ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: ***Regular Project***
Country/ies: ***United Republic of Tanzania***
Title of Project/Programme: ***Bunda Climate Resilience and Adaptation Project***
Type of Implementing Entity: ***National Implementing Entity (NIE)***
Implementing Entity: ***National Environment Management Council (NEMC)***
Executing Entity/ies: ***Bunda District Council***
Amount of Financing Requested: ***1,400,000 (In U.S Dollars Equivalent)***

1.0 Project Background and Context

1.1 Brief background on what the project aims to solve

Bunda district represents the section of poor rural communities of Mara region in the Lake Victoria Zone of Tanzania, who are already vulnerable to the impacts of climate change[1]. Key climate elements like temperature, rainfall and wind speed have been shifting their historical trends and magnitudes over time. As a result, extreme climate and weather driven events such as droughts, prolonged dry periods, erratic rainfall and strong winds are nowadays more common across the district[2]. The observed climate vagaries coupled with high poverty level have already taken their toll on people's socio-economic, livelihood and environmental systems. Crop failures, water scarcity and livestock deaths due to drought are already common events in the area. Rainfall seasons and number of rainy days has greatly changed and declined, affecting economic, social, environment and peoples' livelihoods. Communities are experiencing failures of their traditional livelihood systems with no replacement or alternatives[3]. Dependence on fishing is also under threat due to catch decrease as a result, the Poverty and Human Development Report released in 2005 by the United Republic of Tanzania ranked the district the poorest with the highest rates of income poverty. More than half (68%) of the population are living below the basic needs poverty line. Projected climate change scenarios by the Tanzania Meteorological Agency (2014), show that, the district will experience more temperature increase in future while drought and dry spell periods will intensify. Rainfall pattern in the area is projected to be more unreliable and number of rainy days will be further reduced, while flushing and catastrophic floods will be more pronounced[4]. Many future climate-change impacts are predicted to accelerate multiple challenges across the district, affecting nearly all of the population. These impacts are expected to include profound changes in water availability, temperature stresses to human, livestock and crops, changes in farming practices, incomes and food security, ecological disruption, and human health related impacts such as changes in disease vectors and rangelands, spatial expansion of malaria and water borne diseases. Hence, it is imperative that robust, technically-sound and multi-disciplinary, integrated concepts need to be developed and sustainably implemented urgently in Bunda district, especially focusing on water, agricultural and public health sectors.

Like many other rural setting districts in Tanzania and in the East African region, agriculture (crop cultivation, fishery including aquaculture and livestock) and water sectors in Bunda are important driver for economic growth, poverty alleviation, food security and rural communities' development. The sectors employ more than 80% percent of human population, contribute to approximately 95 percent of district food requirements, and accounts for about more than 80 percent of households income earnings[3].

[1] The United Republic of Tanzania (URT), "Tanzania demographic and health survey (2010)," National Bureau of Statistics, Dar Es Salaam, 2011.

[2] TMA, (2014).Climate change projection for Tanzania: A report Submitted to the Government of Tanzania. Dar es Salaam 33p.

[3] UNDP(2014).Assessment study to identify Institutional, Legal and Financial Bottlenecks On Poverty – Environment (P-E) Implementation at different levels of District, Ward and Village in Bunda District

[4] Bamwenda G.R., Mashindano O., and Hangi M. (2013). Promoting Agriculture- Climate Change-Trade Linkages for Development in the East African Community, PACT International.

However, high dependence on rain fed subsistence agriculture, degradation of land and forest resources due to poor farming practices, unsustainable charcoal production and fuel wood harvesting, declining fish stock, illegal and primitive fishing practices and livestock grazing aggravate the impacts of climate change on peoples' livelihood systems. These are amplify community's vulnerability and limit their adaptive capacity[5]. We need to reverse this situation by improving environmental and life quality of people and achieving sustainable land management, which are essential in order to address food insecurity, rural poverty and ultimately enhancing resilience of communities and their adaptive capacity to climate change effects. While some proposals for such interventions already exist in the district plans, their implementation lags behind. Therefore, this project proposes to develop and implement concrete adaptation actions at grass root levels to increase community livelihood resilience to climate change effects and cover the following sectors; water resources and supply, agriculture, fisheries and aquaculture, livestock, forestry and ecosystems and gender in relation to climate change.

The project will apply transformative integrated environmental management and aquaculture innovations, resilient rural water supply systems and Ever-Green-Agricultural (EVA) practices to reduce vulnerabilities and the impact of climate change on local communities in the district. This approach offers practical and effective combination of Community-Based-Adaption and Ecosystem-Based-Adaptation techniques to support transformation of livelihood system, combat poverty, enhance greater climate resilience of rural communities and gender equality while reducing emissions through long-term storage of carbon in landscapes. The project will implement concrete and practical cost effective and multi-stakeholders adaptation solutions to improve livelihoods of the poor and vulnerable communities in Bunda districts through the following five outcomes:

i) Enhanced climate resilient water management and supply system in vulnerable agro-pastoral communities of Bunda District;

ii) Improved agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices;

iii) Traditional fishing practices of small scale fishers transformed and fishers' income improved through climate sensitive aquaculture innovations;

iv) Improved ecological and environmental services and functions to sustain climate sensitive rural livelihoods in Bunda District;

v) Strengthened institutional capacity to reduce risks associated with climate-induced socio-economic losses and livelihood failures in Bunda district.

1.2 Socio-economic, development and environmental context

1.2.1 Location and Topography

Bunda district (BD) is one of the five districts of Mara Region. It borders to the North by the Musoma Rural District, to the South by Lake Victoria and Simiyu Region, to the East by the Serengeti District, and to the West by Lake Victoria. BD is located at an elevation of 1,225 meters above sea level. Its coordinates are 2°0'0" S and 33°49'60" E in Degrees Minutes Seconds. The district has an area of about 3080 sq. km, of which water occupies an area of 200 sq. km and land 2888 sq. km, which translate into 6.5% and 93.5% of the total area respectively. For the land resources, about 480 sq. km is within the Serengeti national park and the rest is agricultural land, grazing land, settlement and forest. The land area covered by Serengeti national park is equivalent to 17% of the total land area therefore, highly influenced by Serengeti ecological system. Administratively, Bunda District is divided into 4 divisions, 28 wards, 106 villages and 572 hamlets. Serengeti Division, however, has largest number of wards (10), village (29) and hamlets (176) as compared to other divisions.

1.2.2 Socio-economic and development context

Bunda is one of the most densely populated districts in Tanzania with over 370,000 inhabitants living in an area of 2888 square kilometers and with a growth rate of 1.8 %. Of the total population 172,820 (51.6%) are female and 162,241 (48.4%) are male. Serengeti Division has very high population compared to other divisions and Kenkombyo division has the lowest population. Compared to 2002 census, the population has increased by 29.4%. This is a large change and may impact various socio-economic development endeavors, including the optimal allocation and use of the meagre financial

[5] Bunda District Baseline report 2013: Integrating Poverty-Environment-Gender objectives in district development plans for accelerating economic and environmental sustainability

resources and may strongly affect the level of exploitation of the natural resources assets in the district.

Despite being one of the poorest districts in Tanzania with the highest rates of income poverty where more that 68% of the population are living below the basic needs poverty line, the district is on a positive growth trajectory. The number of people living below the national poverty line has reduced from 68% in 2005/2001 to 55% in 2012. The Government of Tanzania, through the district has taken a number of plans reforms and programme initiatives to ensure poverty reduction, sustainable economic growth and the broader achievement of SDGs from national to village and family levels. However, significant challenges remain particularly around the agricultural sector growth, food security and water scarcity as illustrated by the National Bureau of Statistics in 2012. Bunda District has predominantly agrarian economy with approximately more than 90% of the population residing in rural areas and agricultural sector (agriculture, fishery, livestock and forestry) providing around 80% of employment. Given its dominant role in the peoples' livelihood system and economy, and that more than 90% of households rely on subsistence agriculture, fishing and livestock keeping, the majority of communities especially women and other vulnerable groups are poor. Thus, supporting productive high value and market-oriented agriculture and fisheries is both of national and district priorities in line with the National Development Vision 2015, Five Year National Development Plan 2016/2021 and Bunda District Strategic Plan 2016-2021, whereas environmental management, conservation of natural resources and gender equality are cross-cutting addressed issues. Equally, the District recognizes climate risks and has committed to implementing improved climate resilient and adaptation including water management and aquaculture innovations and a sound biodiversity conservation plans to combat deforestation, reverse land degradation and combat desertification. Like at the national level, the District is also actively promoting gender equality and equity in its by-laws and education plans and programmes. It has a proactive plans and strategies that promote women participation in all areas of socio-economic life in the district and currently has a higher number of women led projects and departments.

1.2.3 Environmental context

Bunda District has considerable diversity of environmental resources, including fishery, good fertile soils, forests, minerals, wildlife and extensive network of mountain ecosystems and wetlands. Despite income poverty challenges, the forests and environment sub-sector play important role in maintaining ecological balance, protecting soils from erosion and conserving water and wildlife. For instance:- **Forests** (and expansive woodlands, wooded grasslands and bush lands) are sources of domestic energy and also provide a range of goods and services, including timber for furniture, useful non-wood products mainly honey, bees wax and medicine and are habitats for a variety of flora and fauna. **Wetlands** produce important goods for rural communities such as raw material for handicrafts; Support for fisheries, grazing and agriculture and outdoor recreation bas well as ecosystem services, including buffering the negative effects of excess nutrient loads and sedimentation by absorbing nutrients and pollutants. **Unfortunately**, forests and woodlands are overexploited for production of charcoal, firewood and house construction materials. Likewise, forests are threatened by illegal harvesting and destructive agricultural activities due to population growth and lack of alternative sources of income.

- The ongoing deforestation has reduced the coverage of forests and woodlands and the availability of associated goods including accelerating land degradation. Deforestation is undertaken largely to provide firewood, charcoal and timber. For example, over 97% of households use charcoal and firewood for cooking[6].
- Across the district, wetlands have been severely degraded as a result of *inter alia*: a) intensive cultivation of crops such as sweet potatoes and horticultural crops; b) excavation of sand and clay for brickworks; and c) grazing activities.
- Fish abundance in the has declined as a result of intensive fishing efforts and overfishing, changes in Lake Victoria's hydrology; iii) anthropogenic pollution; and iv) the invasion of exotic species[7]. Community and artisanal fishing efforts are showing decreased catch yields, despite intensified fishing efforts, increased number of fishers and improved fisheries' management[6].
- Natural and traditional water sources such as seasonal rivers and springs are no longer reliable. Drinking water quality and quantity has been impaired by both anthropogenic factors and

[6] *Bunda District Council, 2014*

[7] *UNEP. 2006. Lake Victoria Basin environment outlook: environment and development. UNEP, Nairobi*

environmental issues including climate change related factors.

1.3 Climate change context

1.3.1 Climate trends

Bunda district has complex climate with wide variations across the district, characterized by seasonality. The annual average temperature ranges from 21˚C to 30˚C. There are two rainy seasons, February –May and August to December with an annual average rainfall of 1100 mm. The highest monthly average rainfall, observed in April, is 110 mm. Recent analysis of rainfall trends shows that, rainy seasons are becoming shorter with higher intensity leading to decreases in agricultural production and events such as droughts and floods. From data analysis and trends and the UMFULA report, monthly and annual total rainfalls recorded between 2005 and 2015 were generally lower than the average recorded between 1961 and 1990. Moreover, rainfall in April, the month with the highest rainfall, has been dramatically reduced (27%, 48%, 88%, 70% and 52% of the average rainfall recorded for this month between 1961 and 1990 respectively in 2010, 2011, 2012, 2013 and 2014)[8]. The average number of rainfall days per year has also declined from 138 between 1971 and 1990 to 92 days between 1991-2015. Similarly, the monthly average rainfall totals decreased between1991 and 2015. This is also confirmed by the total annual mean rainfalls which have decreased from 980 mm to 720 mm. Despite the overall downward trend in annual rainfall, the recorded rainfall for September, November and December has been higher than normal. For example, the mean monthly total rainfall for September in 2012 was 108.7 mm compared with only 38.6 mm for the period 1961-1990. Most of this type of flushing rain usually falls in one day in the month and causes catastrophic and heavy floods. Nowadays rainfall in Bunda district has become increasingly erratic and unpredictable. Some areas are already undergoing gradual shift from bimodal to unimodal. Local experience indicates that, between 1981and 2016 most parts of the district are growing drier while extreme weather events especially droughts and floods are becoming more common.

Since late 1950s to date, Bunda district continued to experience rising temperatures, and warming trend is more pronounced in mean annual minimum temperature. Available climate information confirms that, mean annual temperature has increased by 1.0˚C since 1960, an average rate of 0.23˚C per decade. The rising rate is more rapid for periods/seasons covering January and February while display slowest rate for periods covering June, July, August and September[8, 9].

