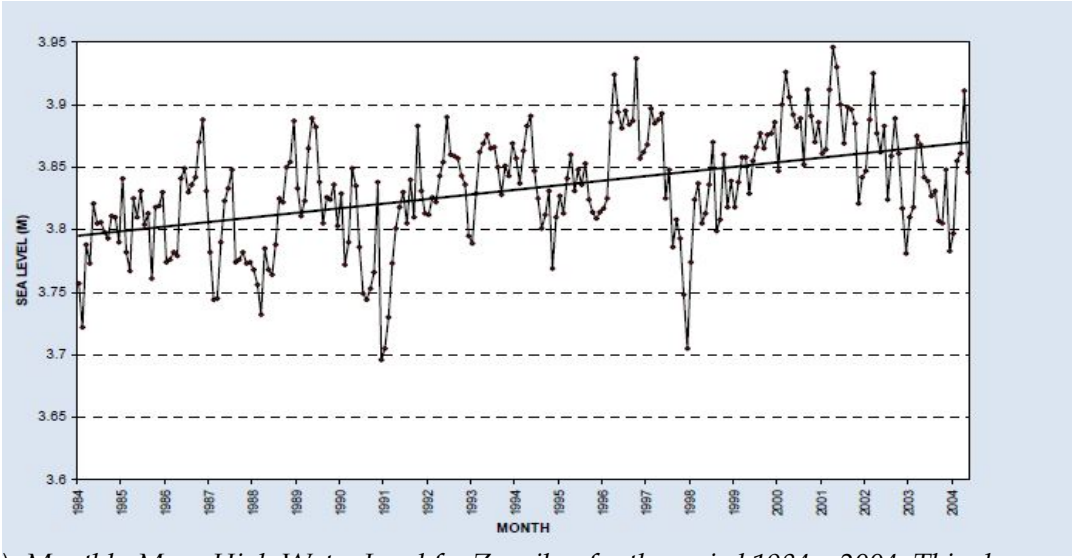

Figure 3 (a): Monthly Mean High-Water Level for Zanzibar for the period 1984 – 2004: This shows significantincreases, indicating changes that are highly relevant to coastal impacts.

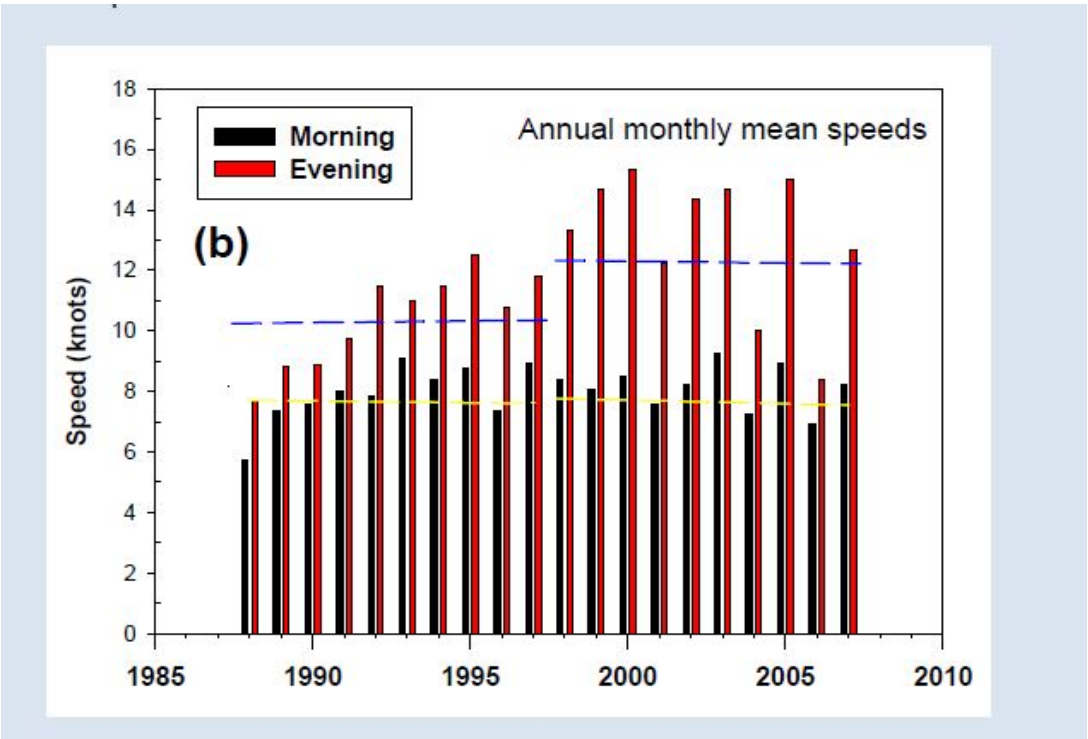

Figure 3(b): Annual monthly mean wind speeds for Zanzibar[11,12]. The dotted blue lines and the dotted yellow lines in (b) indicates the ten years monthly mean averages for the evenings and mornings wind speeds, respectively.

[11]Shaghude, Y.W. and Dubi, A.M. (2008). Survey of beach erosion problems at La Gemma Dell'Est Hotel, Nungwi, Zanzibar. Report submitted to La Gemma Hotel, Nungwi, September 2008

[12] Tanzania Meteorological Agency, Zanzibar Station

The historical meteorological data shows that the climate of the islands is changing. The data indicates a strong temperature increase over recent decades (Figure 4). The temperatures in January and February in Unguja have increased strongly over the last 40 years. This may be linked with increasing trend of sea level rise in Figure 2 above. There seems to be unclear or rather complex rainfall trends in both Unguja and Pemba. Future climate projections (Figure 5) also shows a similar trend in which temperatures are likely to increase around 2 degrees by 2050 while the rainfall trends are uncertain.

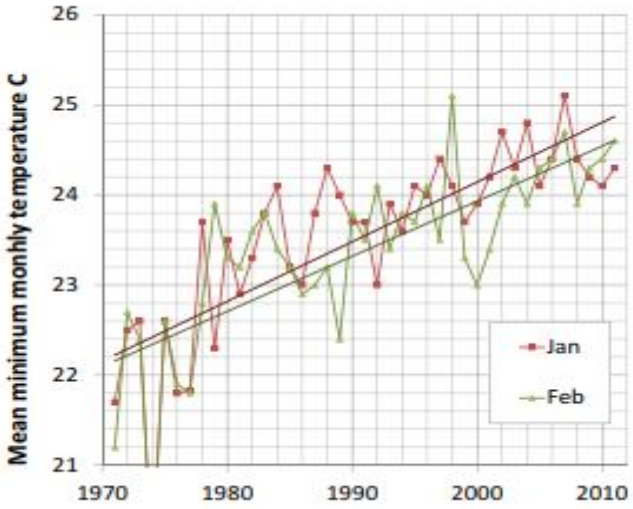

Figure 4: Mean monthly minimum temperature in January and February in Unguja[13]

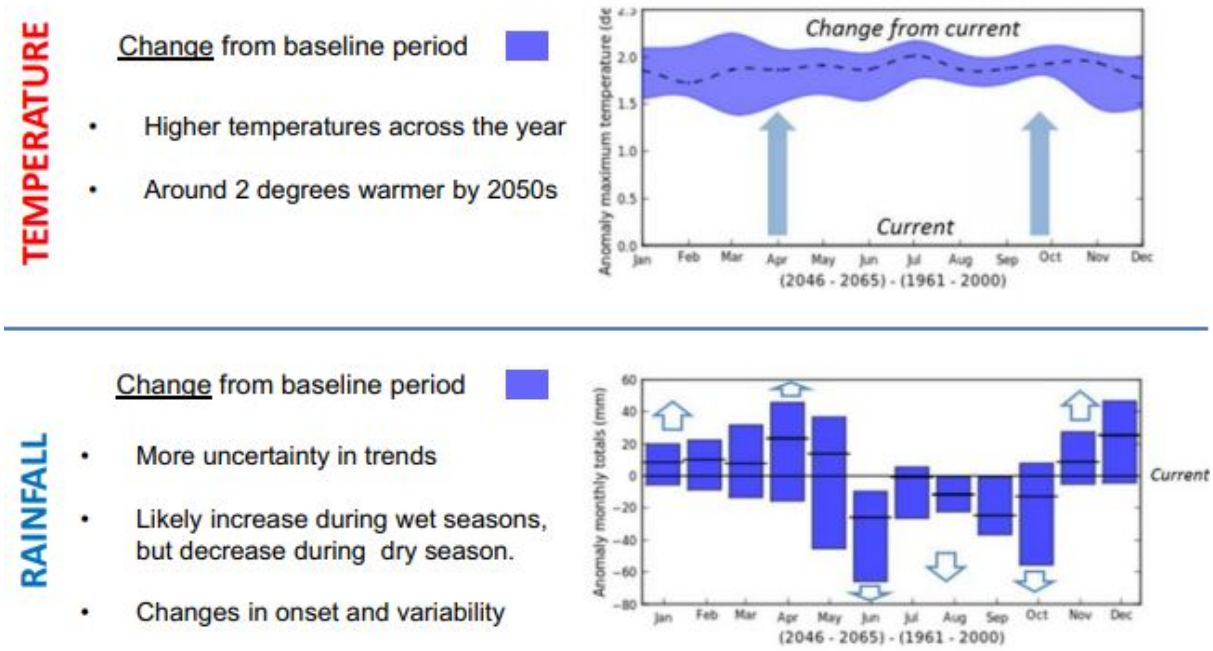

Figure 5: Change in Future Monthly Daily Maximum Temperature and Precipitation (2040- 2060) Relative to Baseline Zanzibar[14]

[13] Zanzibar Climate Change Strategy 2013, TMA

[14] Watkiss et al, (2012). The Economics of Climate Change in Zanzibar

1.4 Scope of the project and location of project areas

The project will be implemented in the selected sites of North B and Wete districts. Such sites were selected during the project pre-design phase involving the targeted beneficiaries and other stakeholders such as officers from the district councils, ward and shehia officers. NorthB district is one of two districts of North Unguja Region. It is located south of North A district, about 11 miles from Urban West, and also shares boundaries with the Central district on the south-east, West district on the south-west and the Indian Ocean on the west and east. According to the Population Census of 2012, NorthB district has a total population of 81,675, which is equivalent to 6.2 per cent of Zanzibar's population.