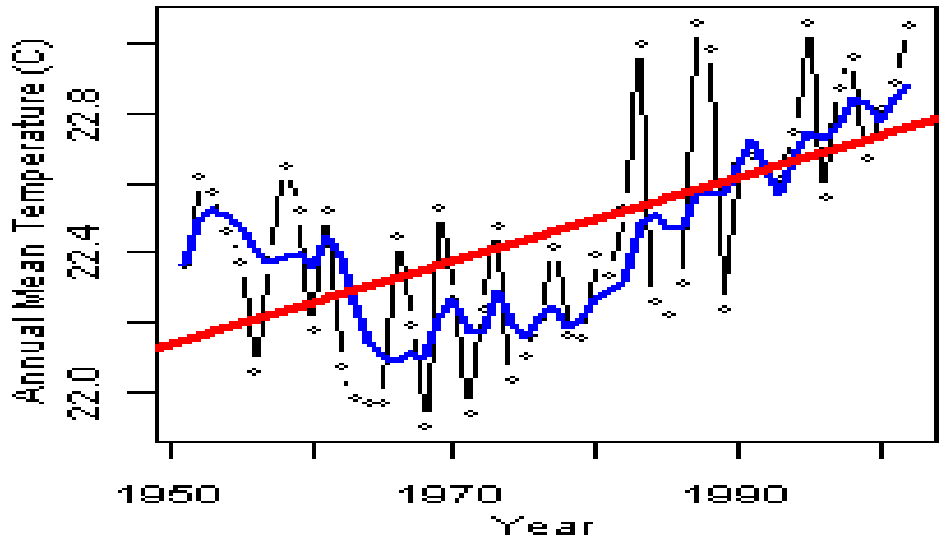

Figure 1: Historical average rate of change for temperature in Bunda district since 1951-2001 (Source[10])

Daily temperature observations in Bunda district show only small increasing trends in the frequency hot

[8] *Future Climate for Africa: Tanzania country brief 2017*

[9] *Tanzania dashboard. Available at: http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=TZA&ThisTab=ClimateBaseline*

10 Draft stocktaking report of the National Adaptation Plan –NAP, 2018

days, but much larger increasing trends in the frequency of hot nights. The average number of 'hot' days in the United Republic of Tanzania has only increased significantly in December- January –February (DJF) when the average number of hot DJF days has increased by 2.5 days per month (an additional 8.2% of DJF days) between 1960 and 2003. The average number of 'hot' nights per year increased by 50 (an additional 13.6% of nights) between 1960 and 2003. The rate of increase is seen most strongly in DJF when the average number of hot DJF nights has increased by 6 days per month (an additional 19.8% of DJF nights) over this period. The frequency of cold days has not changed discernibly, despite the observed increases in mean temperature. The frequency of cold nights has, however, decreased significantly in all seasons. The average number of 'cold' nights per year has decreased by 34 (9.3% of days). This rate of decrease is most rapid in DJF when the average number of cold DJF nights has decreased by 3.6 nights per month (11.5% of DJF nights) over this period

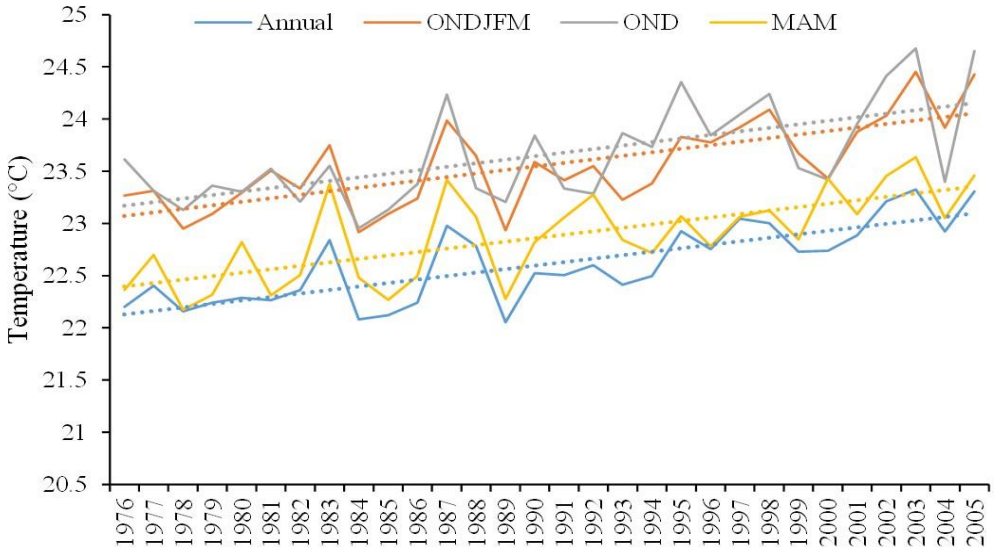

Figure 2: Observed annual and seasonal temperature (^{0}C) in Bunda for the period covering 1976 -2005. Seasons are March to May (MAM), October to December (OND) and October to the following March (ONDJFM) Source [11].

1.3.2 Future climate change/future climate projections

Most of available climate model projections indicate that Bunda District and all regions around Lake Victoria will have higher future rainfall amount[11]. Available climate information agree strongly for future decrease in the mean number of rainy days and increases in the amount of rainfall/rainfall insensity for each rainy day. All projections of future precipatation suggest more variability in rainfall with both likelihood of dry spells and higher likelihood of intense rainfall events, more often associated with flooding. Mean rainfall is projected to increase slightly in annual rainfall[12], and the increase is said to be similar throughout the District areas, but the seasonal patterns of change will be more complex[13]. However, many analyses and Observations of past rainfall data in Bunda district show significant decreasing trends in annual, June –July-August-September(JJAS) and March-April-May rainfall.

As explained earlier, all parts of Bunda District like in most districts and regions in the United Republic of Tanzania are growing hotter[14]. It is very likely that, throughout the District, temperature will increase by 1.0 to 2.7˚C by the 2060s, and 1.5 to 4.5˚C by the 2090s. However, the range of projections by 2090s under any one emissions scenario is 1.5-2.0˚C. All projections indicated that:- a) Hot' days will occur on 19-40% of days by the 2060s, and 19-65% of days by the 2090; b) Nights that are considered 'hot' for the annual climate of 1970-1999 are projected to increase more quickly that hot days, occurring

[11] URT,2014: *Agriculture Climate Resilience Plan 2014-2019*

[12] *TMA 2014, Climate change projection for Tanzania.*

13 UNDP 2010, Climate change country profiles: Improving the accessibility of observed and projected climate change information for studies of climate change in developing countries.

14 Wambura et al (2014). Projections based on Coupled Model Intercomparison Project phase 5 (CMIP5) model using Mid-Century Representative Concentration Pathway (RCP) 8.5. A total of twenty global circulation models (GCMs) were downscaled based on the eleven Tanzania climatological zones using thirteen synoptic weather stations.

on 30-68% of nights by the 2060s and 35-91% of nights by the 2090s; c)Nights that are considered hot for each season by1970-1999 standards are projected to increase particularly rapidly in December-January-February (DJF), occurring on47-99% of nights in the season by the 2090s; and d) Decrease in the frequency of days and nights that are considered 'cold' in the current climate. Events of cold days and nights are expected to become exceedingly rare, with cold days occurring on 0-4% of days and cold nights occurring on a maximum of 1% of days, and not at all under higher emission scenarios, by the 2090s[14, 15].

1.3.3 Future effects of climate change

Predicted increase in the frequency of intense rainfall events indicates that, flooding is expected to occur, particularly in low-lying areas of Bunda District. The frequency of droughts is also predicted to increase, by 40–70%. Floods are expected to increase in frequency and magnitude in the low-lying villages. As more than 90% of water sources are provided by direct rainfall, the predicted spatial variation in rainfall patterns is expected to cause changes in water availability and serious water scarcity in various villages in the District. A predicted decline in rainfall volume per season, coupled with increased variability in rainfall patterns, is expected to cause serious crop failures and reduce the productivity of farming, for example more than 20% reduction of total food crop production in the District and other areas around Lake Victoria zone by 2090 is predicted[12,13,14,15]. In addition, the increased frequency and severity of extreme weather events is expected to increase livestock mortality, decreased wild fish catches and abundance. Therefore, under the likely future conditions of climate change, district food insecurity will be intensified and vulnerability of local communities to climate shocks will be increased as livelihoods underpinned by fishing and livestock activities including agriculture will strongly be marginalized. Because livelihoods and several economic, livelihood activities and social life if communities in Bunda are reliant on natural resources, climate change may indirectly result in negative socio-economic effects and failures of the existed community social systems.

1.3.4 Climate Change and gender issues in Bunda district

In Bunda district, climate shocks such as irregular rain and periods of drought and heavy rainfall are affecting everyone who relies on agricultural related sectors for survival. Moreover, the effects of climate change are particularly pronounced on vulnerable groups such as the poor and women in the district[15]. In most cases, data in the district indicate that, women are the most affected group by all climate related effects and disasters as their ability to adapt these event is poor. In addition, unequal access and control over assets mean that men and women do not have the same adaptive capacity and bear a disproportionate burden of climate change consequences due to their social roles, poverty and intra-household inequity[16]. Women are especially vulnerable to seasonal, episodic weather and natural disasters because of their responsibilities for water access and household care, roles in food securing and fuel wood, agriculture and greater exposure to risk in crisis and severe weather events. For instance, it is now common practices in the district for women to undertake more responsibilities during famine and reconstruction of homesteads while most men often emigrate and take refuge to other places, away. Moreover, climate change induced water scarcity and food shortage in the district has been linked with the **increased conflict within households**, including incidents of gender based violence and abandonment. Children especially school girls are also considered more at risk to climate change effects as they could more easily get sick or hurt due to the instability of the home and more often are pulled out of schools. The proposed project will take into consideration various gender roles in various activities and by using such information, develop gender sensitive and segregated adaptation mechanisms to combat adverse effects of climate change. For instance, representation of women members in COWSOs will be given more emphases, number of women groups and women stakeholders will be included in income generating activities including engaging in aquaculture activities, small- scale irrigation, bee keeping activities, ecological restoration activities and tree planting. The project will therefore ensure equal opportunity for both women and men to participate in stakeholders' meetings, implementation of project activities, and training for capacity building in order to build their climate resilience while addressing their differentiated vulnerability, and increase their adaptive capacity to adapt to climate change impacts.

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[15] ***Bwire,M.K*** *(2018) Tackling "Climate Change" in Bunda district: Can Integration of Ecosystem-Based-Approach (EBA) and Community-Based- Approach (CBA) be more effective? Perspectives from grass-root communities, unpublished paper*

[16] *Bunda district Ciuncil,2018*

1.4 Scope of the project and location of project areas

The project will implement concrete resilience and adaptation measures in selected communities of Bunda District. The priority areas will include sustainable Socio-economic development and environmental management with key activities in the water, agriculture, fishery, livestock, forests and ecosystems management. The project areas cut across various Divisions, Wards and Villages of Bunda District as shown in Table 2: The project areas are spread across the district among communities with diverse cultures who derive their livelihoods from the environment and are most vulnerable to the effects of climate change. The selected project areas are more vulnerable to climate change effects and have significant water deficit and food shortage status that makes the inhabitants to suffer the most to climate shocks and bad weather events like drought and dry spells.

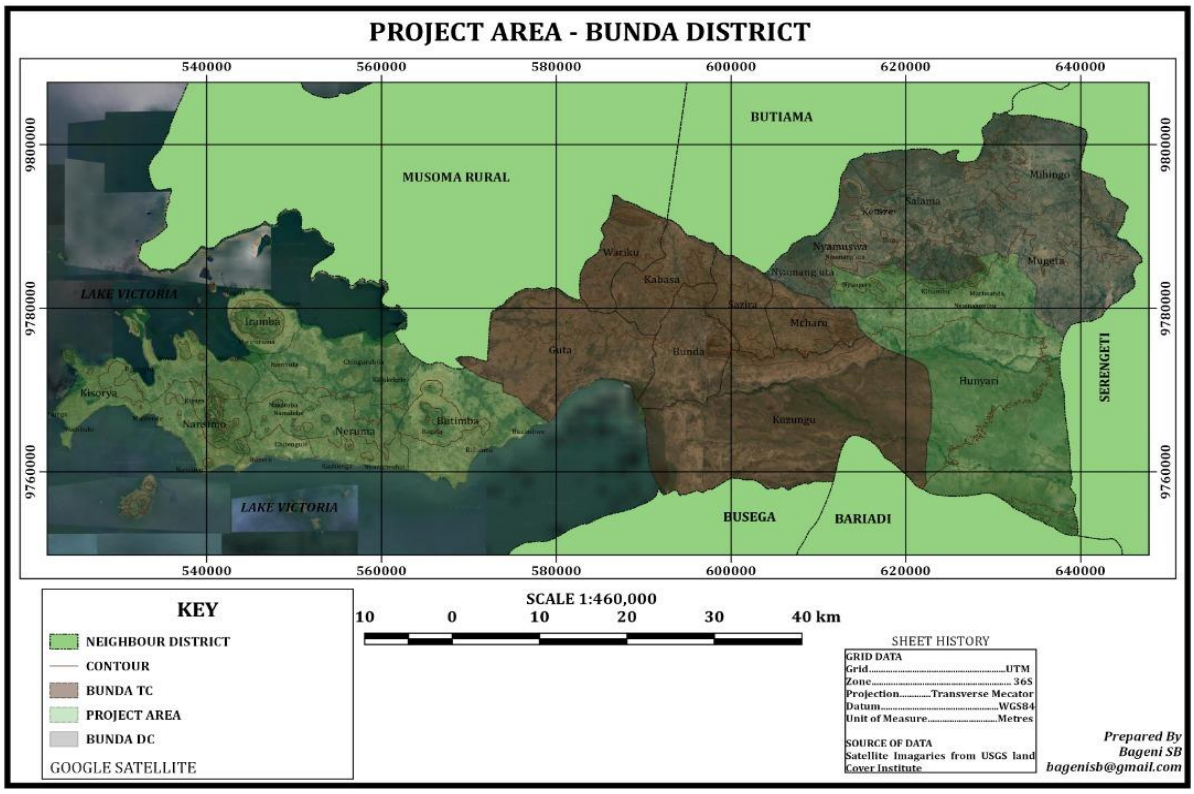


Figure 3: Map of Bunda district showing the project area

1.5 Project objectives

The project will specifically target the most vulnerable groups who have less resource to adapt to climate change in Bunda and is built on the principles of local empowerment through engagement of vulnerable and grassroots communities such as farmer groups and village governments and community groups. Therefore, the overall objective of this project is to enhance resilience and adaptive capacity to effects of climate change while reduce vulnerability of selected communities in Bunda District. Specifically, the proposed project will be addressing through the following specific objectives;

i) Enhance Climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda district;

ii) Improve agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices;

iii) Promote paradigm change of small scale fishers for sustainable income and climate resilient rural livelihood through aquaculture innovations in selected villages of Bunda district;

iv) Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District;

v) Strengthening institutional capacity and knowledge management on climate change adaptation.

1.6. Project Components and Financing

Project Components	Expected Concrete Outputs	Indicative activities	Expected Outcomes	Amount (US$)
1. Enhancing Climate resilience through water supply system of the drought prone agro-pastoral communities	*1.1: Climate resilient rural water supply system established in selected drought prone agro-pastoral communities of Bunda district*	*1.1.1 Rehabilitate/Construct pumped water supply schemes in drought prone agro-pastoral communities of Neruma ,Iramba and Nyamihyoro Wards of Bunda district*	Enhanced climate resilient water management and supply system in vulnerable agro-pastoral communities of Bunda District	*450,000.00*
		1.1.2 Construct/ and or rehabilitate water storage structures and network system for Iramba and Kasahunga water sources		
		1.1.3 Rehabilitate / construct an extension of the pumped water network system in drought prone communities of Iramba, Namhura and Neruma Wards		
		1.1.4 Drill boreholes in selected drought prone (Nakatuba, Lagata and Buzimbwe) villages uncovered with pumiped water systems from Kasahunga and Iramba water sources and Install solar energy driven water pumps		
		1.1.5 Construct storage tanks and Water Kiosk/Network for the drilled boreholes		
		1.1.6 Train selected members from Water Users on operation and maintenance of their climate resilient rural water supply schemes to ensure sustainability.		
	1.2: Water troughs for cattle constructed in selected agro-pastoral communities in Bunda district to improved water availability during drought and dry periods	1.2.1 Construct troughs for livestock water system in selected drought prone villages in agro-pastoral communities of Bunda District Council		
	1.3 *Establishment of Community Owned Water Supply Organization(COWSOs) facilitated and their functional*	1.3.1 Establish and/or strengthen water governance structures/arrangements (COWSOs by considering gender balance for selection of members of the management team) to better manage water source, equitable and gender sensitive water allocation for human and other uses, and revenue collection.		

Project Components	Expected Concrete Outputs	Indicative activities	Expected Outcomes	Amount (US$)
	committee members trained on operational and maintenance in Bunda District	1.3.2 Establish by laws for regulating effective use of water resources and protection of water harvesting structures; document and disseminate success information and resilience value of water interventions to communities through learning and practice platforms		
2. *Improving agricultural productivity, livelihood and enhancing agro-ecosystem resilience through Climate Smart EVA practices*	2.1 Climate Smart EVA practices to improve food security through small scale and micro-irrigation schemes enhanced in selected villages of Bunda district	2.1.1 Rehabilitate/improve the unlined traditional irrigation scheme at Namhura villagevillage and increase the command area 2.1.2 Construct and establish drip irrigation structures at Buguma, Bulendabufwe and Mumagunga villages 2.1.3 Facilitate construction of one rural post-harvest management center at Namhura village using force account modality 2.1.4 Facilitate increased use of EVA practices and drought tolerant and early maturing cropsby farmers in Bunda district council 2.1.5 Train farmers on Operation and Maintenance (O&M) on irrigation facilities to promote sustainability of infrastructures	Improved agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices in selected village communities	420,000.00
3. Promoting paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through fish farming innovations in selected villages of Bunda District	3.1 Traditional fishing practices transformed for improved climate resilient livelihood and sustainable income generating activities in selected villages of Bunda District.	3.1.1 Pilot and establish effective and efficient fish farming best practices (pond and cage faming) for vulnerable small scale fishing communities (including women groups) at Buguma, Bulendabufwe and Isanju villages 3.1.2 Train community for improving fish farming knowledge and fishing options in the district 3.1.3 Facilitate establishment of one fish hatchery for tilapia species at Buguma village and improvement of fish feeds formulation and disease management techniques in Bunda District	Traditional fishing practices of small scale fishers transformed and' income improved through climate sensitive aquaculture innovation	*130,000.00*
4. *Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural*	4.1.Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District	4.1.1 Establish and implement ecological restoration and rehabilitation plans (hills, mountainous and woodland restored and conserved) in selected Wards (Iramba, Neruma and Igundu wards) 4.1.2 Promote bee keeping activities in woodland, hillsand mountainous systems and fruit plants as improved ecosystem based income generating activities	Improved ecological and environmental services and functions to sustain climate sensitive rural livelihoods in Bunda District	*141,000.00*

Project Components	Expected Concrete Outputs	Indicative activities	Expected Outcomes	Amount (US$)
communities of Bunda District	Integrated management of environmental and ecological systems implanted to sustain climate sensitive rural livelihood	4.1.3 Mobilize enclosure systems in degraded ecosystems to promote natural regeneration and recovery of ecological functions and explore the use of local/traditional institutions to strengthen management of sensitive ecological systems. 4.1.4 Engage farmers in tree planting on surrounding residential areas, along streets and roadsides and degraded landscapes and establish ecological schools in selected villages		
5. S*trengthening institutional capacity and knowledge management on climate change adaptation*	5.1.Capacity of the district and communities in Bunda is strengthened to respond to extreme weather events	5.1.1 Training of government stakeholders: technical staff, community groups and civil society in climate risk management and project measures for further scaling up 5.1.2 Communicate and share knowledge generated through project implementation in Bund district, National and International communities 5.1.3 Sharing project results and lessons learned and mainstreaming climate change adaptation approaches in district planning	Strengthened institutional capacity to reduce risks associated with climate- induced socio-economic losses and livelihood failures in Bunda district	40,000.00
1.	Project execution cost			110,000.00
2.	Total Project cost			1,151,000.00
3.	Project cycle Management Fee charged by the Implementing Entity			109,000.00
4.	**Amount of financing requested**			**1,400,000.00**

Projected Calendar:

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

PART II: PROJECT JUSTIFICATION

PARTII A: *Describe the project / programme components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually. For the case of a programme, show how the combination of individual projects would contribute to the overall increase in resilience*

Bunda district is part of the Serengeti ecosystem, largely with a semi-arid weather system. Although agriculture is the major livelihood activity, it has depended on the rainfall patterns of the region. However, the district rainfall pattern is not reliable, it is erratic and less than most crop requirements. Thus communities are highly exposing to climate impacts. This necessitates for alternative district resilience plan that will ensure communities' livelihood support water supply systems, agriculture system and fisheries within the district. More will be needed for strengthening the implementation of various resilience plans. These will necessitate the inclusion of improvement of ecological and environmental services, market value chain improvements and institutional capacity enhancements.

In order to achieve the set objectives, the project will focus on both implementation of concrete on-ground adaptation activities in the selected sites vulnerable rural communities and strengthening

institutional capacity across the Departments in the district. The project implementation approach will include six components, detailed below:

Component 1: Enhancing Climate resilience through water supply system of the drought prone agro-pastoral communities

Outcome 1: Resilient rural water supply system in selected drought prone agro-pastoral communities of Bunda District

Output 1.1: Enhanced climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda District

Rural communities rely directly on climate-impacted natural water resources for their water supply and improvement of livelihoods. These impacts are already occurring, and future projections for climate change indicate enormous potential disruption of almost all natural springs and seasonal rivers which has been their traditional water sources. Such substantial climatic change will further increase water scarcity areas, to detrimental effect of almost all rural communities in drought prone villages. This output is proposed to put climate resilient rural water supply and pumped scheme through rehabilitation of previous water system, establish and extend new networks in other vulnerable villages. The old systems was built in 1970s and was grounded in the 1980s while some few important structures like house pumps, storage tanks still exist. Rehabilitation and constructions of all systems will be designed by integrating all necessary measures of social and environmental risks including flood risk management measures. This is vital for sustainability aspects. Therefore all constructions activities will be designed built in accordance to the standard guideline for the preparation of water safety plans –resilient to climate change for rural water supply services in the United Republic of Tanzania, prepared in 2015 by the Ministry of Water. In addition, the designing of water supply systems including its networks will also consider the prepared flood plain management plan of Bunda District which has already put in place strategic decisions of reducing residual flood risk in the district to an acceptable level (more details will be provided later when developing the full proposal).

The climate resilient rural water supply being proposed here will use water from Lake Victoria as it is considered stable to climate shocks when compared to natural springs and seasonal rivers Some bore holes will also be drilled in some selected water scarce villages located very far from the previous build water supply systems.

The indicative activities to be implemented under Output 1.1 are:

1.1.1 Rehabilitate/Construct pumped water supply schemes in the drought prone agro-pastoral communities of Neruma, Iramba and NyamihyoroWards of Bunda district

1.1.2 Construct/ and or rehabilitate water storage structures and network system for Iramba and Kasahunga water sources sites

1.1.3 Rehabilitate / construct for extension of the piped water network system in drought prone communities of villages in Iramba, Namhura and Neruma Wards

1.1.4 Drill boreholes in selected drought prone (Haluzare, Lagata and Buzimbwe) villages uncovered with pumped water systems from Kasahunga and Iramba water sources and Install solar energy driven water pumps

1.1.5 Construct storage tanks and Water Kiosk/Network for the drilled boreholes

1.1.6 Train selected members from Water Users on operation and maintenance of their climate resilient rural water supply schemes to ensure sustainability

Output 1.2: Water troughs for cattle constructed in selected agro-pastoral communities in Bunda district to improved water availability during drought and dry periods

This will increase resilient of the livestock sector which has been suffering from disastrous effects of climate change. Over a decade now, cattle have been dying because of water and fodder shortage due to drought effects. Improvement of water availability for cattle will build adaptive capacity of vulnerable agro-pastoral communities in drought prone villages of Bunda district. The output will enhance growth of the livestock sector, contributes to diversity household income activities by allowing the sector to grow and prevent death of cattle during drought and dry periods.

The indicative activity to be implemented under Output 1.2 is:

1.2.1 Construct troughs for livestock water system in selected dry villages in agro-pastoral communities in Bunda District

Output 1.3: Community Owned Water Supply Organization (COWSOs) established and their functional committee members trained on management, operational and maintenance in Bunda District.

This output is proposed to put good and sustainable institutional structure to manage community and village climate resilient water supply system in the project sites. The output suggests establis hment of Community Owned Water Supply Organization (COWSOs), which will be trained on group management and dynamics, maintenance and operations of the rural water systems. Financial and procurement systems in relation to COWSOs will also be facilitated under this output. The indicative activities to be implemented under Output 1.3 are:

1.3.1 Establish and/or strengthen water governance structures/arrangements (COWSOs by considering gender balance of selected members of the management team) to better manage water source protection, equitable water allocation for human and other uses, and revenue collection

1.3.2 Establish by laws for regulating effective use of water resources and protection of water harvesting structures; document and disseminate success information and resilience value of water interventions to communities through learning and practice platforms

Component 2: Improving agricultural productivity, livelihood and enhancing agro-ecosystem resilience through Climate Smart EVA practices

Outcome 2: Improved agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices in selected village communities of Bunda District

Output 2.1 Climate Smart EVA practices to improve food security through small scale and micro-irrigation schemes enhanced in selected villages of Bunda district

The agricultural sector in Bunda district and Tanzania at large is facing many challenges including poor farming practices and reliance on erratic rainfall patterns. Climate change and variability has exacerbated these challenges rendering the agriculture sector more vulnerable thus heightened food insecurity in the district. Some of climate change impacts affecting agriculture include droughts, decline an unpredictable in rainfall patterns, increased crop pests and diseases among others. The selected sites experience prolonged droughts and erratic rainfall resulting in serious crop failures. This makes individuals in these areas more vulnerable to food insecurity, and hence, less resilient to climate change. To enhance the viability and success of food production, the component and the output will promote climate sensitive-irrigation system in selected areas based on the existing traditional structures, previous irrigation activities and introducing new ones. All design of small scale irrigation schemes will follow measures identified in the Agriculture Climate Resilience Plan 2014-2019 and will be in accordance to the National Irrigation Act, 2013 and the National Environmental Management Act, 2004. Therefore, this output intends to increase resilience of farmers to climate change by improving infrastructures, crop diversification, innovations and production by enhancing small and micro irrigation schemes in the selected villages. The details of the selected sites will be provided during development of the full proposal. The indicative activities to be implemented under Output 2.1 are:

2.1.1 Rehabilitate/improve the unlined traditional irrigation schemes in Namhura and other selected villages and increase the command area

2.1.2 Construct and establish drip irrigation structures at Namhura and other selected sites in Bunda district

2.1.3 Facilitate construction of one rural post-harvest management center at Namhura village using force account modality

2.1.4 Facilitate increased use of drought tolerant and early maturing crop varieties by farmers using locally available agro-varieties

2.1.5 Train farmers on Operation and Maintenance (O&M) on traditional water irrigation facilities to promote sustainability of infrastructures

Component 3: Promoting paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through fish farming innovations in selected villages of Bunda District

Outcome 3: Traditional fishing practices of small scale fishers transformed and fishers' income improved through climate sensitive aquaculture innovations in selected fishing communities of Bunda District

Output 3.1: Traditional fishing practices transformed for improved climate livelihood and sustainable income generating activities resilient in selected villages of Bunda District.

The decrease in wild fish catches in lake Victoria were reported as early as 1970s. The records show that, number of native fish species has disappeared or have decreased to very low levels and the lake's ecosystem and food web also have changed and indeed are still changing, thus affecting the fisheries and the lake resources in general. The low seasonal rainfall, prolonged drought, dry weather and pollution along lakes contributes much on stock decrease while clearing of the peripheral wetlands, which served as fish nursery grounds are seriously affecting the fisheries and the lake resources in general. The decline in fish stock around Bunda areas as part of the Lake Victoria is projected to intensify by the current and future climate trajectories. It is apparent that poor and susceptible rural and small scale fishing communities in Bunda are even forced deeper into poverty and livelihood problems, predominantly driven by climate change. There have always been dry and wet seasons in the District with the general declining rainfall trend and with high magnitude effects on fish abundance and availability in-terms of catch. Small fishers have managed to deal with seasonal variations; however rainfall fluctuation has been a continuous stressing factor and an important reason for the low overall fish catches linked to market failures, high poverty rates and poor standard of living among small scale fishers.

In order to ensure that small scale fishers and vulnerable fishing communities and their fishery systems are climate resilient in the District, this output and component 3, proposes the following indicative activities.

3.1.1 Pilot and establish effective and efficient fish farming best practices (pond and cage faming) for vulnerable small scale fishing communities at Buguma, Bulendabufwe and Isanju villages

3.1.2 Train community for improving fish farming knowledge and fishing options in the district

3.1.3 Facilitate establishment of one hatchery for tilapia species at Buguma village and improvement of fish feeds formulation and diseses management techniques

3.1.4 Provide reliable hatchery of high quality fingerings to support fish farming activities in the district

Component 4: Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District

Outcome 4: Improvement of ecological and environmental services functioning to sustain climate sensitive rural livelihoods in Bunda District

Output4.1: Integrated management of environmental and ecological systems to sustain climate sensitive rural livelihood and energy source diversification in selected villages of Bunda District implemented

The ongoing degradation of environmental and ecological systems coupled with climate change issues has reduced the coverage of forests and woodlands and the availability of associated goods including accelerating land degradation and water catchments in Bunda. Across the district, wetlands have been severely degraded as a result of inter alia: a) use of forestry as a source of energy b) intensive cultivation of crops such as sweet potatoes and horticultural crops; c) excavation of sand and clay for brickworks; and d) grazing activities. This component and the proposed output activities seek to establish and implement ecological restoration and rehabilitation plans and restoration activities of hills, mountainous and woodland systems. The output will implement Ecosystem-based Adaptation (EbA) activities such as Promote bee keeping activities in woodland land and mountainous systems and fruit plants as income generating activities. The indicative activities to be implemented under Output 4.1are:

4.1.1 Establish and implement district, Divisions, Ward and villages' ecological restoration and rehabilitation plans (hills, mountainous and woodland restored and conserved) in selected wards (Iramba, Neruma and Igundu Wards)

4.1.2 Promote bee keeping activities in woodland, hillsand mountainous systems and fruit plants as improved ecosystem based income generating activities

4.1.3 Mobilize enclosure systems in degraded lands to promote natural regeneration and recovery of ecological functions and explore the use of local/traditional institutions to strengthen management of sensitive ecological systems.

4.1.4 Engage farmers in tree planting on surrounding residential areas, along streets and roadsides and degraded landscapes and establish ecological schools in selected villages

Component 5: Strengthening institutional capacity and knowledge management on climate change adaptation

Outcome 5: Strengthened institutional capacity to reduce risks associated with climate-induced Socio-economic losses and livelihood failures in Bunda district

Output 5.1: Capacity of the district and communities in Bunda is strengthened to respond to extreme weather events

The outcome and output activities of this component are designed to strengthen the foundational capacities required by the implementers by improving their absorption of new measures. This will support the communities to continue implementing measures that are necessary for success of resilience bcapacity building and for the ongoing replication of adaptation strategies in the district; hence this component, when implemented is expected to make a lasting contribution to the sustainability of all climate change adaptation measures in the district and beyond. The output will facilitate integration of good adaptation practices into existing development planning at community levels, village and ward development plans. Enhancing knowledge management system and capacities for planning, coordination and implementation at the local level is critical to guarantee effective climate adaptation in the district.