The main economic activities of North B district include: agriculture, forestry, fishing, hunting, livestock, mining and quarrying, manufacturing, services, construction, merchandise trade, hotels and lodges, and provision of other services such as financial and insurance. These sectors contribute in different ways to the district's economy. Major crops produced within the district are paddy, sweet potato, cassava, yam, millet, banana, and different varieties of fruit and vegetables.

Available statistics depict a relatively low level of productivity, especially when the district is compared to other crop-producing areas. A very good example here is paddy which in the island, is considered a priority crop by the people. However, the land area under crop production has been declining over the years due to various factors, such as increasing encroachment on farmland caused by high population, coupled with a growth in demand for better housing. Rising seawater is yet another factor. This is among the major determinants of the future of agriculture. According to the 2014/15 Zanzibar Household Budget Survey, incidence of poverty declined only marginally from 26.2 per cent in 2009/10 to 23.3 per cent in 2014/15. This means that poverty declined by 3 per cent only. On the other hand, the level of food poverty in respect to the head count rate was 7 in 2014/15, compared to 6.9 reported in the 2009/10. This means that food poverty did not change from what was reported in the previous Household Budget Survey (2009/10).

Proposed areas in North B

Bumbwini which is one of the four constituencies is the proposed project site for NorthB district. This includes the three shehias of Makoba, Mafufuni and Kiongwe located in Mafufuni ward. In total there are about 7,700 inhabitants in the three shehias most of them are engaged in agricultural activities. However, to a large extent the paddy fields in these areas are affected by sea water intrusion

Wete District

Wete district is one of the two districts in North Pemba Region, in Pemba Island. The other district in the region is Micheweni, which is along the eastern part of the island. Wete district has a total population of 107,916, which is equivalent to 8.3 per cent of the population of Zanzibar, based on the 2012 population census. The economy of Wete district constitutes several sectors such as agriculture, fishery, livestock, hotels, merchandise trade and tourism. Fishery is one of the sectors that supports the livelihood of several people within the district. Fishermen and others employed in allied segments of the fishery value chain make a living through this sector. However, this sector is not well developed partly because participants do not have adequate education and lack necessary credentials to access loan facilities from banks. Besides fishing from the sea, the number of households engaged in fishing, farming or aquaculture is growing within the district.

The incidence of poverty in the district has declined marginally from 50.8 in 2009/10 to 47.7 in 2014/15. This means that poverty declined by a magnitude of only 3 percentage points. Meanwhile, the level of food poverty in respect to head count rate was 15.7 in 2014/15, compared to 21.1 reported in 2009/10. This means that food poverty has declined by 5 per cent from the previous level.

The key issues in relation to agriculture in the district are modernization of agriculture and protection of agricultural land against encroachment by expanding construction activities and seawater. Modernization of agriculture should mainly seek to improve productivity and achieve self-sufficiency in food.

Proposed area in Wete District

In Wete District there are at least 12 shehias already affected by sea water intrusion. These include Ukunjwi, Gando, Kiuyuminungwini, Kiungoni, Chwale, Shengejuu, Piki, Kisiwani, Junguni, Kangagani, Mjio ole and MtambweKusini. However, the proposed project intends to address the needs of Tovuni which is the most affected area. In Tovuni there are 77.5 hectors of which 12 hectors are already affected by seawater intrusion. About 270 farmers mostly women are engaged in agriculture in this area. In recent years the production of rice has decreased significantly due to environmental changes (see Figure 6)

Figure 6: Farm affected by saltwater intrusion

1.4 Project objectives

The project will progress activities geared towards enabling climate resilient livelihoods in climate impacted areas of Zanzibar. Thus, the project's main objective is to build the capacity of smallholder farmers in tackling climate change impacts through practical and innovative solutions; that have

concrete and tangible outputs. Specifically, the project envisages achieving the following:

(i) Constructing water harvesting infrastructures for supplying water throughout the year in selected sites
(ii) Promoting soil and water conservation techniques for improved water protection and crop productivity
(iii) Developing integrated climate resilient livelihoods diversification systems in selected sites
(iv) Institutional capacity building of local government authorities and communities in planning and implementation of climate change adaption actions

1.5 Project Components and Financing:

Project Components	**Expected ConcreteOutputs**	**Indicative activities**	**Expected Outcomes**	**Amount (US$)**
1. Construction of water harvesting infrastructures for supplying water throughout the year in selected sites	1.1 At least 10 reservoirs constructed for improved water availability	1.1.1Technical designing of the reservoirs considering the location and capacity (liters of water) 1.1.2Construction of the reservoirs 1.1.3Training of communities on reservoirs operation and maintenance procedures	Increased water supply leading to improved production in various sub sectors	411,600
	1.2 At least 4 water troughs constructed	1.2.1Designing and construction of water troughs 1.2.2Training local community intuitions on operation and maintenance of the water troughs		
	1.3Water efficient irrigation schemes established	1.3.1 Site selection and community mobilization to agree on the selected site for the irrigation schemes 1.3.2 Installation of drip irrigation system 1.3.3 Establishment of irrigators organization (IO) 1.3.3 Training of leaders of IO on various topics including operation and maintenance of the irrigation system		

	1.4Rural water supply system improved	1.4.1 Land survey for establishing where the water pipe will pass through 1.4.2 Digging of the trenches 1.4.3 Construction of water delivery points/outlets 1.4.4 Establishment of community owned water supply organizations (COWSOs) for community water delivery system 1.4.5 Training of COWSO leaders on various topics including operation and maintenance of the water supply system		
2.Promoting soil and water conservation techniques for improved water protection and crop productivity	2.1Improved land management for improved crop yield	2.1.1 Training of smallholder farmers on soil and water conservation techniques 2.1.2 Support smallholder farmers to implement selected techniques 2.1.3 Establishment of demo farms	Increased agricultural production Increased water resources protection	120,000
	2.2:Improved water resources management	2.2.1 Community awareness raising on integrated water resources management 2.2.2 Situational analysis of water resources in the project sites 2.2.3 Establishment of WUAs 2.2.4 Training of WUA leaders on good governance, financial management, water use conflict management and water resources management		
3.Developing integrated climate resilient livelihoods diversification systems in	3.1Tress nurseries for supplying seedlings promoted	3.1.1 Awareness raising on the need for restoration of coastal vegetation 3.1.2 Training of communities on tree nursery establishment 3.1.3 Establishment of tree nurseries	Increased income, food security and resilience to climate change	210,000

selected sites	3.2 Poultry farming improved	3.2.1 Training on indigenous chicken production 3.2.2 Training on exotic chicken production 3.2.3 Provision of startup capital in form of chicken or chicks to the needy farmers	impacts	
	3.3Ponds/enclosures for aquaculture production constructed	3.3.1Training of farmers on production of various aquaculture products 3.3.2 Designing and construction of ponds/enclosures for aquaculture production 3.3.3 Purchase and distribution of fingerlings to farmers		
	3.4 Beekeeping production improved	3.4.1 Training on sustainable beekeeping practices 3.4.2 Provision of modern beehives and other related items 3.4.3 Training on honey processing and packaging 3.4.4 Provision of honey processing equipment such as honey centrifuge machine		
	3.5 The production of high value horticultural crops increased	3.5.1 Training on horticulture production for selected crops 3.5.2 Supporting the provision of extension services to farmers 3.5.3 Support business development activities and enabling farmers to access local and internal markets		
4. Institutional capacity building of local government authorities and communities in planning and implementation of climate change adaption actions	4. 1 The capacity of local government authorities in facilitating the adoption of climate smart agriculture practices strengthened	4.1.1 Training of local government officials in two targeted districts on climate smart agriculture including mainstreaming of climate change into development plans and budgeting process. 4.1.2 Facilitating district officers to provide technical assistance to farmers on climate smart technologies and	Improved capacity of local government authorities and communities in planning	100,000

		practices	and implementing adaption actions	
	4.2 Capacity of the farmers associations and communities in promoting the adoption of climate smart agriculture practices is strengthened	4.2.1 Build capacity of farmers associations on planning for climate related action 4.2.2 Train farmers associations on climate smart agriculture and sustainable and integrated water management practices 4.2.3 Supporting Community Based Trainers (CBT) in training peer farmers		
5. Project execution cost				83,600
6. Total Project cost				841,600
7. Project cycle Management Fee charged by the Implementing Entity (8.5%)				74,800
8. Amount of financing requested				**1,000,000**

Projected Calendar

Milestones	Expected Dates
Start of Project Implementation	December 2019
Mid-term Review	November 2021
Project Closing (6 months after project completion)	May 2023
Terminal Evaluation	November 2022

PART II: PROJECT JUSTIFICATION

PARTII A: Describe the project components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience.