The indicative activities to be implemented under Output 5.1are:

5.1.1 Training of government stakeholders: technical staff, community groups and civil society in climate risk management and project measures for further scaling up.

5.1.2 Communicate and share knowledge generated through project implementation in Bund district, National and International communities

5.1.3 Sharing project results and lessons learned and mainstreaming climate change adaption approaches in district planning

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

Each of the project components will significantly contribute to economic, social and environmental development of selected vulnerable communities in Bunda. The interventions identified for implementation will improve adaptive capacity of the most vulnerable community members which will result in both environmental and economic gains. Through these economic gains, the project will also deliver significant social benefits.

i) Environmental benefits

This project will have environmental benefits, including contribution to climate change mitigation, biodiversity conservation and behavioral change. This project have special component on improving functions and services of ecological and environmental systems and it aims to increase availability of forest cover through trees planting by establishing community owned nurseries and invest in reforestation and restoration of degraded terrestrial systems including hills and mountains. A need for cooking fuel is a major cause of mass tree felling to produce firewood and charcoal. It will also introduce pilot installation of biogas digester which will reduce wood and wood product dependence. Reversing the ongoing degradation of environmental and ecological systems and enhancing adaptation activities through EVA practices, is expected to contribute over 50% of forest regeneration and cover including woodlands and water resources availability, compared to the baseline scenario. The proposed restoration and tree planting activities under component will contribute to climate resilient of rural communities directly and indirectly through improved ecological functions and services such as weather amelioration, protect soils from erosion, control land degradation and as well as forest products. Promotion of planting activities for fruit

plants and wood plants for timber including beekeeping activities in pilot villages may yield excellent reduction of income poverty and will contribute significantly to climate resilience of vulnerable communities specially women and girls. In addition, these activities will also play a pivotal role in mitigating some of the effects of anthropogenic climate change and will increase the ability of biotic communities and ecosystems to gradually adapt to climate change and other global changes. Under component 2 and 4, the project proposes to implement ecological restoration and rehabilitation plans and restoration activities of hills, mountainous and land cover systems. Restoration and rehabilitation activities will be conducted in Iramba, Neruma and Igundu wards, which are the already known and prioritized by the district council as the most degraded hills and mountainous ecological systems. However, this project will facilitate establishment and implementation of comprehensive district ecological restoration and rehabilitation plan to accelerate the scaling up of environmental benefits to other areas in the district. Overall environmental benefits of implementing the project will therefore be over 50% from the current baseline data and it is sustainable, it can be going beyond the project and district borders.

ii) Economic benefits

The project components will ensure sustainable utilization of the natural resources for the communities' development of the district. Thus, contributing to the economy, social and environment of Bunda district. The suggested interventions strategies are for improving adaptive capacity of most vulnerable disadvantaged community members such as women in order to provide them with economic gains. In particular, the activities outlined in each output of the component on enhancing climate resilience agricultural, fishery, and livestock production systems to improve food security among selected most vulnerable communities will benefit them as follows: The project will lead to increased agriculture and livestock production and move vulnerable communities beyond subsistence farming to selling excess crops and stock for income. This project will also aim at building on impressive gains from agriculture, fishery and livestock production by organising the communities into sustainable marketing and credit cooperatives known as SACCOs. This is because the livelihoods of smallholder farmers are often constrained by poor access to markets and limited entrepreneurial skills, which hinders the economic development by limiting the economic base of the most vulnerable communities. The business cooperative approach has proven in various parts of the country to be the strongest driver of income generation. By increasing the scale of their combined outputs, the social-cooperative model will maximize their bargaining power and gain better access to markets and credit. The cooperative will also benefit their members through skills training in agricultural techniques and business practices. Detailed quantification of economic benefits will be provided when developing the full proposal of this project.

iii) Social benefits

With improved economic and generally livelihood activities, the interventions are expected to provide social solution to vulnerable community members and most disadvantaged groups. The social benefits from this project are multifold, mostly related to economic empowerment. All components offer social benefits to marginalize and poor vulnerable rural communities including Women and school girls and youth. The project inspires to improve water systems and food security, thus solving existing social conflicts at household levels due to water scarcity, famine and food insecurity. School dropout will also be solved as well including improving sanitation issues at household and public institutions. The observed malnutrition challenges will also be tackled through various output activities of this project especially activities at component 2, 3 and 4. Protein availability will be also enhanced as well. Families and communities will be better able to invest in their own healthcare and education for their children as most of interventions will improve social livelihood systems in the project areas.

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

a) Cost effectiveness from a technical perspective

This project focuses on reducing their vulnerability to seasonal and long-term weather and climate variation, through implementation of concrete climate resilient activities and boost rural water supply systems, crop and fishery productions and alternative income generation, supporting livelihood diversification and capacity building to scale up successful climate adaptation actions. This contrasts with the current approach to climate related risk management and poverty reduction projects in Bunda

District and in the United Republic of Tanzania, which are largely reactive, based on time events and top down approach. Interventions have been focusing on costly responses, which are in most cases not sustainable. Investment in improved and integrated community-based and ecosystem-based adaptation as applied to this project is viewed to be cost-effective, and provides a longer-term solution to managing climate related effects as opposed to the costly traditional measures in the district. For instance, the previous water supply system built in 1970s was not sustainable and failed due to limited involvement of local communities and top down management approach. In contrast, this project proposes cost effective, gender based - climate resilient-rural water supply in Bunda district council, through creation of Community Owned Water Supply Organizations (COWSOs), implemented through Force Account and Self-reliance (Ujamaa) Modalities. This create the sense of in-kind cost contribution by the community and project ownership, lasting project impacts and outcomes for improved community's livelihood systems and increased adaptive capacity. The cost-effectiveness of the project's on-the-ground adaptation interventions proposed under Component 1, 2, 3 and 3) will be greatly enhanced by the principles of local peoples' empowerment through engagement of vulnerable and grassroots communities such as socio-economic groups (women groups, farmer groups, small scale fishers, credit and savings (VIKOBA), livestock keepers) and village governments. Analysis done by the study on Economics of Climate Change in the United Republic of Tanzania (2011), highlighted that, empowerment and strong engagement of local people/communities who actually feel the pinch of climate change effects to implement adaptation measures always results in a greater ratio of benefit: cost compared to the costly tradition top-down implementation approaches. For example, preliminary socio-economic analysis on the proposed project activities (rural water supply, fish farming, small scale irrigation, bee keeping, restoration and rehabilitation of ecosystems), when implemented using Force Account and Self-reliance (Ujamaa) Modalities estimate internal rates of return of 35–70% and higher benefit: cost ratios of up to 30:1200 for the actions under components 1, 2, 3 and 4. In addition, this project will promote collective actions and opportunities for adaptation best practices, knowledge-sharing and communicating project outputs among departments, across sectors and village communities in the district. In this way, the project's investment will accrue a disproportionately large benefit for life and livelihood quality improvement under the current and the expected future climate change effects, vis-à-vis the traditional and existing way of implementing development/adaptation projects using un-integrated and isolated projects in the district.

The cost of each component against the number of beneficiaries is shown in the Table below.

Project component	***Cost in US$ interventions***	***No. of beneficiaries***
Component 1: Enhancing Climate resilience through water supply system of the drought prone agro-pastoral communities	*450,000.00*	Approximately more than 15,000 households equivalent to more than 102,365 people will directly befits under the investment proposed by Component 1, close to 30% relative to approximately 400,000 number of people in the district. About 2000 cattle in four wards will also benefit. Detailed analysis of the investment impacts to people relative to the total population and the number of households in each village will be provided during the full proposal development
Component 2: Improving agricultural productivity, livelihood and enhancing agro-ecosystem resilience through Climate Smart EVA practices	420,000.00	800 households are targeted through improved agricultural productivity at Namhura irrigation scheme including 300 households for the proposed drip irrigation activities at Buguma, Bulendabufwe and Mumagunga villages.
Component 3: Promoting paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through fish farming innovations in selected villages of Bunda District	*150,000.00*	600 small scale fishers (women groups included) relative to approximately 7,672 households of small scale fishers in the district.

Project component	*Cost in US$ interventions*	*No. of beneficiaries*
Component 4: Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District	*131,000.00*	It is now expected that, over 102,365 people will directly befits from interventions under component 4of this project as compared to about 400,000 people in the district. However, it is expected that benefits from ecological and rehabilitation including bee keeping and tree planting activities will go far beyond the project
Component 5: Strengthening institutional capacity and knowledge management on climate change adaptation	50,000.00	Over 200people from communities groups and stakeholders, district and project staff trained. Project results shared through mass media to more than 10 million people in the Lake Victoria zone and the nation at large.

b) Cost effectiveness from a project management perspective

The cost effectives of this project is also built in its implementation arrangements and proposed interventions to tackle the specific climate driven challenges at grassroots and local levels with adverse impacts on livelihood systems, disruption of ecosystem and high incidence of poverty (especially income poverty). The Project Implementation Unit (PIU) will be established and hosted at the Headquarters of Bunda District Council. Project personnel will be recruited from the existing experienced and qualified staff of the district council. In this way, no new recruited is needed as project personnel will be remunerated by top-ups, no other personal benefits like health insurances, termination benefits, staff resettlement allowances as well as costs for utilities and bills. This will allow effective and the best use of financial resources and will reduce project management costs, including creating perfect environmental for the project team to make closer management and monitoring of project activities. The implementation approach of this project is considered to be among the best approach in the least developed countries as will use the Force Account Modality (FAM). Force Account Modality allow communities in all project sites to volunteer and to perform various earth work activities without any costs, provide construction materials available in their local areas, offers free local expertise/knowledge including participating in tree planting and ecological restorations without monetary rewards. Employing new staffs, for example, the project coordinator and I project staff in each sector would have cost the project about US$ 160,000 for salaries in three years compared to US$ 45,000 for top-up allowances of the project team. The recruitment and participation of community volunteers will build local capacity, utilize local knowledge and deliver expected project outputs for a relatively small investment as well as enhance the sustainability of project interventions. Force Account Modality is geared to ensure that, most of resources go straight to the beneficiaries. Force Account Modality including Project Management Unit set-up and staff recruitment modalities are expected to leverage the project cost by almost 40%. These measures are the most cost effective and are also expected to raise project value/resources by almost over 40% on the ground above the requested AF resources. The implementation modalities proposed by this project are heavily embedded into the District's and Tanzania's Ujamaa (self-reliance) culture for poverty reduction and other livelihood improvement projects and programs. The cost-effectiveness of the project's on-the-ground adaptation interventions (components 1-4) will also be greatly enhanced by taking into account of the on-going interventions in Bunda district council and in the central government ministries, with a view to complement those investments by creating synergies. For instance, activities under Component 4, will complement and leverage national efforts for tree planning campaigns and presidential award for best district and villages for tree planting. The components will also complement the on-going efforts in the district to combat deforestation and climate change effects by using Ecosystem-based-Adaptation (EbA) through ecological restoration activities, tree planting and bee keeping activities. Being executed by the District Council, the project will also link with interventions related to agriculture, aquaculture and rural water supply. For instance, the project will link with Farmer Field Schools supported by the district budget, credit and savings groups existing in almost all villages in Bunda districts, Women Based Groups as well as fisheries and beach management rural groups to achieve expected outputs

under Components 1, 2, 3 and 4. Therefore, the cost effectiveness of this project is clear and if implemented will provide the groundwork and build block for the Government of the United Republic of Tanzania to replicate and enhance interventions in other districts and regions. The detailed Cost-effectiveness will be further analysed during full proposal development stage.

C) Cost effectiveness from project sustainability perspectives

The investment underlying the proposed project entails a unique, new approach towards tackling the increasing climate change impacts in the vulnerable rural areas as the previous approaches have yet to delivered more benefit to people. As a result, the paradox of poverty and climate change amid all the advantages led to a number of initiatives being undertaken to improve the situation in the District. The project will be implemented through the existing stable district institutions and village government structures by implementing their respective activities. Conduct technical Trainings of Trainers(TOTs) on maintenance and operation to selected communities members to ensure operations and maintenance of infrastructures beyond the project life lime. For instance, activities under Component 1 will also include Training of selected members of Water Users Associations (COWSOs) on operation and maintenance, revenue collections, group dynamics, accounting and financial management to ensure sustainability of the climate rural water to be established by the project. Activities under Component 2 and 5 will involve training of selected farmers on Operation and Maintenance (O&M) of improved irrigation facilities at Namhura village and drip irrigation schemes at Buguma, Bilendabufwe and Mumagunga Villages. Equally, selected fish farmers and bee keepers will be trained on their maintenance and operation issues. For instance, it is designed here that, no behalves will be purchased for villagers, rather experts and necessary workshop tools and equipment will be purchased and villagers will be equipped practical knowledge on modern behalves and honey processing techniques, including maintenance and operations. Activities under component 4 will also promote sustainable ecological and environmental management including tree planting. This will promote more cost effective and sustainable multi-purpose climate adaptation actions which increase climate resilience for vulnerable and marginalized people in rural areas when compared to the existing and traditional initiatives in the district. The investment matches with Government Priorities set out in key national policy documents including the Vision 2025, the Second Five Years Development Plan, Strategic Plan of Bunda District Council and the NAPA including the NDCs. Alignment with national priorities ensures Government commitment to project objectives during and beyond implementation. The operation of the project through the District Authority Headquarters will also ensure Sectors at the district and village level play a central role in terms of project implementation and ensuring sustainability through the integration of adaptation plans into District Performance Contracts to institutionalize and sustain community interventions.

PART IID: *Describe how the project / programme 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 and will be implemented in line and consistent with various development policies, strategies and plans of the United Republic of Tanzania including the Development Vision 2025, Tanzania's second Five year development plan (2016/2021), the Intended Nationally Determined Contributions (INDCs, 2014), the National Climate Change Strategy (URT, 2012), the Tanzania National Adaptation Programme of Action (NAPA, 2007), the First and the Second national Communication to the UNFCCC, the Roadmap of the National Adaptation Plan, and the Bunda District Strategic Plan (2016/2021) which recognizes the growing negative impacts of climate change and sets initiatives of tackling its effects. In line with Sustainable Development Goals to take urgent action to combat climate change and its impacts, it is necessary to develop the project with concrete actions in solving such problems for Bunda district which are not necessarily similar to other parts of the Tanzania. Selected national policies, plans, strategies and development goals with which the project is aligned are presented in the table below. Alignment is indicated at component level, but this will further be detailed during the development of the full proposal.