The project is conceptualized and designed in such a matter that it comprises of concrete adaptation activities. Such activities are envisaged to contribute to climate resilience among coastal communities in Zanzibar most of whom are vulnerable to climate impacts. The project will include four components, the details of which are provided below.

Component 1: Construction of water harvesting infrastructures for supplying water throughout the year in selected sites

Zanzibar is facing critical shortage of freshwater resources owing to environmental degradation and climate change. Generally, it is water stressed, relying on freshwater obtained from unpredictable rains and stored in shallow aquifers consisting freshwater lenses floating on seawater. Tourism in Zanzibar has grown rapidly putting additional pressure on the dwindling freshwater resources. The freshwater exploitation beyond the aquifers` recharge rate leads to lowering of groundwater table, deterioration of

groundwater quality and saltwater intrusion[15]. According to Zanzibar Water Authority, about 200 million liters of freshwater are needed to supply the entire population per day. However, the supply is limited with much of freshwater aquifers being intruded by saltwater. This necessitate the use of desalination techniques for recovering the freshwater. But the desalination technology is not a best option on long term, because it is relatively expensive and has some environmental risks. In rural areas women and children have to walk long distances (sometimes up to 7 hours) fetching for waterthat is often contaminated and unsafe[16], thus affecting other household activities. In some rural households, children are unable to do school homework because when they come back home after many hours of fetching water are already very tired. Therefore, the construction of water harvesting infrastructures will demonstrate concrete adaption action for enhancing climate resilience in a water scarce Zanzibar thus contributing to socio-economic development. While drilling of boreholes may appear to be a solution as well, hydrological evidence suggests that increased pumping of groundwater may degrade the freshwater aquifers leading to increased saltwater intrusion.

Output 1.1 At least 10 reservoirs constructed for improved water availability

A total of 10 reservoirs for rainwater harvesting (RWH) will be constructed in selected sites (5 in Bumbwini - Unguja and 5 in Tovuni-Pemba). The harvested water will be used to cope with rainfall shortage in the area and it is envisaged to improve agricultural production through irrigation. From gender perspective, water availability will minimize cases of street children and early marriages since one of the causatives of such issues is travelling long distances in search of water, whereby women and adolescent girls are sexually abused leading to unplanned pregnancies. Furthermore, water efficient irrigation system such as drip irrigation will be promoted to avoid water loss and increase crop water productivity. The irrigation schemes will not only enhance yield of cereals but also horticultural crops thus improving the livelihoods of communities building their resilience to climate change impacts. The following indicative activities will be implemented:

1.1.1 Technical designing of the reservoirs considering the location and capacity (liters of water)
1.1.2 Construction of the reservoirs
1.1.3 Training of communities on reservoirs operation and maintenance procedures

Output 1.2 At least 4 water troughs constructed

Climate induced drought conditions affects not only agriculture production, but also livestock production. The project will support the construction of water troughs to enable water supply to the livestock. Apparently caves which are found in grazing lands are the major source of water for livestock drinking in Pemba Island while local wells are used in Unguja. However, due to climate variations leading to rising of sea level the caves and natural wells are now becoming unsuitable for livestock drinking owing to saltwater intrusion. Therefore, part of the rainwater to be harvested will be used to supply water to domestic animals through water troughs. To this end, 2 water troughs will be constructed in Bumbwini – Unguja and 2 in Tovuni – Pemba. Indicative activities include the following:

[15]Gössling, S. (2001). The consequences of tourism for sustainable water use on a tropical island: Zanzibar, Tanzania. Journal of Environmental Management 61 (179 – 191)
[16]https://drop4drop.org/water-crisis-zanzibar/

1.2.1 Designing and construction of water troughs
1.2.2 Training local community intuitions on operation and maintenance of the water troughs

Output 1.3 Water efficient irrigation schemes established

The project will support the establishment of irrigation schemes with a view of supplementing rainfall shortages and thus improving crop production in the selected project sites. The water to be used for irrigation will be taken from rainwater harvesting reservoirs. Water efficient irrigation systems such as drip irrigation will be promoted. The irrigation systems will be established in selected farms located in one area and approved by local government authorities. Farmers interested in growing various crops and do not have a farmland in the irrigation scheme will initially be supported by the project to lease land for growing crops of their choice. The following indicative activities will be implemented

1.3.1 Site selection and community mobilization to agree on the selected site for the irrigation schemes
1.3.2 Installation of drip irrigation system
1.3.3 Establishment of irrigators organization (IO)
1.3.3 Training of leaders of IO on various topics including operation and maintenance of the irrigation system

Output 1.4 Rural water supply system improved

With the acute water shortage in rural Zanzibar, climate change appears to exacerbate the problem. To address this, the project will support the rural water supply system in the selected project sites. This is envisaged to easy the work of women and children who would otherwise travel long distances to fetch water. As pointed earlier in this document, the water to be used will be sourced from the constructed reservoirs. The communities will be involved in every aspect e.g. digging of trenches for installing the water supply pipes. Thus the project will work towards ensuring that the community has sense of ownership of the water supply system. The following indicative activities will be implemented

1.4.1 Land survey for establishing where the water pipe will pass through
1.4.2 Digging of the trenches
1.4.3 Construction of water delivery points/outlets
1.4.4 Establishment of community owned water supply organizations (COWSOs) for community water delivery system
1.4.5 Training of COWSO leaders on various topics including operation and maintenance of the water supply system

Component 2: Promoting soil and water conservation techniques for improved water protection and crop productivity

Output 2.1: Improved land management for improved crop yield

In water limited areas like Zanzibar, the implementation of soil and water conservation (SWC) techniques is very pivotal as it increases water storage in the soil. Moisture stress and decline of soil fertility are themajor obstacles for crop production in Zanzibar, associated with climate change, poor

crop husbandry, excessive use of chemicals, poor conservation of catchment areas and deforestation.[17]SWC techniques are among the smart agriculture technologies and practices. They enable capturing and water/moisture retention in the soil and reduce evaporation losses and retain nutrients hence supporting plant growth even in drought conditions. For Zanzibar, technologies such as sunken bed, water spreading and pitting will be promoted for enhanced water retention in the soil. Moreover, mulching will be promoted for reducing evaporative water losses.

2.1.1 Training of smallholder farmers on soil and water conservation techniques
2.1.2 Support smallholder farmers to implement selected techniques
2.1.3 Establishment of demo farms

Output 2.2: Improved water resources management

The project will also foster catchment conservation with a view of protecting the dwindling freshwater resources. To this end, local government authorities and communities will be in involved in catchment conservation activities. In particular, community engagement in water resources management is one of the principles of integrated water resources management (IWRM). Thus the project will support the formation of Water Users Associations (WUAs) with a view of protecting water resources and addressing water use conflicts among various water users. This will ensure equitable water allocation and access to water for all. The indicative activities to be implemented under this output include the following:

2.2.1 Community awareness raising on integrated water resources management
2.2.2 Situational analysis of water resources in the project sites
2.2.3 Establishment of WUAs
2.2.4 Training of WUA leaders on good governance, financial management, water use conflict management and water resources management

Component 3: Developing integrated climate resilient livelihoods diversification systems in selected sites

Considering the fact that Zanzibar's economy and the livelihoods of its people depend on climate sensitive resources, it is crucial that adaptation strategies that target climate resilient livelihoods are promoted. Livelihood integration and diversification is recommended so as to maximize the resilience. This is because reliance on only one means of livelihood may risk increased climate vulnerability if that particular livelihood activity fails. Integration of livelihoods increases cost effectiveness as may generate some co-benefits and synergies. For example, the integration of tree planning, poultry, aquaculture and beekeeping on the same farm creates synergies. Trees protect soils and enhance water infiltration in the soil, poultry farms supplies manure to the fish ponds. The nutrient-rich water from the fish ponds are then used to irrigate horticultural crops adjacent to the fish ponds. Thus this kind of integration enhances productivity while ensuring cost effectiveness. Furthermore, beekeeping may be integrated in the same farm for enhanced pollination and increased income accruing from sale of honey.

Output 3.1 Tress nurseries for supplying seedlings promoted

[17] Zanzibar Research Agenda 2015-2020

The project will promote the establishment of tree nurseries with a view of not only restoring the coastal vegetation in degraded areas, but also generating income from the sale of seedlings. Population growth and economic development involving increased urbanization and increased investment in the tourism industry have led to clearing of coastal forests. Furthermore, the increased population has increased biomass energy demand hence causing more tree cutting for charcoal making. Therefore, the seedlings will be supplied to institutions and individuals. Mangrove tree seedlings will be given priority given the ecosystem services they provide in the marine ecosystem.Besides preventing beach erosion, mangroves have higher carbon sequestration potential than terrestrial trees as they have higher below ground carbon to above ground carbon ratio than terrestrial counterparts[18]. Seedlings of other tree species will also be supplied. Indigenous trees species will be promoted so as to restore the natural vegetation. The following indicative activities will be supported by the project:

3.1.1 Awareness raising on the need for restoration of coastal vegetation
3.1.2 Training of communities on tree nursery establishment
3.1.3 Establishment of tree nurseries

Output 3.2 Poultry farming improved

According to Zanzibar's Agricultural Transformation Strategy 2010-2020, poultry production constitutes higher proportion in total livestock keeping in Zanzibar, and emerges as important livelihood option for the majority of people. In particular, the current poultry production does not meet the demand and hence some poultry products are imported. Therefore, the project will provide some technical assistance to interested farmers on how to establish and run poultry enterprise. While the focus will be on indigenous chicken, the project will also support farmers interested in the husbandry of exotic chicken (broilers and layers). The following indicative activities will implement under this output:

3.2.1 Training on indigenous chicken production
3.2.2 Training on exotic chicken production
3.2.3 Provision of startup capital in form of chicken or chicks to the needy farmers

Output 3.3 Ponds/enclosures for aquaculture production constructed

Considering the climate induced challenges facing Zanzibar such as saltwater intrusion due to sea level rise, aquaculture has a huge potential for climate change adaptation. Aquaculture which means cultivation of aquatic animals and plants, involves freshwater and marine products. In the integrated farming system, freshwater fish production is recommended as the farm will have other activities requiring freshwater. Mariculture will be supported along the shoreline whereby some ponds/enclosures will be constructed for cultivating seaweeds, crabs, sea cucumber and milk fish. Mariculture is a key livelihood activity for coastal communities and has good prospect for increasing resilience to climate change impacts. While sea level rise may affect crop production due to saltwater intrusion, mariculture may offset the damages through sale of mariculture products, the proceeds of which can be used to purchase rice and other food items whose production is affected by saltwater intrusion. In the integrated farm, fishponds will provide nutrients through the nutrient-rich water to be

[18]Along, D.M(2012). Carbon sequestration in mangrove forests. Carbon Management 3, 313–322

used for cultivation of horticultural crops in the other side of the farm. Moreover, the fishponds will provide source of water for the bees. The following indicative activities will implement:

3.3.1Training of farmers on production of various aquaculture products
3.3.2 Designing and construction of ponds/enclosures for aquaculture production
3.3.3 Purchase and distribution of fingerlings to farmers

Output 3.4 Beekeeping production improved

Beekeeping is another livelihood activity with a potential to increase resilience to climate change impacts. With the significant mangrove forest vegetation still remaining in the shoreline, beekeeping is a viable livelihood based enterprise benefiting communities living in and around forests. The mangrove honey is considered to fetch good price as compared to terrestrial honey. People have high preference for mangrove honey because it is smooth and has medicinal value. Unlike the normal honey which contains much sugar, the mangrove honey has a different test, somewhat bitter and salty. The mangroves absorb various nutrients from the ocean thus making the nectar absorbed by the bees and subsequently the honey to be rich in nutrients making it to have a high medicinal value. Most importantly beekeeping can also be a practical tool for raising the awareness of communities on the importance of forest management and conservation[19].Compared with cultivated crops, beekeeping is not affected by climate variations and can provide a more predictable source of income. Besides, the pollination contributes to crop yields. The climate resilience of the beekeeping enterprise lies in the fact that the honey bees can tolerate high temperatures to some extent. The integration of beekeeping in a farm will facilitate crop yield through pollination. Indicative activities include the following:

3.4.1 Training on sustainable beekeeping practices
3.4.2 Provision of modern beehives and other related items
3.4.3 Training on honey processing and packaging
3.4.4 Provision of honey processing equipment such as honey centrifuge machine

Output 3.5 The production of high value horticultural crops increased

Horticulture farming involves growing fruits and vegetables, products highly needed in daily meals. In Zanzibar, the horticulture sub sector is largely dependent on imports owing to low production. With the increasing population and growing tourism industry, the demand for horticultural crops is increasingly high. The smallholder farmers engaged in horticulture production do not the suffice the demand of tourist hotels. This is partly due to limited resources for increasing production and inadequate water supply during the dry season. To this end, through the project supported water harvesting and irrigation schemes the smallholder farmers will be able to grow horticultural crops throughout the year. Horticulture if well practiced can improve the climate-stressed livelihoods of communities in North B and Wete districts. Studies show that farmers engaged in horticultural crop production are well placed to earn higher net farm incomes than those growing staple crops[20]. For example, a study by the

[19] Gebru, Y.G., Gebre, A.E and Beyene G. (2016). Review on the role of honey bee in climate change mitigation and poverty alleviation. Livestock Research for Rural Development 28 (3)
[20]Bengesi, K.M.K., & Abdalla, J. O. (2018). Forces Driving Purchasing Behaviour of Tourists Hotels Along

Volunteer Services Overseas (VSO)[21] in 2015 indicated the profits accrued from horticulture production may be up to eight times more than of cereal crops. Indicate activities include the following:

3.5.1 Training on horticulture production for selected crops
3.5.2 Supporting the provision of extension services to farmers
3.5.3 Support business development activities and enabling farmers to access local and internal markets

Component 4: Institutional capacity building of local government authorities and communities in planning and implementation of climate change adaption actions

Both droughts and floods are ever posing the threats for farmers' food security. Their harvests depend directly on predictable and sufficient rainfall. However, climate change is already negatively impacting these farmers through unpredictable rainfall, soil degradation and soil erosion. The situation is unlikely to change given worsening climatic conditions and maladaptive agricultural practices. As a result, the uptake of climate adaptive farming practices is critically important. The project will work in an integrated manner on strengthening capacity of the local institutions, farmers associations and communities regarding promoting the adoption of climate smart agriculture practices. At one level, the project will seek to influence and involve local people in relation to adopting smart agriculture by developing capacities among communities. This approach will be especially effective in proposed project areas given the well-developed local organization structures that exist in local communities. Farmer associations will be supported (through the provision of encouragement and technical advice) to promote the adoption of climate smart agriculture practices. In addition, communities will be also capacitated to practice smart agriculture in their farming activities.

Output 4.1 The capacity of local government authorities in facilitating the adoption of climate smart agriculture practices strengthened

The local institutions operating within project areas have a potential influence of transforming agricultural practices from non-smart to smart agriculture. This is because of their direct interaction with farmers as well as their planning and decision-making roles in formulating agricultural related policy and legislations. The farmers in the project areas depend solely on rain fed agriculture. Rain fed field crops are amongst the most vulnerable crops to climate change. Several technologies are harnessed to risk coping, including the introduction of adapted selected varieties, supplementary irrigation and irrigation management, integrated pest management, no-till and crop rotation practices and so forth. Thus, it is important to build capacity of the local institutions in promoting the adoption of climate smart agriculture. This will result in among others increasing farmers' capacity on how to practice smart agriculture under climate uncertainty. This approach will also amplify the adaptation mechanism increase farmers' resilience.

Activities:

4.1.1 Training of local government officials in two targeted districts on climate smart agriculture including mainstreaming of climate change into development plans and budgeting process.

Tourist-Agricultural Supply Chain in Zanzibar. International Journal of Marketing Studies, 10(2):36-46

[21] VSO (2015). Value Chain Analysis of the Fruit and Vegetable Market for Smallholder Farmers in Zanzibar. Volunteer Services Overseas, Dar Es Salaam. 38pp.

4.1.2 Facilitating district officers to provide technical assistance to farmers on climate smart technologies and practices

Output 4.2 Capacity of the farmers associations and communities in promoting the adoption of climate smart agriculture practices is strengthened

Building capacity of the farmers associations and communities in promoting the adoption of climate smart agriculture practices is very important. Farmers association in project areas are mainly composed of farmers and lead by farmers themselves who for a large instant live within the respective project areas. Adoption of climate smart agriculture practices is largely based upon farmer to- farmer transfers of information, knowledge, experience and resources. Lead farmers who are locally influential farmers within farmers associations are vital to this process. The proposed project will train and capacitate farmers associations and communities at large in in promoting the adoption of climate smart agriculture practices

Activities:

4.2.1 Build capacity of farmers associations on planning for climate related action

4.2.2 Train farmers associations on climate smart agriculture and sustainable and integrated water management practices

4.2.3 Supporting Community Based Trainers (CBT) in training peer farmers

PATR IIB. Describe how the project provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund. (Refer Annex I).