S/No	Selected national policies, plans, strategies and development
1	***National Adaptation Programmes of Action (NAPA, 2007)*** Components 1, 2, 3, 4 and 6 of the project are aligned with NAPA Priorities 1, 2 and 3, Priority 1, focuses on improving food security in drought prone areas. The priority 3, focuses on improving water availability to drought stricken communities, while the Priority 3 focuses on climate change adaptation through participatory reforestation and includes awareness on climate change adaptation through community participatory efforts.
2	***National Development Vision 2025*** The objective of the Vision is to build a globally-competitive and resilient economy and to increase the quality of life for all citizens. The Vision proposes transforming Tanzania from a LDC to a middle-income country by 2025. The vision will create the enabling environment for socio-economic development in Tanzania. The identified objectives of the Vision include tacking environmental and climate change challenges. Therefore, through its six Components, the interventions of the project are therefore strongly aligned with the Vision.
3	***National Strategy for Growth and Reduction of Poverty (2011)*** The objective of the National Strategy for Growth and Reduction of Poverty is to increase the economic growth and productivity to reduce poverty through the: i) efficient use and development of factors of production (including human capital); and ii) strengthening and establishing well-functioning institutions and markets. The National Strategy for Growth and Reduction of Poverty also recognizes that to promote food and nutrition security and water availability in Tanzania, water resources, fishery, crops and livestock need to be made resilient to the future effects of climate change. The project is therefore aligned with the National Strategy for Growth and Reduction of Poverty through the interventions of Components 1, 2, 3, 4 and 5.
4	***Country Strategy Paper (2011-2015)*** The Country Strategy Paper promotes the creation of an enabling environment to realise the 2025 national development vision. In collaboration with the Germany Government, the United Republic of Tanzania is developing a National Climate Change Adaptation Plan (NAP) to address the effects of climate change in the country. Therefore, through Components 1, 2, 3, 4 and 5 the project is aligned with Country Strategy Paper.
5	***National Climate Change Strategy 2012*** The goal of the Strategy is to enable Tanzania to effectively adapt to climate change and participate in global efforts to mitigate climate change with a view to achieving sustainable development. The strategy focuses on reduce vulnerability and enhance resilience to the impacts of climate change. The specific objectives of the Strategy are:- To enhance resilience of ecosystems to the challenges posed by climate change; To enable accessibility and utilization of the available climate change opportunities through implementation; To enhance participation in climate change mitigation activities that lead to sustainable development; To enhance public awareness on climate change; To enhance information management on climate change; and To put in place a better institutional arrangement to adequately address climate change. Components 1, 2, 3, 4 and 6 of this project are strongly in align with almost all objectives of the National Climate Change Strategy 2012.
6	***The Sustainable Development Goals (SDGs)*** take a broad approach on environmental sustainability and have been adopted and implemented in the United Republic of Tanzania and in Bunda District. This project will contribute to the following SDGs; SDG 5 – Achieve gender equality and empower all women and girls, by promoting gender equity throughout the project and targeting women in specific project activities. SDG 6 – Ensure availability and sustainable management of water and sanitation for all, by implementing interventions under Component 1. SDG 13 – Take urgent action to combat climate change and its impacts, all components are in line with the SDC 13. SDG 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss through the implementation of Components 2 and 4 and EVA practices

S/No	Selected national policies, plans, strategies and development
7	The project also is in coherence with **The 4th East African Community Development Strategy (EACDS), which** outlines broad strategic goals of the EAC as well as specific targets to promote infrastructure development and economic growth, including emphasis on reducing or mitigating the negative effects of climate change on agriculture and food security.
8	**National water policy, 2002 and the National Water Resources Management Act,2009** The national water policy, 2002 recognizes that, fresh water is basic natural resources to sustain both animal and human life, and that reliable and safe drinking water are fundamental needs for improved social livelihoods and life quality. The proposed project activities under Component 1 and 2 will largely be guided by this policy. Also the project activities under Component 1, 2 and 3 also are in coherence with the objectives of The national Water Resources Management Act,2009 specifically a) promoting equitable access to water and the principle that water is essential for life and that safe drinking water is a basic human right; (c) promoting the efficient, sustainable and beneficial use of water in the public interest; (d) facilitating social economic development; (e) promoting stakeholders' involvement in water resources management at all levels especially by ensuring decentralisation to the lowest possible level of government, consistent with available capacity at such level; (1) protecting biological diversity especially the aquatic ecosystems; (g) providing for systems for managing the growing demand for water use through integrated planning and management of surface and groundwater resources, in ways which incorporate economic, environmental and social dimensions in the planning process; and (h) preventing and controlling pollution and degradation of water resources
9	**The National Water Supply and Sanitation Act, 2009** The objective of this Act is to promote and ensure the right every person in Tanzania to have access to efficient, effective sustainable water supply and sanitation services for all by taking into account the following fundamental principles relevant to activities under component1: b) which call delegation of management functions of water supply and sanitation services to the lowest appropriate levels taking into account the local government administrative systems; c) ensuring that water supply and sanitation authorities are financially and administratively autonomous and sustainable d) transfer ownership of water supply schemes in rural areas to the respective communities and enabling beneficiaries and stakeholders to participate effectively in the management of community water supply schemes. Activities under Component 1 are in consistence with the overall objective of this act, and will be generally guided by the National Water Supply and Sanitation Act, 2009.
10	**The National Irrigation Policy, 2009 and the National Irrigation Act,2013.** Irrigation activities proposed under Component 2 well linked to objectives of the National Irrigation Policy of 2009 and will be its implementation will be guided by the National IrrigationAct,2013
11	***Bunda District Strategic Plan (2017/2018-2021/2022)*** Among other issues, the Strategic Plan of Bunda District focuses on:-Improving Environmental Conservation, Natural Resources and Land Management for sustainable development; Enhancing, Sustaining and Effective Implementation of the National Anti-corruption strategy; Improving Access to Quality and Equitable Social services; Increasing in Quantity and Quality of social service and infrastructures such as Water systems; and Improve social welfare, gender, participation and community empowerment in the district. The project Components, 1, 2, 3, 4, 5, and 6 are therefore linked to these objectives of the District Strategic Plan

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

The project is aligned with the requirements of the 2013 Environment and Social Policy of the Adaptation Fund (see Section K). In addition, The project will be assisting in fulfilling some national policies and strategies set by the United Republic of Tanzania and Bylaws set by the Bunda District. Policies, governing the Environment, Water, Agriculture, Forestry, Livestock, Fishery and Local Government administrations are key and relevant to the Project. All relevant national standards for water, fishery, forestry, environment, agriculture and food security, land use planning will be applicable during implementation of the proposed interventions of the project:. In addition, the project

will be subjected to Environmental Impact Assessment (EIA) specified in the National Environmental Act, 2004, and will be conducted according to the Environmental Impact Assessment (EIA) and Environmental Audit Regulations of 2005. Bunda District Council fully understands that it will be responsible for risk management associated with the project activities including any environmental and social risks presented by the proposed project where applicable. Bund District Council has adequately reviewed the project concept note and classified the project in the C category as per the approved Environmental and Social Policy by Adaptation Fund Board. There are no significant parts of the proposed project that poses any serious threat or danger in regard to environment and social aspects during implementation. However, in order to mainstream the environmental and social safeguards as per the policy, the District together with the National Implementing Entity (NIE) will develop an environmental and social risk management tool to assist in managing any environmental and social risks in the project implementation process. This tool will in addition provide suitable interventions to any identified areas that might introduce environmental and social threats. It is on this basis that it is not feasible to have an environment and social plan at this early stage of the project development level.

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

The proposed components of this project and its interventions will as much as possible avoid any duplication of actions and funding sources. In designing this project concept note all departs and actors in the district and in the region secretariat were consulted at the pre concept note stage. The AF resources will therefore build on ongoing district development programming as operationalized through its investment and operational budgets. Like district, Bunda district council receive funding from the national government and ministries through programmes as well as through more targeted projects (including donor-supported projects). The proposed project will build on core operational funding delivered to the district through the departments of Water resources and irrigation, Agriculture, planning, environment, forestry and bee keeping, community development and livestock development. The project will also build on projects on climate change adaptation being implemented in Tanzania like; the on-going project under the GEF/IFAD project - "Reversing Land Degradation trends and increasing Food Security in degraded ecosystems of semi-arid areas of Tanzania" which is being implemented in Kondoa, Mkalama, Magu and Nzega districts in Tanzania main land; and Micheweni district in Zanzibar; The GEF/UNEP project - "Supporting the implementation of integrated ecosystem management approach for landscape restoration and biodiversity conservation in Tanzania", and the LDCF/UNEP project, "Ecosystem-Based Adaptation for Rural Resilience", currently being implemented in Kishapu, Mpwapwa, Simanjiro, Mvomelo districts of Tanzania main land and in Kaskazini A in Zanzibar. The Dryland Development Project (DDP) for mainland Tanzania under the lead of the Ministries of Agriculture, Fishery and Livestock Development and in collaboration with IFAD which work with livestock keepers, agro-pastoralists and other land users in Tabora, Shinyanga Ruvuma regions to support integrated dryland-based livelihoods including linkages to markets and income generation while providing ecologically sound strategies for resolving conflicts between farmers and pastoralists. Other project like the project funded by the African Development Bank (AfDB)- Institutional Support for Climate And Seasonal Weather Information for Adaptation Planning in Mwanga and Same districts, Northern Tanzania, had concrete adaptation intervention which used Force Account to deliver activities at local levels. Therefore, AF resources under this project are expected to build synergies on the ground particularly for component 1, 2, 3 with activities related livelihood improvements and ecological restorations, rather than duplication of resources. However, there is no geographical duplications with the sited donor funded projects. Detailed analysis of duplication of this project with other funding sources including synergies will be performed during the full proposal stage.

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

The requested Adaptation Fund (AF) resources will be used to strengthen knowledge management frameworks at the district and zonal level in the Lake Zone of the United Republic of Tanzania. One of the key activities built into every component of the Project is that of climate change education and awareness raising. Building awareness on the value of preserving ecosystem services and reducing the impacts of climate change through participatory implementation and direct involvement of communities

in the project activities. Methods such as community field days, community trainings, tour and visits and on farm/site demonstrations will be conducted in a participatory way. Participatory monitoring and evaluation (M&E) focusing on outcomes and learning parameters to allow stakeholders control over content and processes. This will help measure the effectiveness of the project, build ownership, and promote accountability at various levels. Also the proposed project has set of activities under Component 6 which specifically focuses on sharing project results and lessons learned and mainstreaming new approaches in local and district planning. The lessons will be disseminated through community group-to-community fora (cross visits, community meetings etc.), enterprise development meetings, participatory videos made by farmers/fishers/COWSOs to showcase local experiences, techniques and achievements, and directly transmit messages to decision makers and donors, project reports and briefing notes, a project website, as well as mass media outlets (newspapers, radio etc.) to promote a wider understanding of the issues and the secondary uptake of successful approaches.

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 project's Executing Entity, Bunda District Council, consulted a wide range of stakeholders, particularly local communities, during preparation of the Pre-concept note and the Concept Note. At the outset of the Concept Note design process, a series of preliminary consultations with key stakeholders was held in Kibara, Iramba and in Bunda districts between 6th and 9th October, 2018 to solicit views and to better understand the problem, it's root causes and potential interventions that would enhance resilience to climate change shocks in Bunda District. The techniques used in the pre-consultation visits were mainly expertise judgment, meetings with village administrators and community members, Focus Group Discussions and cross departmental meetings in the District. Quick gender analysis has also been undertaken as part of the Concept Note development process and to get good understand on gender roles, power relations and to disaggregate women's and men's specific interests, needs, and priorities as they relate to the proposed project. This was done through district experts and experiences and assisted to pre-examine women's vulnerabilities to climate change in Bunda and how gender relations determine adaptation strategies, how climate change affects women and men in different ways and enabled all components proposed in this project to be gender sensitive and ensure gender equality in the distribution of project benefits. In addition, review of climate change vulnerability analysis has also been conducted by the project team to identify the most vulnerable groups within community member in the district. The stakeholders consulted to date and those that will be consulted during the development of the full project proposal are listed below.

Stakeholders	**Roles**
Bunda District Headquarters	The District Councils Chairpersons and District Executive Directors and Councilors are important in driving the District development agenda. Currently, the District Strategic Plan (SP), which sets out development priorities for the next five years, has been developed. Key actors within the District include Officers in Environment, Agriculture, Fishery, Forestry, Water, Agriculture, Land and Planning. District government offices also host a number of special development initiatives and activities which are particularly relevant for this project under the AF funding.
Sector government	All sector Ministries relevant to this project are key and will be consulted in the full proposal development stake and during the implementations. Sectors such as Agriculture, Forestry, Environment, Fisheries, Livestock, water and Lands are key to this project and will be broadly consulted.
Mara Regional Secretariat Office	The Regional Office in Mara region will be consulted and involved in project implementations as is key partner in development processes in Bunda District
Cooperatives	Prevalent across the project area, in Wards and Divisions, but vary greatly in degree of organization, size and resources –from small associations with ten members that meet in people's houses, to large organizations with hundreds of members, permanent staff and offices. In some cases they appear to partially substitute for government structures such as agricultural extension services and gap in financial service provision in rural villages due to a lack of banks and the inability of poorer members of society to access financial services.
Local NGOs and CBOs	They are very few in number, and most of them are not active. Most NGOs initiatives are

Stakeholders	Roles
	linked to national level organizations. WWF, PSI, Mwibara Community Trust Fund World Vision including CARE international in Tanzania appear to be the NGOs whose approaches align most with the project concept.
Private Sector	The private sector will be an important stakeholder and will to link villagers to markets, and carry out some analytical work on local business opportunities.
Project beneficiaries	Poor villages, mostly farmers, fishers, livestock keepers, women and youth groups in various project sites are key stakeholders and will be involved widely.

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

The economy of Bunda district is mainly based on services and goods provided by well functioning ecological and climate systems. Degradation of these ecosystems through poor farming practices and climate induced processes adversely affects the existing socio-ecological and livelihood systems and human well-being of local communities in the District. The current climate change trend and continued global change in the climate system have affected provisions and economic growth of key sectors like water, agriculture, fishery and livestock. The requested funds from Adaptation Fund, is viewed to support direct implementation of climate smart innovations for building resilient livelihood systems and facilitate transformation of traditional farming, fishing, grazing and water supply systems in vulnerable communities of Bunda District, Mara region, Tanzania.

Component 1: Enhancing Climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda district

Baseline scenario (without AF resources): Without the AF project, it is likely that the current trend of water interventions and investment continue, with adaptation gaps particularly in villages where climate threats present serious water scarcity. Extreme climate and weather driven events such as droughts, and prolonged dry periods are more common across the district nowadays. Rainfall seasons and number of rainy days has greatly changed and declined, affecting the existed and traditional water sources such as seasonal rivers and natural springs and water wells. Communities are experiencing failures of their traditional water resources and with no replacement or alternative as the resources in District are limited. The climate driven water scarcity and the resulting socioeconomic consequences are now both pervasive and complex in almost all villages in Bunda District. There are sufficient evidences that, women in most rural areas are now forced to walk longer distances for searching water. Usually, they walk such longer distances with heavy burden of water buckets, at even night times. For instance, such practices are now more common in most villages in the district. Moreover, water scarcity driven by climate change related events like droughts in the district has also been linked with the increased social group (farmers and livestock keepers) conflicts as well as conflicts within households, including incidents of gender based violence and abandonment. Local communities in the project area have a low capacity to adapt such induced water scarcity due to poverty levels. In addition, Bunda District and Tanzania Government been in the list of Least Developed Countries have low adaptive capacity and inadequate financial resources to assist. **Additionality (with AF funding):** The AF funding will be used to enhance investments for climate resilient water management and supply system in vulnerable agro-pastoral communities of Bunda District. The AF resources will assist in building climate salient water supply systems which meets the current demand while avoiding future climate shocks to the water sector in the project areas. The improved management and retention of surface waters will increase natural drainage and increase storage capacity so that farming communities will have water to irrigate crops and women spend less time fetching water. The empowerment of community groups, capacity building and the adoption of COWSOs will provide a more secure water management structures as asset base and better to withstand the effects of climate change in future.

Component 2: Improve agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices

Baseline scenario (without AF resources):Without the AF project, rural communities in Bunda Distrcit will be left with little choice except to continue with their way of farming traditional practices, which are already proven failures to every climate shocks each year. Food aid from the Sectral government has been common practices. As explained at Section 1.1 of this Concept Note, in most villages food

insecurity has been the persistence problem. The under-developed markets for processed goods and non-agricultural goods are major barriers to moving people out of marginal agriculture. If left silent with no measures to improve agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices, this situation and the projected future climate change will continue to push people into deeper poverty levels while disrupting long-term ecosystem resilience in the District. The Government has prioritized livelihood improvement through Climate Smart Agriculture Action and the Agriculture Sector Resilient Strategy and Action Plan and in its NAPA but lacks the necessary resources to provide support on the required scale. **Additionality (with AF funding):** The AF resources will be used to facilitate improvement of agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices in Bunda, to avoid future effect of climate change (including increased mean annual temperatures and increased frequency and intensity of droughts) to the agriculture sector and increase food security in rural communities of Bunda Districts. The proposed interventions will support local communities particularly Women who currently depend on Rain fed farming to increase their agriculture productivity and food security.

Component 3: Promote paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through aquaculture innovations.

Baseline scenario (without AF resources): Local communities in Bunda District are vulnerable to climate change, including increased frequency and intensity of droughts and an increased variability in rainfall patterns (see Brief background on what the project aims to solve for further details). In particular, vulnerable communities are exposed to several negative effects of climate change, including inter alia: i) reduced farming productivity; ii) reduced livestock productivity; and iii) decreased availability of fish catches and abundances. The productivity of livelihoods of local communities within the District particularly those underpinned by traditional wild fishing activities – will be reduced by these negative effects of climate change. In addition, non climate-related challenges facing local fishers are expected to worsen under the future conditions of climate change. The District and the sector Ministry responsible has also failed to adequately address the challenges. As a result climate induced effects coupled with other non-climatic factors have forced these vulnerable fishing communities into unpredictable and poor catches, and therefore poor life quality. Despite of this, no interventions exists in the district to transform these communities into climate smart fishing practices and facilitate paradigm change using integrated aquaculture innovations. **Additionality (with AF resources):** AF resources will be used to implement on-the-ground activities to promote alternative fishing practices using proven aquaculture techniques to local and poor fishers in Bunda District and transform them into to continue with climate proof fish farming systems. The requested resources from AF, will be used to establish climate resilient post- harvest/processing and storage systems for safe handling, landing sites and storage of both farmed and wild fish catches during extreme climate events (floods, rains). The resources will also assist to institute and implement effective and efficient methods (pond and cage faming) for fish culture techniques including facilitating availability and improvement of fish feeds formulation and disease management and construction of fish ponds in selected areas in Bunda Districts

Component4.Improving ecological and environmental services and functions to sustain climate sensitive rural livelihoods in Bunda District

Baseline scenario (without AF resources): Despite income poverty challenges which are being experienced in Bunda District, ecological and environmental services and functions which sustain climate sensitive rural livelihoods plays key role in maintaining life and food security. For instance:- Forest ecosystems such as woodlands, wooded grasslands and bush lands have been providing biomass energy for cooking at house levels. Unfortunately, the ongoing deforestation has reduced the coverage of forests and woodlands and the availability of associated goods including accelerating land degradation. Across the district, wetlands have been severely degraded as a result of inter alia: a) intensive cultivation of crops such as sweet potatoes and horticultural crops; b) excavation of sand and clay for brickworks; and c) grazing activities. Fish abundance in the lake has declined as a result of intensive fishing efforts and changes in Lake Victoria's hydrology. **Additionality (with AF resources):** AF resources will be used to implement concrete adaptation activities to enhance integrated management of environmental and ecological systems to sustain climate sensitive rural livelihood in Bunda District. The Requested will assist to establish and implement district, Divisions, Ward and village ecological restoration and

rehabilitation plans and restoration activities of hills, mountainous and woodland systems. These resources will facilitate and promote implementation of Ecosystem-based Adaptation (EbA) activities such as Promote bee keeping activities in woodland land and mountainous systems and fruit plants as income generating activities including engaging farmers in tree planting on surrounding residential areas, along streets and roadsides and degraded landscapes. To reduce future degradation and induced climate change impacts activities geared to enhance increased access and use of efficient firewood and charcoal stoves and support commercialization of energy efficient stoves will funded under the AF financial resources.

Component 5. Strengthening institutional capacity and knowledge management on climate change adaptation

Baseline: (without AF resources): Bund District Council currently lacks the capacity and expertise to support and scale up climate adaptation. Without the AF project, it is likely that the pace of adaptation planning will be slow, with limited development of community based approaches and dissemination of best practice. The most vulnerable community in villages are likely to continue unsustainable farming, fishing and livestock keeping practices with increasing exposure to climate change risks while economic opportunities remain limited. **Additionality (with AF resources):** With AF funding, community based adaptation planning and best practices piloted during project implementation can be effectively shared and communicated with key decision makers so that they can be replicated in other parts of the country. Finally, building capacity of local institutions to plan and implement climate resilient and cost effective interventions already indentified capacity shortfalls in the District and at local communities. The requested resources from the AF will also facilitated sharing project results and lessons learned and mainstreaming new approaches in district planning.

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

The project's sustainability will be supported by emphasizing the active participation of community and other stakeholders in decision-making and implementation of the project's activities and strengthening the institutional and technical capacity at community and district levels to ensure that stakeholders have adequate knowledge and skill to maintain the benefits of the project's interventions. The participatory approach will root ownership of the project interventions firmly in the local communities. By engaging communities in the design and implementation of the project and creating COWSOs and Farmer/Fishers/Livestock Groups and community based agricultural enterprise, the project will empower and build capacity of local people to continue adapting to climate change risks. Community ownership will also ensure that the environmental gains are not reversed. The proposed investment matches with Government Priorities set out in key national policy documents including the Vision 2025, the Second Five Years Development Plan, Strategic Plan of Bund District Council and the NAPA. Alignment with national priorities ensures Government commitment to project objectives during and beyond implementation. The operation of the project atthe District Authority Headquarters will also ensure that District, Sector and village level governments play a central role in terms of project implementation and ensuring sustainability through the integration of adaptation plans into District Performance Contracts to institutionalize and sustain community interventions. The use of Community Animators to deliver project interventions will demonstrate the project's commitment to investing in local people and recognition that community members are best placed to lead project implementation at the community level. The proposed project components and interventions of this project are rooted in the sectors that touch everyday life of communities in Bunda. By supporting adaptation measures that address the factors that are exacerbating the impacts of increasing variation in rainfall and increasing the resilience to long-term climate change risks, the proposed project provides a longer-term and more sustainable solution.

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

Checklist of Environmental and Social Principles	**No further assessment required for compliance**	**Risk and potential impact**	**Detail of potential risks**	**Measures to address risk**

Checklist of Environmental and Social Principles	No further assessment required for compliance	Risk and potential impact	Detail of potential risks	Measures to address risk
Compliance with the Law	x	Risk: **Low** Potential impact: **High**	None anticipated	The final project design will be compliant with all relevant district and national laws including international standards. To achieve this, during the development of the full project proposal, local , district and national stakeholders will be consulted to ensure that all relevant legal requirements are met.
Access and Equity	x	Risk: **Low** Potential impact: **Low**	None anticipated	The project design will ensure that project activities will not reduce or prevent communities at project sites from accessing basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions and land rights. But will enhance availability of those basic human services in the project areas
Marginalized and Vulnerable Groups		Risk: **Moderate** Potential impact: **Moderate/High**	Without extensive consultation with marginal/vulnerable groups at the project sites and in training exercises, it is probable that project activities will exclude these marginal/vulnerable groups, therefore preventing them from accessing benefits – both in terms of resources and training	During the development of the full project proposal – to the maximum possible – marginal/ vulnerable groups such as women, female headed families, girls, elderly and disabled peoplewill be consulted in the design of all of on-the-ground activities. Transparent selection process will be undertaken which will comprise extensive and thorough consultation with local communities. In addition, the project design will ensure that benefits accruing from the project interventions – including technology transfer and awareness-raising activities – reach marginalized and vulnerable groups in the district. As this project targets specifically the most vulnerable households/groups to improve their adaptive capacity through improved water supply for reduce social stress of women and school girls, improved agricultural systems for increased crop yields and fruit trees, improved fish farming and bee keeping activites. This will improve income and cashflows at household levels, increase food security and household nutrition levels, reduce poverty and the dependence of these vulnerable households on humanitarian relief and food aid from the central government and donor agencies. Thus, the project will ensure that the adaptive capacity of marginalized and vulnerable groups is enhanced.
Human Rights	X	Risk: **Low** Potential impact: Moderate/ **High**	None anticipated	To ensure that project interventions respect and adhere to the requirements of all relevant conventions on human rights, district, national groups in this area will be consulted during the development of the full project proposal.
Gender Equity and Women's Empowerment		Risk: **Moderate** Potential impact: **Moderate/High**	Without extensive consultation with women at the project sites and in planning for training and capacity-building activities, it is probable that the project will inadequately include women in both the design and during implementation	The project design will therefore ensure that gender considerations are included in all project interventions, with a specific focus on activities on the ground (Components 1 to 5). All consultative and participatory processes will strive to include a representative sample of the larger community and analyse gender-disaggregated data where relevant. During the development of the full proposal, gender experts, NGOs and local community organisations will be consulted to ensure that the project follows best-practice guidelines

Checklist of Environmental and Social Principles	No further assessment required for compliance	Risk and potential impact	Detail of potential risks	Measures to address risk
Core Labour Rights	x	Risk: **Low** Potential impact: **Moderate/ High**	None anticipated	Core labour rights will be respected and considered in the project design and implementation. In particular, national and regional stakeholders will be involved in the design of project activities to ensure that labour legislation is adhered to
Indigenous Peoples		Risk: **low** Potential impact: **low**	No indigenous people but local communities	All project interventions will ensure that local/communities/peoples benefit from the project's activities and that, wherever poosible, they are included in community consultation and participatory planning /implementation of activities.
Involuntary Resettlement	x	Risk: **Low** Potential impact: **High**	None anticipated	The project design does not include involuntary resettlement.
Protection of Natural Habitats		Risk: **Low** Potential impact: **High**	Interventions will include planting of tree species, If these activities are not undertaken with consideration of immediate and downstream effects, natural habitats may be negatively affected.	By implementing climate resilient and water conservation practices, climate-smart techniques and EVA activities, the project will promote improved management of natural habitats, particularly in the context of future climate change. The downstream effects of these activities will include enhanced ecosystem functioning within protected areas.
Conservation of Biological Diversity		Risk: **Low** Potential impact: **High**	Without careful planning and mapping of project sites, on-the-ground adaptation interventions might adversely impact on local biodiversity. For example, exotic, invasive species might outcompete indigenous species and impact negatively on both indigenous species' richness and on the ecosystem services that underpinning biological diversity.	Therefore, during the process of site selection, a baseline assessment will be undertaken to assess site-specific risks to biodiversity. Final project sites will then be mapped using a participatory approach – which will include village leaders – to ensure that the project's activities do not result in the significant loss of biological diversity or the introduction of known invasive species.
Climate Change	x	Risk: **Low**	None anticipated	The project will contribute to climate change adaptation at village, ward, divisions, district, national and international levels
Pollution Prevention and Resource Efficiency		Risk: **Low** Potential impact: **High**	None anticipated	The proposed project will result in minimal pollution. Rather, project design will ensure that all applicable international standards are met for maximizing material resource use and minimizing the production of wastes, and the release of pollutants.
Public Health	x	Risk: **Low** Potential impact: **High**	None anticipated	The project design will ensure that public health is not negatively affected by the project's activities. Indeed, through Component1, 2 and 3 will increase water quality and improve public health.
Physical and Cultural Heritage	X	Risk: **Low** Potential impact: **Moderate/ High**	Without thorough and careful site selection, it is possible that the on-the-ground project interventions will negatively affect physical and cultural heritage, for example by encroaching on plant species of notable cultural value.	Through a baseline assessment and participatory mapping – which will include local communities and village leaders in the district-level – the likelihood of physical cultural heritage being affected will be minimised.

Checklist of Environmental and Social Principles	No further assessment required for compliance	Risk and potential impact	Detail of potential risks	Measures to address risk
Lands and Soil Conservation	X	Risk: **Low** Potential impact: **Moderate/ High**	Without thorough planning and species selection, on-the-ground adaptation interventions might result in reduced soil productivity or ecosystem degradation.*	The project will promote the conservation of soil and land resources. Specifically, careful species selection and EVA activities in Component 2 and all activities in Component 4 will result into increased soil stability, reduced runoff of nutrients from topsoil and increased soil fertility at project sites.

PART III: IMPLEMENTATION ARRANGEMENTS

PART III A. *Describe the arrangements for project / programme implementation.*

Executing Agency: Bunda District Council (Bunda DC) will be the executing agency of this project. The Department responsible for Environment at the District will be the lead Implementing Agency (IA) with actual execution at village, Ward and Division levels. Implementation at the District level will be coordinated by the District Executive Director (DED). Bunda District Council (Bunda DC) through the DED, will establish a dedicated project implementation unit (PIU) based at the District headquarters with core technical and support staff comprising: Project Coordinator - responsible for ensuring that the project produces the expected results specified in the results framework to time and budget. The PIU will carry out the day-to-day implementation of the project, and will be responsible for the operational and financial management and reporting. The PIU will liaise closely with the District Administrations in Bunda district to maximise opportunities and to integrate the project within the district development planning processes. Monitoring and Evaluation Officer - responsible for all project monitoring and reporting including baseline and other field surveys, annual impact assessments, collection and collation of data for quarterly reporting, risk monitoring and reporting, capacity building of Government and co-operatives in M&E, participatory monitoring and evaluation with beneficiaries, knowledge management as well as co-ordination of mid-term and final evaluations. Enterprise Development Officer - to support vocational training, value chain development, agro-processing activities, capitalisation of financing facilities and monitoring flow of finance into viable enterprises, market development and facilitating better access to credit, liaise with financial institutions. A **Project Steering Committee** will be set up to steer the project implementation process. The Committee will be chaired by the DED. The Secretariat of the Committee will be the Project Coordination Unit. Its members will be District Executive Director, the Chairperson of the District Council, Heads of Departments and Units of Bunda district council, Project Focal Person of Ward levels. **Implementing Entity:** The National Environmental Management Council (NEMC) is the National Implementing Entity (NIE) of the Adaptation Fund projects in the United Republic of Tanzania that will endorse the proposed Adaptation Fund Project. NEMC will be responsible for the overall management of the Project and financial, monitoring the achievement of the project outcomes/outputs, and reporting on behalf of the Adaptation Fund. Detailed implementation arrangement including financial and procurement issues will presented during the full proposal development stage.