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

Environmental benefits

The proposed project is expected to have multiple environmental benefits. The adoption of climate smart agriculture practices (which promotes soil and water conservation) and other best environmental conservation practices such as tree plantation will improve the natural vegetation cover thereby contributing to proper management of soil and water resources. In particular, tree planting will significantly contribute to the restoration of forests which were previously cleared for various reasons. Restoration of mangrove forests along the shorelines will reduce beach erosion and enhance other ecosystem services provided by mangroves. To address water shortage challenge, the project will support the construction of rainwater harvesting reservoirs which assist in collecting and storage of rainwater which would otherwise be lost as runoff. While the project recognizes the potential of boreholes in addressing water scarcity in Zanzibar, it is not promoting boreholes due to environmental reasons. The boreholes contributes to increased pumping of freshwater from the groundwater aquifers leading to destabilization of the freshwater - saltwater equilibrium and hence increasing saltwater intrusion. Therefore, by promoting rainwater harvesting structures the project will enhance the protection of freshwater aquifers. Furthermore, the project will contribute to water resources

management through the formation of Water Users Associations which among others will be required to ensure protection of river catchments. The establishment of integrated farming systems the project will contribute to nutrient cycling, soil fertility and crop pollination through honey bees. All these are essential for enhancing the resilience of the ecosystems and communities in the targeted project sites.

Economic benefits

The project has been designed to transform the economic situation of rural communities in the target sites of Zanzibar. The project will be supporting the availability of water which is a very vital resource in agricultural production systems. With the irrigation system in place farmers are envisaged to produce more crops which will not only increase household food security but also income. The activities to be implemented under components 1 and 3 will transform the economic status of communities from resource-poor and vulnerable to resource-rich and resilient to climate shocks. The implementation of livelihood based enterprises such as aquaculture, cultivation of high value horticultural crops and beekeeping offers many economic benefits.

Social benefits

The project offers many social benefits which can be realized through the proposed interventions aiming at livelihood improvement. In particular, the availability of water throughout the year will reduce the workload of women and school girls who would otherwise travel long distances to fetch water. Tree planning in private lands will create woodlots which can be used for firewood and charcoal making and thus reducing women's task of collecting firewood. In rural settings, besides fetching water women also have a duty of gathering firewood for household's heating energy. The livelihood activities to be supported by the project will have a multiplier effect whereby the benefits will trickle down to more vulnerable and marginalized groups in the community.

PART IIC. Describe or provide an analysis of the cost-effectiveness of the proposed project

Cost-effectiveness aims to achieve the greatest development impacts from the available resources. The cost-effectiveness of the project's adaptation interventions will be greatly be enhanced by the implementing entity. This project will be implemented through the government ministries and local authorities such as the Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF), thus operationally no need for a new office and new staff. Also, pensions and insurance will be paid by the implementing agencies as these costs are already covered by the employer and can be accounted for as co-financing by the government. The operational costs will also be reduced through the involvement of the local government authorities where the interventions will be implemented to support in some aspects of the project including Monitoring and evaluation.

Also, the fact that the project will focus on coastal agricultural communities which highly depend on agriculture for their livelihood, enhancing their capacity in adapting to the climate change impacts will reduce costs associated with the hidden costs resulted from these impacts. The accessibility to water, for example, will mean less time will be spent in the search for water, thus time saved could be used for other economic activities to generate more income.

Zanzibar receives a relatively high annual rainwater volume, which exceeds demand, though much of this lost from run-off to ocean or evaporation. Through the construction of water harvesting structures such as reservoir and installation of irrigation facilities will be able to reserve much water for economic activities which will improve the household income. Also, this will improve water source protection and

secure access to water supply for agricultural as well as domestic purposes. This proposed activities that enhance sustainable and integrated water management yield significant benefits, based on estimates of the economic value of ecosystem services provided by the agriculture productivity; and justify the cost of investments in climate change adaptation. It is anticipated that the modest investment of Adaptation Fund resources will result in significant improvements in water supply in the targeted districts. This will yield significant benefits.

PART11 D: Describe how the project is consistent with national or sub-national 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 proposed project is consistent with both national and international plans. It is particularly consistent with plans of the Revolutionary Government of Zanzibar including Zanzibar Development Vision 2020 (2000/2020), Zanzibar Strategy for Growth and Reduction of Poverty III (2016/2020), Zanzibar Climate Change Strategy (2014), Economics of climate change in Zanzibar (2012), Agriculture Sector Review (2015), National program under the Tanzania Social Action Fund (TASAF), Environmental Policy (2013), African Union Agenda (2063), EAC Climate Change Policy (2011),Sustainable Development Goals (SDGs) 2030, National Adaptation Programme of Action (NAPA), 2007 and Tanzania Intended Nationally Determined Contributions (INDCS)

Zanzibar Development Vision 2020
Zanzibar Development Vision 2020 is the basic tools toward development of Zanzibar. The Vision 2020 gives the important direction on various issues including Climate change and Sustainable Environment Management by encourage renewable energy resources, conservation and protection of the environment, rational and sustainable utilization of natural resources. The strategy direction for Zanzibar Vision 2020 guides on promoting sustainable tourism, fishing and industrial sector, strengthen trade sector, promote human resources development, encourage information and information technology, encourage environmental protection and the promotion of good governance, capacity building and peace and stability.

Zanzibar Strategy for Growth and Reduction of Poverty III, 2016 - 2020
The Zanzibar Strategy for Growth and Reduction of Poverty III comes up with key results areas to ensure that the strategy is focused, prioritized and results-based (i) Enabling Sustainable and Inclusive Growth (ii) Promoting Human Capital Development (iii) Providing quality services for all (iv) Environmental Sustainability and Climate Resilience (v) Adhering to Good Governance Principles.

Zanzibar Climate Change Strategy, 2014
One among other objectives of the Zanzibar Climate Change Strategy is to guide mainstreaming of climate change adaptation and low carbon sustainable development across the government and provide the enabling environment for all stakeholders (private sectors, civil society, and communities) to advance relevant activities.

Economics of climate change in Zanzibar, 2012
This document indicates key issues on climate change including the projection of climate change, sea rise level, Socio-Economic Projections and Climate Screening of Development, climate risk, opportunity for

adaptation, Impacts of Climate Change and Possible Adaptation Options and Coastal and Marine Ecosystems and Ecosystem Services.

Zanzibar Environmental Policy, 2013
The overall objective of Zanzibar Environmental Policy (ZEP) is to pave the way for the protection, conservation, restoration and management of Zanzibar's environmental resources, such that their capacity to sustain development and maintain the rich environmental endowment for the present and future generations is not impaired.

EAC Climate Change Policy, 2011
The purpose of the Policy is to guide EAC Partner States and other stakeholders on the implementation of collective measures to address climate change impacts and causes in the region through adaptation and mitigation measures while sustaining social and economic development. The adaptation objective for EAC Climate Change Policy is to institute and implement measures which will improve the adaptive capacity and resilience of the East African region to the negative impacts of climate change.

Sustainable Development Goals (SDGs)
The proposed project will tackle the issues directly related to the SDGs such as Goal 1. End poverty in all its forms everywhere, Goal 2. End hunger achieve food security and improved nutrition and promote sustainable agriculture, Goal 6. Ensure availability and sustainable management of water and sanitation for all, Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all, Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable, Goal 13. Take urgent action to combat climate change and its impacts, Goal 14, Conserve and sustainably use the oceans, seas and marine resources for sustainable development and Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

National Adaptation Programme of Action (NAPA), 2007.
The overall vision of Tanzania's NAPA is to identify immediate and urgent Climate Change Adaptation Actions that are robust enough to lead to long-term sustainable development in a changing climate. It will also identify climate change adaptation activities that most effectively reduce the risks that a changing climate poses to sustainable development.

Tanzania Intended Nationally Determined Contributions (INDCS)
Tanzania Intended Nationally Determined Contributions (INDCS) has put much emphases on Intended Contributions to Agriculture, livestock, forest, energy, Coastal, Marine Environment and Fisheries, water resource, tourism, human settlement and health

National Environmental Action Plan (NEAP)
NEAP developed to support the country towards meeting key international environmental obligations, which include conventions related to Biodiversity and Forests, Climate Change, Sustainable Land Management; Environmental Pollution, Hazardous Waste and Chemicals Management; Sustainable Oceans, Coastal Zones, and protection of Coral Reefs.

Zanzibar Climate Change Action Plan
The aim of the Action Plan is to identify the specific implementation activities to deliver the Strategy, setting out the priority options for adaptation and low carbon development, and providing a costed, climate-finance ready pipeline of projects and programmes.

PART IIF. Describe if there is duplication of project with other funding sources, if any.

The proposed project and its interventions will avoid any duplication of actions and funding sources. During conceptualization and designing of this project, consultations were made with North B and Wete district council and relevant sector ministries whereby it was clear that no similar interventions exists in such districts. Furthermore, during the development of the full project proposal, the team of the proposed project will involve various stakeholders including NIE. This will ensure that no duplication of project or funding sources is done. However, there some projects in other sites of Zanzibar which were proposed or implemented some of the aspects of the proposed project. The table below shows some of related projects for climate change adaptation conducted in Zanzibar:

Table 2. Climate change related projects/programs in Zanzibar

Project/Program	Objectives	Synergy with the proposed project
Enhancing climate change resilience in Zanzibar	Institutional support to the Revolutionary Government of Zanzibar in developing climate strategy and adaption action plan.	**No duplication**. The proposed project does not target decision makers but rather communities vulnerable to climate chocks. As such the proposed project seeks to implement concrete adaption actions that will tangibly transform livelihoods.
Economics of Climate Change in Zanzibar	To quantify the economic impact of climate change to Zanzibar.	**No duplication.** This was purely a research project/program. However, the proposed project focuses on concrete adaption interventions.
Decentralized Climate Finance Project	Piloting climate resilient investments.	**No duplication**. Much of the interventions were conducted in Tanzanian mainland. Furthermore, the project targeted SMEs while this proposed project targets poor and vulnerable communities

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

The project's learning and knowledge management component will entail dissemination of good practices and lesson learned through various ways including media, publications, workshops and video documentaries. In every component of the Project, one of the fundamental project activities focuses on education, awareness creation and sensitization on climate change and its related impacts on social,

environment and economy aspects. This aims to ensure project beneficiaries and stakeholders are aware of the risks and impacts associated with climate change so that effective and appropriate adaptation and mitigations options are designed and executed. Enhancing community awareness on climate smart agriculture, the importance of protecting water sources and efficient use of water resources in agricultural crop production is expected to increase community commitment in participatory management of natural resources around their areas and in turn reducing climate change threats. Project activities will be undertaken in participatory and gender sensitive manner to ensure community acquire required learning and knowledge. The outcome of this is increased knowledge sharing among and between project beneficiaries and other community members outside the project. The project will organize and conduct study visits within the project sites (Unguja and Pemba) to help farmers learn and sharing experience. Study visits to Mainland Tanzania in areas with similar project will also be organized to enhance better learning. The project will organize meetings with community and other stakeholders engaged in project activities to capture lesson learned including challenges experienced during the implementation. The project's synthesized lesson learned will be published and shared with project beneficiaries for wider knowledge dissemination.

PARTII 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.

The Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF) Zanzibar made rapid consultations with various stakeholders including community in project targeted areas. The aim was to raise awareness on the project, getting first-hand information for the preparation of this concept note and building project ownership from the start. In the development of this note, the project reviewed climate change vulnerability characteristics of the targeted areas to identify potential climate change challenges and the most vulnerable groups within community in Wete and NorthB'Districts. Described below are the various levels of stakeholders consulted during the preparation of the concept note. A detailed stakeholders' analysis and meetings will be conducted during the development of the full project proposal including quantitative analysis of the data and information that will be gathered.

a) Sectoral level Stakeholders (MDAs):

- SVPO – DoE (Unguja and Pemba)
- Ministry of Finance and Planning
- Planning Commission
- Ministry of Land, House, Water, and Energy (MLHWE) Planning Commission
- Zanzibar Environmental Management Authority (ZEMA)
- Department of Irrigation
- Department of Agriculture
- Department of Forestry and Non-Renewable Natural Resources (DFNR)
- Zanzibar Water Authority (ZAWA)
- Head of Ministry of Agriculture, Natural Resources, Livestock and Fisheries, Pemba

b) LGAs Level Stakeholders:

i) Wete Town Council, Pemba
ii) NorthB District Council, Unguja

c) Community, Famers Associations and NGOs Level Stakeholders:

i) Community Forest Pemba (CFP) – Wete, Pemba
- Makoba and Mafufuni Community, North B District, Unguja
- Tovuni community, Wete District, Pemba
- Tanzania Horticulture Association (TAHA) Zanzibar
- Organized women groups in the targeted areas

The table below summarizes the roles of each stakeholder consulted.

Potential Stakeholders	Description of the Roles
LGAs (Wete Town Councils and North B District Council)	The project activities will be executed in the rural areas of the Town and District authorities where key actors within the Town and District Councils have direct role of managing community and activities. These include Subject Matter Specialists (forestry, land, environment, community development, fisheries) and extension officers. Other includes Planning and District Agricultural officers who plan and implements district plans and programs. The authorities have a role to mobilize community to participate in the project activities, monitor project progress, support community natural resources management program including approval of bylaws for safeguarding water resources.
Sectoral government	All sector Ministries and their Departments relevant to this project are key and the project will be keen to ensure they are widely consulted. Sectors such as Agriculture, Forestry, Environment, Fisheries, Water and Lands are relevant to this project and their inputs are necessary during full proposal development.
Water User Associations	These are stakeholders that are part of the farmers but established to oversee and advocates farmer's rights in agriculture sector including managing rice fields, water utilization and follow up of access to farming inputs. In this project they will be used to mobilize farmers to actively engage in project activities. They will also receive training on how best to manage community groups, manage irrigation structures and enforcing the bylaws to realize positive projects outputs and outcomes. Members of the famer's associations are democratically elected, and they are about twenty with leadership structure.
Non-government organizations	These are specialized group of stakeholders that will be engaged by the project to raise community awareness on climate change issues, climate smart agriculture and water resource management. They will work under the guidance of project team and district authority and in close consultation with farmers associations.
Farmers	These are grass root project beneficiaries that will be mobilized through their local institutions to participate in project implementation including climate smart agriculture practices, trainings and awareness raising sessions, water sources protection and community meetings. Farmers are key stakeholders that will be used to provide feedback and lesson learned from project activities as they will practice the interventions on the ground.

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

Funds requested from the Adaptation Fund will be used to support building the capacity of coastal communities in Unguja and Pemba to adapt to the impact of climate change through implementation of practical interventions to produce tangible and sustainable impacts. Without funds from the Adaptation Fund, communities in Wet and North B districts will continue to be negatively affected from the impacts and fail to meet the livelihood needs. A more justification for funding can be evaluated by analyzing the project and without project scenarios as described below:

Component 1: Construction of water harvesting infrastructures for supplying water throughout the year in selected sites

Without funds from the Adaptation Fund (AF), no activity will be implemented to address the challenge of inadequate sustainable water supply for irrigation farming in Wete, and NorthB districts. This means that communities will continue to depend on rainfed agriculture which is not sustainable due to unpredictable nature of the rainfall patterns. This will lead to food insecurity problem and poor household income resulting from poor agricultural production. Preliminary observations in these areas show that women and other marginalized groups are highly affected. Women, in particular, are highly impacted compared to men due to their dependency and involvement in agricultural activities.

AF funding to construct water infrastructures will enable water availability throughout for both farmers and livestock keepers. Moreover, the construction of water reservoirs for rainwater harvesting will not only reduce flood risks and supply water for irrigation systems but also enable water supply for domestic use. By funding rainwater harvesting structures the AF will have enabled Zanzibar to achieve Sustainable Development Goal 6 (Ensure availability and sustainable management of water and sanitation for all).

Component 2: Promoting soil and water conservation techniques for improved water protection and crop productivity

Without AF funding, more degradation of soil and water resources is expected given the prevailing land management practices coupled with urbanization pressure. This project intends to progress soil and water conservation innovations that will ensure restoration of degraded land and improve the protection of river catchments. With AF funding the soil and water conservation interventions will enhance soil fertility, soil structure and soil moisture which is critical for plant growth. This is envisaged to not only boost crop yield but also increased groundwater recharge through increased water infiltration in the soil, though this may be offset by evapo transpiration losses. With AF funding the project will facilitate the establishment of Water Users Associations which will play very important role in protection of river catchment areas.

Component 3: Developing integrated climate resilient livelihoods diversification systems in selected sites

Given the current situation in the target districts whereby the livelihoods of rural poor communities are vulnerable to climate change impacts, more people are posed to experience shortages of water and food. The current farming practices are not climate resilient causing farmers to experience very low yield. Therefore without AF funding, the communities are more likely to continue suffering from

climate change impacts owing to inability to implement climate resilient livelihood activities. Saltwater intrusion has caused more harm to farmers as they are forced to abandon their farms. The economic cost of losing land which has been previously used for agriculture cannot be compensated if there are no alternative generating activities that can produce equally socio-economic benefits to the affected communities.

With AF funding it is envisaged that the livelihoods of communities at grassroots will be improved making them vibrant and resilient to climate change shocks. In particular, farmers affected by saltwater intrusion will be capacitated to implement alternative and climate resilient livelihoods the proceeds of which can be used to purchase food. Livelihood diversification will not enable communities to have assured income for buying foods and other household needs, but also create employments. Activities such as horticulture production and poultry require some labor inputs; hence some people will be employed and hence contributing to the economic development of the country.

Component 4: Strengthen capacity of the local institutions, farmers associations and communities in promoting the adoption of climate smart agriculture practices in the targeted districts.