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

The following measures for financial and project risk management will be put in place during implementation of the interventions and project activities. The risk categories on delays in implementation of project activities and conflict management are rated as low whereas that of limited stakeholders' involvement, instability within p areas and natural and environmental hazards are rated as medium. The financial risks are one rated as high. The table below summarizes measures for financial and project risk management

Risks Category	Level of Risk	Measures to be taken

Delays in Implementation of project activities	Low	i)The Project Steering Committee as an oversight body for implementation constituted with regular quarterly meetings to review, approve and provide corrective oversight on project milestones; inception, mid project review and end of project review; i) Development of detailed implementation plans (DIPs) and annual plans to be approved by the NIE and to guide the implementation; and iii) Joint monitoring team and community based monitoring groups formed to review progress in implementation in the various project components
Conflict Management	Low	i)NIE Management and conflict resolution structure/mechanism set up and providing oversight support role and ii) NIE to ensure agreed arbitration mechanisms on any upcoming project related conflicts.
Limited Stakeholders Involvement	Low	ii) All stakeholders to be involved in the project design, implementation and monitoring & evaluation during the entire life cycle of the project; ii) Democratic decision making process on all pertinent issues will be upheld for all the stakeholders; iii) Involvement of key local stakeholders; local leaders, community beneficiaries, local county government structure and public service organizations.
Instability within project sites	Low	i) NIE to reach out to relevant government departments particularly where ethnic /political tensions/ conflict may interfere with project implementation; ii) Project stakeholders also to play key role in conflict resolution in the respective project implementation sites
Financial Risk	Low	i) A financial management strategy formulated to manage any upcoming financial problems including any inflation in market prices; ii)The programe to adhere to all Generally Acceptable Accounting Principles (GAAP) regarding control, transparency and documentation, and have processes, procedures and necessary infrastructure in place for an appropriate audit system; iii)The Office of Auditor Genera or any other Internationally accepted firm to undertake regular annual financial audits; and iv) Approved regulations, procedures and guidelines on costs for services & goods of the United Republic of Tanzania including the Adaptation Fund Standards to be upheld
Natural and Environmental hazards	Low	i)Traditional and scientific early warning systems to guide decision making process on the implementation of project components; ii) Diversification of relevant drought/ floods mitigation approaches incorporated in project implementation; iii) Improved awareness on climate change vulnerabilities and adaptations among stakeholders.

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

According to the AF's Environmental and Social Policy, a project can be categorised as either A, B or C. Category A refers to projects that "likely to have significant adverse environmental or social impacts that are for example diverse, widespread, and irreversible". Because any adverse social and environment impacts of the proposed project are expected to be localized and minimal on the ground interventions will largely be "green". The Category A classification does not apply to this project. In contrast, Category C refers to projects "with no adverse environmental or social impacts". Because the project will be undertaking on-the-ground activities, some environmental and social impacts are expected, however can be easily mitigated. Therefore, the project is classified as a Category B project as its potential impacts are "less adverse than Category A projects, because for example they are fewer in number, smaller in scale, less widespread, reversible or easily mitigated." While a preliminary screening of social and environmental risks is presented above, further assessment of these risks will be required.

Environmental and social Risk Category	**Measures to be taken**
Gender Equity and Women Empowerment	i) Profiling of beneficiaries during project implementation phase (initially will be done during project formulation phase) to ensure that women are direct beneficiaries of the project; ii) Deliberately target women groups and girls in implementation and monitoring of the activities; iii) Encourage women to take up leadership positions during the project implementation process; iv) Developing gender indicators for monitoring the success of the project. For instance, the gender proportion of the beneficiaries, (verifiable during M&E), gender sensitive work plans (project activities to be executed taking cognizance of availability of different genders); and v) Assessment and documentation of gender differentiated impacts of the project will be done

Loss of biodiversity	i) Encourage sustainable agriculture within the project areas eg precision farming, water retention fallow techniques; ii) Promote high value crops and fruit trees as well as improved fallows; iii) Promote integration of crops, trees and animals; and Promote village protection of areas and participatory management of natural resources
Exclusion of farmers with HIV, disabled/physically challenged, Gender	i) Deliberately target People Living with HIV and Aids (PLWHAS) through their support groups; ii) Involve the social development officers in identifying the vulnerable groups; iii) Ensure representation of different age groups especially the youth and the elderly among the target farmer groups/communities;and iv) Entrench gender and Greater Involvement of People With Aids (GIPA) during the implementation and Monitoring process
Exclusion of Indigenous/loval technical knowledge (ITK)	i) Embrace/Mainstream use of ITK in implementing and promoting adaptation activities; and ii) Uphold indigenous people's rights through profiling, documenting and integrating their knowledge in the decision making and implementation processes.
Labour laws	i) Ensure that all employed personnel in the project sites/areas are contracted in accordance with the national and international Labour Laws.
Compliance with statutory Laws	i)All the statutory requirements shall be met in the project implementation.(licences, standards, taxation, procedures, Government fiduciary standards; and Environmental Impact assessments and Environmental Audits shall be done in all the project activities that warrant such measures.
Complaints/grievances	i) A grievance management mechanism shall be put in place and implemented; and ii) There will be deliberate processes to ensure that the all the project beneficiaries and project executors are aware of this mechanism

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

The monitoring and evaluating system will be based on the indicators and means of verification defined in the Results Framework. Overall responsibility for monitoring and evaluation will be the responsibility of the executing agency, Bund District Council. Outcomes and outputs will be monitored during project implementation by the Project Implementation Unit with data collected, compiled and analysed by the Project Implementation Unit (PIU) on a regular basis. The monitoring and evaluation system will be linked to the results framework, annual work plans and budgets and impact assessments. The timely provision of results from Monitoring and Evaluation activities will enable the team to take corrective or enhancing measures accordingly, or report the new and an expected project risks before they occur. The project will employ a variety of means for data collection including surveys, participatory methods and case studies with project beneficiaries. The data will be disaggregated by socio- economic group and gender. Monitoring results will be disseminated in a user-friendly format and timely manner to project stakeholders by the Communications Officer to enable a responsive approach to implementation and allow for troubleshooting of any problems to ensure smooth implementation of project activities.

Six monthly Progress Reports will describe progress on implementation as well as lesson learning, a risk update and management and an ongoing assessment of sustainability and acceptance of project interventions by the stakeholders particularly the beneficiaries. The report will also include the expenditure report and a work plan and budget for the following reporting period. The bi-annual progress reports will be submitted to the Project Steering Committee for regular review and approval. Quarterly Progress Reports will also be prepared by the Project Co-ordinator and be submitted to the District Executive Director to ensure continuous monitoring of project activities and to allow for corrective measures in due time. These reports will provide an update on progress on the delivery of outputs, a quarterly expenditure report and a work plan for the next quarter. At the end of each year an Annual Impact Assessment will be carried out by the Monitoring and Evaluation Officer to collect and collate indicator data and measure performance against the baseline and targets in the Results Framework. S(he) will work closely with the Communications Officer to ensure timely and effective communication of the results to all the key stakeholders. The assessment will include a field survey and case studies and will report on the progress made against the indicators and targets, delivery of project outputs, and lessons learned. The project will also establish a Participatory Monitoring and Evaluation

system with beneficiary groups to enable beneficiaries to measure progress of project interventions. In terms of financial monitoring, the PIU via the District Executive Director will provide the NIE (NEMC) with certified periodic financial statements. In addition, the project will commission an annual audit (be conducted by an accredited auditor) of project accounts to ensure compliance with the AF and Government rules and procedures. Moreover, an external Mid-Term Evaluation will be conducted in the mid-way during the project implementation. The evaluation will review progress against milestones and assess progress made towards the delivery of outputs and achievement of objectives as well as identify corrective actions if needed. It will focus on the effectiveness of delivery, timelines and efficiency of implementation, and risk management. It will present the initial lessons of project design, implementation and management. The findings will be used to enhance implementation during the final half of the project phase. A Final Evaluation will be conducted 6 months before project closure and will focus on the impact and sustainability of project results. The report will summarise the results achieved (objectives, outcomes, outputs), lessons learned, and make recommendations on any actions needed to ensure sustainability, replicability and scaling up. The following table summarizes the budget of the M&E plan.

Activity	***Responsible expert***	***Budget***	***Timeframe***
Baseline survey	Monitoring and Evaluation Officer with support from Project Co- ordinator	15,000	Within 2 months of project starting
Inception and annual Workshops	Project Co-ordinator	8,000	Within 2 months of project starting and yearly thereafter
Inception report	Project Co-ordinator	-	Within 2 months of project Starting
Annual impact Assessment	Monitoring and Evaluation Officer and Communications Officer	-	Annual
Bi-annual Progress Reports	Project Co-ordinator	-	6 monthly
Quarterly Progress Reports	Project Co-ordinator	-	Quarterly
Participatory Monitoring and Evaluation by beneficiaries	Monitoring and Evaluation Officer	-	Quarterly
Annual field visits by representatives of Steering Committee	Project Co-ordinator	6,000	Annual
Minutes of Steering Group	Project Director	-	Quarterly
Technical Reports	Project Coordinator	-	Periodic
Mid-term Evaluation with gender gap analysis87	National consultant	16,800	Mid term
Final evaluation	National consultant	20,000	6 months before end of project
Audits	External auditor	4,000	In Years 2 and 4

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

Project Component	***Project Outcome***	***Project Output***	***Output Activities***	***Baseline Indicators***	***Baseline Levels***	***Project Outcome Indicator***	***Results/Targets***
Project goal: Contribute to institutional capacity to manage climate related risks and reduce vulnerability of rural communities in drought prone areas of Bunda District							
1 Enhancing Climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda district	1.Enhanced climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda District	1.1: Climate resilient rural water supply system established in selected drought prone agro-pastoral communities of Bunda district	1.1.1Rehabilitate/ Construct pumped water supply schemes in drought prone agro-pastoral communities ofNeruma ,Iramba and Nyamihyoro Wards of Bunda district	1. Number of buildings for fixing water pumping machines in the project sites 2.Number of purchased water pumping machines	1. Existence of two old building for fixing piping machines; 0 -water pumping machine	% increased resilience and adaptive capacity to climate induced water scarcity in the selected agro-pastoral communities of Bunda District	90% of drought prone agro-pastoral communities in Bunda District access to rural water supply system; 15 COWSOs established and well managed 10 troughs of water for cattle constructed
			1.1.2Rehabilitate /construct/water storage structures and network system for Iramba and Kasahunga water sources	1.Number of water storage structures constructed and rehabilitated	Existence of 2 malfunctions water tanks		
			1.1.3 Rehabilitate / construct an extension of pumped extension of the piped water network system in drought prone communities of villages in Iramba, Namhura and Neruma Wards	1.Number of water network constructed and rehabilitated in the project site 2. % coverage of pumped water network (kilometers of pumped water network from lake Lake Victoria)	0% water network		
			1.1.4 Drill boreholes in selected drought prone (Nakatuba, Lagata and Buzimbwe) villages	1.Number of boreholes drilled 2. Number of purchased and installed solar	5% of required boreholes 0 – water pump driven by solar energy		

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
			uncovered with pumiped water systems from Kasahunga and Iramba water sources and Install solar energy driven water pumps	energy- driven water pumps			
			1.1.5 Construct storage tanks and Water Kiosk/Network for the drilled boreholes	1 Number of storage water tanks constructed 2. Number of Kiosks constructed 3. % coverage of boreholes water network (kilometers of drilled boreholes water networks)	0 % of water kiosk network		
			1.1.6 Train selected members from Water Users on operation and maintenance of their climate resilient rural water supply schemes to ensure sustainability.	Number of people trained	0 trained water users		
		1.2 Water troughs for cattle constructed in selected agro-pastoral Communities in Bunda district to improved water availability during drought and dry	1.2.1 Construct troughs for livestock water system in selected dry villages in agro-pastoral communities in Bunda District	1.Number of constructed water troughs for cattle	0% toughs for livestock water systems		

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
		periods					
		1.3 Community Owned Water Supply Organization (COWSOs) established and their functional committee members trained on management, operational and maintenance in Bunda District.	1.3.1Establish water governance structures/arrangements (COWSOs by considering gender balance for selection of members of the management team) to better manage water source protection, equitable and gender sensitive water allocation for human and other uses, and for revenue collection	1.Number of COWSOs established 2.Training reports 3. Number of committees	0% of established COWSOs		
			1.3.2Establish by laws for regulating effective use of water resources and protection of water harvesting structures; document and disseminate success information and resilience value of water interventions to communities through learning and practice platforms	1.Number of by laws on effective water uses and water resources management 2.Training reports	0% of by laws for water effective uses		
2. Improve agricultural productivity, livelihood and agro-ecosystem resilience	2.Improved agricultural productivity, livelihood and agro-ecosystem	2.1Climate Smart EVA practices to improve food security through small scale and micro-irrigation schemes enhanced in	2.1.1Rehabilitate/improve the unlined traditional irrigation scheme at Namhuravillage and increase the	Number of improved climate sensitive irrigation schemes % increase in	Existence of tow inactive traditional irrigation schemes	% agricultural infrastructure improved to withstand climate change and	Improve 3 traditional irrigation schemes in Bunda district

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
through climate smart EVA practices	resilience through climate smart EVA practices in the selected communities of Bunda District	selected villages of Bunda district	command area	the command area	10% area is under production	variability- induced stresses in selected communities of Bunda District	and Increase food security in Bunda district by 40%
			2.1.2 Construct and establish climate sensitive irrigation structures at Buguma, Bulendabufwe and Mumagunga villages	Number of constructed climate smart irrigation systems % of household using climate resilient agriculture techniques	0% of climate sensitive irrigation structures		
			2.1.3 Facilitate construction of one rural post-harvest management center at Namhura village using force account modality	Number of post-harvest management center	O post-harvest management center available		
			2.1.4 Facilitate increased use of EVA practices and drought tolerant and early maturing crops varieties by farmers in Bunda district council	% of farmers/female using drought tolerant and early maturing seed	Less than 10% farmers use improved drought tolerant and early maturing seeds		
			2.1.5 Train farmers on Operation and Maintenance (O&M) on irrigation facilities to promote sustainability of infrastructures	Number of farmers trained on O&M on irrigation infrustrictures	0 farmers trained on O &M of irrigation infrustructures		