At present the target districts do not have adequate capacity to effectively facilitate implementations of climate change adaptation interventions. Without the AF funding, it is likely that the pace to incorporate climate adaptation related issues into district development plans and implementing adaptation actions on will be slow and may in some instances be impossible. Without FA resources climate change vulnerable communities in North B and Wete districts are more likely to continue suffering. With AF funding the districts will be able to facilitate the implementation of adaption actions with a possibility to scale up the interventions in other sites found in their respective districts.

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

Sustainability aspect was taken into consideration during project design. This is demonstrated by involving North B and Wete district councils which have legal mandate to oversee development activities in the project sites. The water infrastructures to be developed in the project villages will remain under overall supervision of the districts after project termination. Moreover, the project will build the capacity of village level institutions in managing the infrastructures to be developed. Moreover, the farmers and livestock keepers will be trained on how to implement various climate smart technologies which can be sustained beyond the project period. Furthermore, district and ward extension officers still provide technical assistance to the communities even after project termination. Besides, following project termination; some of project activities will be incorporated in the district's Medium Term Expenditure Framework.

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

Checklist of Environmental and Social Principles	No further assessment required for compliance	Risk and potential	Detail of potential risks	Measures to address risk
Compliance with the Law	X	Risk: **Low** Potential impact: **High**	Not expected	The full proposal will be compliant with all relevant national laws and regulation including the bylaws set by North B district, Wete district and project sites.
Access and Equity	X	Risk: **Low** Potential impact: **Low**	Not expected	The project will ensure equitable access to project benefits by all community members.
Marginalized and Vulnerable Groups		Risk: **Moderate** Potential impact: **Moderate/High**	Failure to consult marginalized and vulnerable groups may cause the project to overlook their needs and hence denying them access to project benefits.	Although during concept note development marginalized and vulnerable groups were consulted, more intensive consultations will be done during full proposal development
Human Rights	X	Risk: **Low** Potential impact: Moderate/ **High**	Not envisaged	The project will adhere to national and international human rights standards, policies, rules and regulation
Gender Equity and Women's Empowerment		Risk: **Moderate** Potential impact: **Moderate/High**	If the needs of women and men are not equally addressed the project may experience difficulties during implementation.	Gender will be mainstreamed in all project components

CoreLabour Rights	X	Risk:**Low** Potential impact: **Moderate/High**	Not anticipated	The project will adhere to core labor rights during implementation
Indigenous Peoples		Risk:**Moderate** Potential impact: **Moderate/High**	Without prior consultations with indigenous people the project is likely to fail. Moreover, if their capacities are not built, the project outcomes will not be sustained	The project main target will be to address the needs of indigenous people
Involuntary Resettlement	X	Risk:**Low** Potential impact: **High**	Not expected	Theprojectdesign doesnotrequire involuntary resettlement
Protectionof Natural Habitats		Risk:**Low** Potential impact: **High**	Project interventions should not lead to destruction of natural habitats.	All project interventions will be conducted in a manner that leads to significant threat to natural habitats
Conservation ofBiological Diversity		Risk:**Low** Potential impact: **High**	If care is not taken, project interventions may lead to loss of biodiversity	The sites for construction of rainwater harvesting reservoirs will be subjected to baseline assessment to determine existing species and assess any potential risks
Climate Change	X	Risk:**Low**	Not anticipated	Theprojectwill contributetoclimate changeadaptation. No GHG emissions are anticipated.
Pollution Prevention andResourceEfficiency		Risk:**Low** Potential impact: **High**	Not anticipated	The project may cause pollution to some extent especially during construction of rainwater harvesting reservoirs. However, it will adhere to established national and international

PublicHealth	X	Risk:**Low** Potential impact: **High**	Not anticipated	The project design will ensure that public health is not adversely affected.
Physical and Cultural Heritage	X	Risk:**Low** Potential impact: **Moderate/High**	Withou tthorough and careful site selection especially during construction of water infrastructures.	The baseline study will be conducted to identify the presence of physical and cultural heritage sites
LandsandSoil Conservation	X	Risk:**Low** Potential impact: **Moderate/High**	Not anticipated	The project will promote conservation of soil and land resources

PART III: IMPLEMENTATION ARRANGEMENTS

PARTIII A. Describe the arrangements for project implementation.

The project will be implemented by the Revolutionapart iiry Government of Zanzibar through the relevant ministries and institutions. The main executing entity for this project will be the Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF), which is responsible for the formulation and implementation of agricultural policies and strategies in the country. MANRLF will work closely with the Vice President Office, Department of Environment, which is responsible for all environment and climate change issues in the country, and which is expected to provide relevant guidance to ensure successfully achievement of project objectives.

The Project Team will be comprised of Project Coordinator, Project Accountant, M & E specialist and Project Driver, all to be seconded within the government through MANRLF. The Project Team will be guided by the Project Steering Committee (PSC), which will be constituted by members from the relevant ministries and departments – MANRLF; Second Vice President's Office; Ministry of Finance and Planning; Ministry of land, house water and energy; Representatives from farmers associations and women groups; Representatives from people with disabilities; and Representatives from the local government authorities notably from Wete and North B. Being an NIE, NEMC is responsible for the overall management of the project including facilitating issuance of the project funds.

PARTIII B. Describe the measures for financial and project risk management

Risk Type	Risks Category	Risk Level	Mitigation Measure
Financial risk	Timely disbursement of funds	Low	Fund requests and project progress reports will be timely prepared, communicated and submitted to the Adaptation Fund and other relevant stakeholders to ensure adequate feedback is provided to speed up fund's disbursement. The Project Team will follow required standards and templates as provided by the Adaptation Fund to ensure proper reporting and avoid unnecessary delays.
	Financial control risk	Low	Appropriate structures at the ministerial level and local government authorities exist for proper management and control of the public funds. This project will, therefore, follow these structures and international accounting standards (IAS) and to all Generally Acceptable Accounting Principles (GAAP) to meet all accounting requirements related to reporting, control and transparency and auditing.
Project risk	Project performance	Low	Project Team will be carefully constituted based on skills and capacity to manage project on Climate change intervention as well good monitoring tools to facilitate implementation of this project. Detailed work plans will be developed and be approved by both the Project Steering Committee and NEMC.
	Participation of stakeholders	Low	Participation of stakeholders will consider widely involved from early stages of the project design, implementation, monitoring and evaluation during the entire life of project cycle. Involvement of key stakeholders at community level and inclusion of vulnerable to climate change adaptation communities and groups such as youth, women, local leaders, community beneficiaries, and farmers association as well as responsible ministries will facilitate to mitigating any risks related to stakeholders' involvement.

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

Measures to manage specific Environmental and Social risks are described in the table below.

Environmentalandsocial Risk Category	Measures to be taken
Gender EquityandWomen Empowerment	• Identification of Beneficiariesduring project design and implementationphases with view of ensuring that women directly benefit from project interventions. • Gathering gender disaggregated monitoring data • Giving special consideration for women and girls during project implementation.
Lossof biodiversity	Promoting sustainable practices
Exclusionoffarmers with HIV, disabled/physically challenged,Gender	Special considerations for vulnerable and underprivileged groups
ExclusionofIndigenous technicalknowledge (ITK)	Mainstreaming ITK inproject interventions
Laborlaws	Ensure thatallemployedpersonnel inthe project sites/areas are contracted inaccordancewiththe national and international Labor Laws.
Compliancewith statutory Laws	The project will adhere to all relevant statutory laws including the requirements for Environmental Impact Assessment.
Complaints/grievances	Agrievancemanagement framework will be developed to provide a platform for all project stakeholders to express their concerns in a transparent manner.

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

Activity	Responsible Person	Budget	Timeframe
Inception	Project Coordinator	4000	Within 2 months of project starting
Regular monitoring	Project coordinator	9000	Quarterly
Annual impact Assessment	M &E officer	2000	Annually
Midterm evaluation	National consultant	5000	One and half year
Field report	Project coordinator	0	Semi annual
Steering committee meetings	Project coordinator	6000	Semi annual
Technical reports	Project coordinator	0	Periodic
Final evaluation	National Consultant	6000	Four months before the end of the project
Terminal project Report	Project coordinator	5000	End of the project
Audit report	External Audit	3000	End of the project

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

Expected Results	Indicators	Baseline	Targets	Means of Verificatior	Milestones
Project Goal: Enhancing resilience of coastal community to climate change-induced challenges of drought, floods and saltwater intrusion in NorthB and Wete districts, Zanzibar					
Enhanced resilience to climate change impacts caused by drought, floods and saltwater intrusion	The percentage of community members resilient to climate chocks	To be established during project Inception whereby a baseline study will be conducted	At 50% of the community members have access to freshwater At least 20% of farmers hare practicing irrigation agriculture Household income increased by at least 30% by the end of the project Crop yield increased atleast by 20%.	• Project progress report • Midterm review report • End of project evaluation • Publication in journal articles	By the end of the project and beyond
Component 1: Construction of water harvesting infrastructures for supplying water throughout the year in selected sites					
Improved access to water for various uses such as irrigation farming, livestock and domestic use	• The percentage of households supplied with water • Number of farmers benefiting from the irrigation schemes • Type and number of	To be established during the baseline survey	At least 50% of target population has access to freshwater At least 30 % of farm households practice irrigation farming	• Project progress reports • Midterm review report • End of project evaluation • Publication in journal articles	By the end of Year 2

	other production activities benefiting from water supply system				
Component 2: Promoting soil and water conservation techniques for improved water protection and crop productivity					
Improved crop yield and water resources protection	• Number of bags/kgs produced from a farm under soil and water conservation interventions • Area of catchment conserved • Water quality and quantity • Number of Water Users Associations formulated.	To be established during the baseline survey	Crop yield increase by at least 10% in farms under soil and water conservation At least 30% of the river catchment area restored and conserved Form at least 2 Water Users Associations in each district	• Project progress reports • Midterm review report • End of project evaluation • Publication in journal articles	By first half of Year 3
Component 3:Developing integrated climate resilient livelihoods diversification systems in selected sites					
Increased resilience to climate challenges through livelihood integration and diversification	• Number of farmers engaged in tree nurseries and sale of seedlings • Number of farmers	To be established	At least 10% of target farm households engage in tree nurseries	• Project progress reports • Midterm review report • End of project evaluation	By end of Year 2

	engaged in poultry • Number of farmers doing aquaculture both freshwater and mariculture • Number of farmers engaged horticulture farming • Number of farmers engaged in beekeeping	during the baseline survey	At least 20 % of farm household has more than one livelihood activities At least 10 % of farmhouse practice poultry and aquaculture Al least 30% of farm households engage in horticulture production At least 10 % of farm household engage in beekeeping At least 5 % of farm households integrate tree planting, poultry, aquaculture, horticulture production and beekeeping	• Publication in journal articles	
Component 4:. Institutional capacity building of local government authorities and communities in planning and implementation of climate chang adaption actions					
Improved capacity of local government authorities and communities in planning and implementing adaption actions	• Number of district officers trained on climate change adaption issues	To be established during the baseline survey	• At least 5 % of district planning and budget account for climate change related actions • At least 2 officers from the districts and 2 officers from the wards are dedicated to	• Project progress reports • Midterm review report • End of project evaluation • Publication in journal articles	By first half of Year 3

	• Number of ward officers trained • Percentage of time and funds allocated for supporting climate change adaption interventions by district councils		supporting rural communities on climate related interventions		

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

Project Objective(s)	***Project Objective Indicator(s)***	***Fund Outcome***	***Fund Outcome Indicator***	***Grant Amount (USD)***
1.Construction of water harvesting infrastructures for supplying water throughout the year in selected sites	Number of rainwater harvesting reservoirs constructed	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	411,600
2.Promoting soil and water conservation techniques for improved water protection and crop productivity	Number of soil and water conservation techniques implemented Number of Water User Associations formed	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	120,000
3.Developing integrated climate resilient livelihoods diversification systems in selected sites	• Number of farmers engaged in tree nurseries and sale of seedlings • Number of farmers engaged in poultry • Number of farmers doing aquaculture both freshwater and mariculture • Number of farmers engaged horticulture farming • Number of farmers engaged in beekeeping	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	6.2 Percentage of targeted population with sustained climate-resilient livelihoods	210,000
4. Institutional capacity building of local government authorities and	• Number of district officers trained on climate change adaption issues • Number of ward	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk	3.1. Percentage of targeted population aware of predicted adverse impacts of	100,000

communities in planning and implementation of climate change adaption actions	officers trained • Percentage of time and funds allocated for supporting climate change adaption interventions by district councils	reduction processes at local level	climate change, and of appropriate responses	
Project Outcome(s)	***Project Outcome Indicator(s)***	***Fund Output***	***Fund Output Indicator***	***Grant Amount (USD)***
1.Increased water supply leading to improved production in various sub sectors	Number of rainwater harvesting reservoirs constructed Number of farmers covered by the irrigation schemes Number of households supplied with water	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities 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 climate change impacts, including variability	4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type) 4.1.2Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types 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	411,600

			change scenario	
2.Increased agricultural production and water resources protection	Number of soil and water conservation techniques implemented Number of Water User Associations formed.			120,000
3.Increased income, food security and resilience to climate change impacts	• Number of farmers engaged in tree nurseries and sale of seedlings • Number of farmers engaged in poultry • Number of farmers doing aquaculture both freshwater and mariculture • Number of farmers engaged horticulture farming • Number of farmers engaged in beekeeping	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 4:Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability Output 5.Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts including variability	4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type) 4.1.2Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types 5.1.1 Number of natural resources assets created ,maintained or improved to withstand conditions resulting from climate variability and change(by type and scale) 6.1.1.No. and type of adaptation assets	210,000

			(physical as well as knowledge) created in support of individual- or community- livelihood strategies	
		Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.2. Type of income sources for households generated under climate change scenario	
		Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions	
		Output 5.Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts including variability	resulting from climate variability and change (by type)	
			5.1.1 Number of natural resources assets created ,maintained or improved to withstand conditions resulting from climate variability and	
		Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	change(by type and scale)	
			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.	
4. Improved capacity of local government authorities and communities in planning and implementing adaption actions	• Number of district officers trained on climate change adaption issues • Number of ward officers trained • Percentage of time and funds allocated for supporting climate change adaption interventions by district councils	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events 3.1.1 Number 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 7.2. No. or targeted development strategies with incorporated climate change priorities enforced	100,000

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.*

This part will be done during full proposal development stage

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

This part will be done during full proposal development stage

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

A. Record of endorsement on behalf of the government[22] *Provide the name and position of the government official and indicate date of endorsement. The endorsement letter should be attached as an annex to the project proposal.*

***Ambassador Joseph E. Sokoine**, Deputy Permanent Secretary, Vice President's Office*	Date*: 31st July,2019*

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 (Zanzibar Development Vision 2020 (2000/2020), Zanzibar Strategy for Growth and Reduction of Poverty III (2016/2020), Zanzibar Climate Change Strategy (2014), Economics of climate change in Zanzibar (2012), Agriculture Sector Review (2015), National program under the Tanzania Social Action Fund (TASAF), Environmental Policy (2013), African Union Agenda (2063), EAC Climate Change Policy (2011),Sustainable Development Goals (SDGs) 2030, National Adaptation Programme of Action (NAPA), 2007 and Tanzania Intended Nationally Determined Contributions (INDCS) 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.	
***Fredrick F. Mulinda**,* *Senior Environmental Management Officer,* *National Environment Management Council,* Implementing Entity Coordinator	
Date: August 3, 2019	Tel. and email:+255 753 240 517/ nieaf@nemc.or.tz
Project Contact Person: Aziza Juma Ali	
Tel. And Email: +255 777 498723 E-mail: aziza_juma@hotmail.com	

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.

UNITED REPUBLIC OF TANZANIA

Telegraphic address: "MAKAMU",
Telephone: +255 -26-2329006
Fax. No.: +255 -26-2329007
E-mail: ps@vpo.go.tz

In reply please quote:

Government City,
Mtumba Area,
Vice President's Office
Building,
Ihumwa,
P. O. Box 2502,
DODOMA

Our Ref: BA. 90/201/01/3

31st July, 2019

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

Re: Endorsement for Enhancing Climate Change Resilience of Coastal Communities of Zanzibar

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

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Environment Management Council and executed by Ministry of Agriculture, Natural Resources, Livestock and Fisheries, Zanzibar.

Sincerely,

Ambassador Joseph E. Sokoine
For Permanent Secretary

All correspondences should be Addressed to ***Permanent Secretary,***

Project Formulation Grant (PFG)

Submission Date: 3rd August 2019

Adaptation Fund Project ID:
Country/ies: **United Republic of Tanzania**
Title of Project/Programme: ***Enhancing Climate Change Resilience of Coastal Communities of Zanzibar***
Type of IE (NIE/MIE): **National Implementing Entity (NIE)**
Implementing Entity: **National Environment Management Council (NEMC)**
Executing Entity/ies: ***Ministry of Agriculture, Natural Resources, Livestock and Fisheries, Zanzibar***

A. Project Preparation Timeframe

Start date of PFG	**January 2020**
Completion date of PFG	**July 2020**

B. Proposed Project Preparation Activities ($)

Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Desktop literature review	Detailed literature review, a list of reviewed literatures	900
Stakeholders workshops for validating the project design and inputs for full proposal development	Workshop reports, validated project design, improved design, inputs to the design process	6,500
Field visits in the project area for validating project design and obtaining inputs for full project proposal development	Validated project design	6,800
Detailed analysis of project components	Well described and detailed Project components	2,200
Development of project log frame and results framework	Detailed Project Logframe and Results Framework developed	1,500
Detailed project budget development	Detailed and concrete project budget	1,000
Preliminary Environmental Impact Assessment (EIA) of the proposed project	EIA report, EIA review report and Environmental Clearance Certificate	3450
Full project proposal development	Full Project Proposal developed	4,900
Printing and binding of full proposal copies for submission	Printed and bound copies of full project proposal for submission	200
Implementing Entity's Management Fee		2550
Total Project Formulation Grant		30,000

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Fredrick F. Mulinda		3rd August 2019	Aziza Juma Ali	+255 777 498723	aziza_juma@hotmail.com