Project Component	***Project Outcome***	***Project Output***	***Output Activities***	***Baseline Indicators***	***Baseline Levels***	***Project Outcome Indicator***	***Results/Targets***
3. Promote paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through aquaculture innovations	3.Traditional fishing practices of small scale fishers transformed and fishers' income improved through climate sensitive aquaculture innovations	3.1.Traditional fishing practices transformed for improved climate resilient livelihood and sustainable income generating activities in selected villages of Bunda District.	3.1.1 Pilot and establish effective and efficient fish farming best practices (pond and cage faming) for vulnerable small scale fishing communities (including women groups) at Buguma, Bulendabufwe and Isanju villages	Number of small scale fishers trained on aquaculture technology practices in the selected pilot selected villages of Bunda district	No trainings on on aquaculture technology practices in the selected pilot villages of Bunda district	Promote paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through aquaculture innovations Vulnerable fishing systems in fishing communities (Nyarugoma,Bugu ma and Isanju), strengthened in response to climate change and variability induced stress.	200 small scale fishers trained on climate resilient aquaculture innovations; 3 Fishing ponds for aquaculture constructed in the pilot villages
			3.1.2 Train community for improving fish farming knowledge and fishing options in the district	No of small scale fishers trained	0 small scale fishers are trained		
			3.1.3 Facilitate establishment of one fish hatchery for tilapia species at Buguma village and improvement of fish feeds formulation and disease management techniques in Bunda district	No of hatchery for tilapia established at Buguma village	0 Hatchery exist at Buguma villagevillages		
4. Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in	4.Improved ecological and environmental services and functions to sustain climate sensitive rural livelihoods in	4.1.Integrated management of environmental and ecological systems implemented to sustain climate sensitive rural livelihood in selected	4.1.1Establish and implement ecological restoration and rehabilitation plans (hills, mountainous and woodland restored and	Number of restored and rehabilitation ecosystems(hills , mountainous and woodlands), Number of ecological	30% hills, mountainous and woodland restored and rehabilitated in Bunda district, 1 Functional	Number and type of ecosystems maintained and improved to	Restore and Rehabilitate at least 90% of the degraded ecosystems in the project sites

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
selected rural communities of Bunda District	Bunda District	villages of Bunda District Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District	conserved) in selected Wards (Iramba, Neruma and Igundu wards)	restoration and rehabilitation plans developed	district environmental committee for law enforcement	enhance their functions and services under climate change and variability- induced stress.	
			4.1.2 Promote bee keeping activities in woodland, hillsand mountainous systems and fruit plants as improved ecosystem based income generating activities	Number of modern beehives purchased and used by farmers Number of trees including fruit trees planted by farmers	0% of modern bee hives in the selected project sites 2 tree nurseries available in the district		
			4.1.3. Mobilize enclosure systems in degraded ecosystems to promote natural regeneration and recovery of ecological functions and explore the use of local/traditional institutions to strengthen management of sensitive ecological systems.	Number of degraded ecosystems under community driven closure system to restore ecological functions and services	0% degraded ecosystem under community closure system to restore ecological functions and services		
			4.1.4 Engage farmers in tree planting on surrounding residential areas, along streets and roadsides and degraded landscapes and establish ecological schools in selected villages	Number of trees planted			

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
5.Strengthening institutional capacity and knowledge management on climate change adaptation	5.Strengthened institutional capacity to reduce risks associated with climate-induced Socio-economic losses and livelihood failures in Bunda district	5.1Capacity of the district and communities in Bunda is strengthened to respond to extreme weather events	5.1.1Training of government stakeholders: technical staff, community groups and civil society in climate risk management and project measures for further scaling up 5.1.2.Communicate and share knowledge generated through project implementation in Bund district, National and International communities 5.1.3Sharing project results and lessons learned and mainstreaming climate change adaptation approaches in district planning	Number of communities and district staff trained on climate risk management No of capacity building training workshops and short courses facilitated by the project Number of project papers, knowledge sharing material plan, materials on popular versions in Kiswahili and English Number of knowledge products (IEC) developed and distributed	Number .and type of knowledge products developed and disseminated Number of district staff and community population for effective project and adaptation initiative implementations	Number .and type of knowledge products developed and disseminated Number of district staff and community population for effective project and adaptation initiative implementations	Over 2000 knowledge products (IEC) developed and distributed 12 Radio talk shows on project implementations and adapation issues Web portal for interactions on project success and challenges One database for documentation of project implementation processes One Documentary

Project Component	*Project Outcome*	*Project Output*	*Output Activities*	*Baseline Indicators*	*Baseline Levels*	*Project Outcome Indicator*	*Results/Targets*
				Number of plans at district level with mainstreamed climate change and variability issues			developed for the project stories and shared at district and national level

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

Project Objective(s)/ components	***Project Objective Indicator(s)***	***Fund Outcome***	***Fund Outcome Indicator***	***Grant Amount (USD***
1 Enhancing Climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda district	% increased resilience and adaptive capacity to climate induced water scarcity in the selected agro-pastoral communities of Bunda District	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas **Outcome 4:**Increased adaptive capacity within relevant development and natural resource sectors	2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks 4.1.Development sectors' services responsive to evolving needs from changing and variable climate 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress 6.1 Percentage of households and communities having more secure (increased) access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient livelihoods 3.2. Modification in behavior of targeted population	450,000.00
2.Improve agricultural productivity, livelihood and agro-ecosystem resilience through climate smart EVA practices	% agricultural infrastructure improved to withstand climate change and variability- induced stresses in selected communities of Bunda District	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas **Outcome 4**:Increased adaptive capacity within relevant development and natural resource sectors		400,000.00
3. Promote paradigm shift of small scale fishers for sustainable income	Paradigm shift of small scale fishers for sustainable	**Outcome 4:** Increased adaptive capacity	2.1. No. and type of targeted institutions with	150,000.00

Project Objective(s)/ components	***Project Objective Indicator(s)***	***Fund Outcome***	***Fund Outcome Indicator***	***Grant Amount (USD***
and climate resilience livelihood through aquaculture innovations	income and climate resilience livelihood through aquaculture innovations in fishing communities strengthened in response to climate change and variability induced stress.	within relevant development and natural resource sectors **Outcome 5:** Increased ecosystem resilience in response to climate change and variability **Outcome 6**: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	increased capacity to minimize exposure to climate variability risks; 4.1.Development sectors' services responsive to evolving needs from changing and variable climate; 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress; 6.1 Percentage of households and communities having more secure (increased) access to livelihood assets; 6.2. Percentage of targeted population with sustained climate-resilient livelihoods and 3.2. Modification in behavior of targeted population	
4.Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods Bunda District	Number and type of ecosystems maintained and improved to enhance their functions and services under climate change and variability- induced stress.	**Outcome 4:** Increased adaptive capacity within relevant development and natural resource sectors **Outcome 5:** Increased ecosystem resilience in response to climate change and variability	3.2. Modification in behavior of targeted population 5.1Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress	131,000.00
5.Strengthening institutional capacity and knowledge management on climate change adaptation	Number .and type of knowledge products developed and disseminated Number of district staff and community population trained for effective project and adaptation initiative implementations	**Outcome 2:** Strengthened Institutional capacity to reduce risks associated with climate-induced	Output 2.1: Strengthened capacity of national and regional centers and networks to respond rapidly to extreme weather events	50,000.00

Project Outcome(s)	Project Outcome Indicator(s)	***Fund Output***	***Fund Output Indicator***	***Grant Amount (USD)***

1.Enhanced climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda District	% increased resilience and adaptive capacity to climate induced water scarcity in the selected agro-pastoral communities of Bunda District	Output 6:Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community-livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenario	450,000.00
2.Improved agricultural productivity, livelihood and agro-ecosystem resilience through climate smart EVA practices in the selected communities of Bunda District	% agricultural infrastructure improved to withstand climate change and variability- induced stresses in selected communities of Bunda District			400,000.00
3.Traditional fishing practices of small scale fishers transformed and fishers' income improved through climate sensitive aquaculture innovations	Paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through aquaculture innovations in fishing communities strengthened in response to climate change and variability induced stress.	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	4.1.1. 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)	150,000.00
4.Improved ecological and environmental services and functions to sustain climate sensitive rural livelihoods in Bunda District	Number and type of ecosystems maintained and improved to enhance their functions and services under climate change and variability- induced stress.	Output 5.Vulnerable ecosystem services and natural resource 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	5.1 umber of natural resources assets created ,maintained or improved to withstand conditions resulting from climate variability and change(by type and scale)	131,000.00
5.Strengthened institutional capacity to reduce risks associated with climate- induced Socio-economic losses and livelihood failures in Bunda district	knowledge products developed and disseminated Number of district staff and community population trained for effective project and adaptation initiative implementations	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	50,000.00

		Out3: Targeted population groups participating in adaptation and risk reduction awareness activities	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	

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 duly filled during full proposal development stage

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

This part will be duly filled 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[17] *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:*

***Eng. Joseph K. Malongo**, Permanent Secretary, Vice President's Office*	Date*: December, 28th, 2018*

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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (the Development Vision 2025, Tanzania's second Five year development plan (2016/2021), the Nationally Determined Contributions (NDCs, 2018), the National Climate Change Strategy (URT, 2012), the Tanzania National Adaptation Programme of Action (NAPA, 2007), the First and the Second national Communication to the UNFCCC, the Roadmap of the National Adaptation Plan, and the Bunda District Strategic Plan (2016/2021)) 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	
Date: *January 4, 2019*	Tel. and email: **+255 753 240 517**, nieaf@nemc.or.tz / kasigazi.koku@gmail.com
Project Contact Person: **Ntuku Julieth**	
Tel. And Email: +255758985705, ntukuj@gmail.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.

Annex 1: Concept Note

1.0 Project Background and Context

1.1 Brief background of the problems on what the project aims to solve

Bunda district represents a section of poor rural communities of Mara region in the Lake Victoria Zone of Tanzania, who are already vulnerable to impacts of climate change[18]. Key climate elements like temperature, rainfall and wind speed have been shifting their historical trends and magnitudes over time. As a result, extreme climate and weather driven events such as droughts, prolonged dry periods, erratic rainfall and strong winds are nowadays more common across the district[19]. The observed climate vagaries coupled with high poverty level have already caused their toll to people, their socio-economic, livelihood and environmental systems. Crop failures, water scarcity and livestock deaths due to drought are already common events in the area. Rainfall seasons and number of rainy days has greatly changed and declined, affecting economic, social, environment and peoples' livelihoods. Communities are experiencing failures of their traditional livelihood systems with no replacement or alternatives[20]. Dependence on fishing is also under threat due to catch decrease. As a result the Poverty and Human Development Report released in 2005 by the United Republic of Tanzania ranked the district as the poorest with the highest rates of income poverty.More than half (68%) of the population living below the basic needs poverty line. Projected climate change scenarios by the Tanzania Meteorological Agency (2014), show that, the district will experience more temperature increase in future while drought and dry spell periods will intensify. Rainfall pattern in the area is projected to be more unreliable and number of rainy days will be further reduced, while flushing and catastrophic floods will be more pronounced[21]. Many future climate-change impacts are predicted to accelerate multiple challenges across the district, affecting nearly all of the population. These impacts are expected to include profound changes in water availability, temperature stresses to human, livestock and crops, changes in farming practices, incomes and food security, ecological disruption, and human health related impacts such as changes in disease vectors and rangeland, spatial expansion of malaria and water borne diseases. Hence, it is imperative that robust, technically-sound and multi-disciplinary, integrated concepts need to be developed and sustainably implemented urgently in Bunda district, especially focusing on water, agricultural and public health sectors.

Like many other rural setting districts in Tanzania and in the East African region, agriculture (crop cultivation, fishery including aquaculture and livestock) and water sectors in Bunda are important driver for economic growth, poverty alleviation, food security and rural communities' development. The sectors employ more than 80% percent of human population, contribute to approximately 95 percent of district food requirements, and accounts for about more than 80 percent of households income earnings[3]. However, high dependence on rain fed subsistence agriculture, degradation of land and forest resources due to poor farming practices, unsustainable charcoal production and fuel wood harvesting, declining fish stock, illegal and primitive fishing practices and livestock grazing, aggravate the impacts of climate change on peoples' livelihood systems, amplifying community's vulnerability and limiting their adaptive capacity[22]. Reversing this situation, improving environmental and life quality of people and achieving sustainable land management is essential to address food insecurity, rural poverty and ultimately enhancing resilience of communities and their adaptive capacity to climate change effects. While some proposals for such

[18] The United Republic of Tanzania (URT), "Tanzania demographic and health survey (2010)," National Bureau of Statistics, Dar Es Salaam, 2011.

[19] TMA, (2014).Climate change projection for Tanzania: A report Submitted to the Government of Tanzania. Dar es Salaam 33p.

[20] UNDP(2014).Assessment study to identify Institutional, Legal and Financial Bottlenecks On Poverty – Environment (P-E) Implementation at different levels of District, Ward and Village in Bunda District

[21] Bamwenda G.R., Mashindano O., and Hangi M. (2013). Promoting Agriculture- Climate Change-Trade Linkages for Development in the East African Community, PACT International.

[22] Bunda District Baseline report 2013: Integrating Poverty-Environment-Gender objectives in district development plans for accelerating economic and environmental sustainability

interventions already exist in the district plans, their implementation lacks behind. Therefore, this project proposes to develop and implement concrete adaptation actions at grass root levels to increase community livelihood resilient to climate change and cover the following sectors; water resources and supply, agriculture, fisheries and aquaculture, livestock, forestry and ecosystems and gender in relation to climate change. The project will apply transformative integrated environmental management and aquaculture innovations, resilient rural water supply systems and Ever-Green-Agricultural (EVA) practices to reduce vulnerabilities and the impact of climate change on local communities in the district. This approach offers practical and effective combination of Community-Based-Adaption and Ecosystem-Based-Adaptation techniques to support transformation of livelihood system, combat poverty, enhance greater climate resilience of rural communities and gender equality while reducing emissions through long-term storage of carbon in landscapes.

1.2 Climate Change and gender issues in Bunda district

In Bunda district, climate shocks such as irregular rain and periods of drought and heavy rainfall are affecting everyone who relies on agricultural related sectors for survival. Moreover, the effects of climate change are particularly pronounced on vulnerable groups such as the poor and women in the district[23]. In most cases, data in the district indicate that, women are the most affected group by all climate related effects and disasters as their ability to adapt these event is poor. In addition, unequal access and control over assets mean that men and women do not have the same adaptive capacity and bear a disproportionate burden of climate change consequences due to their social roles, poverty and intra-household inequity[24]. Women are especially vulnerable to seasonal, episodic weather and natural disasters because of their responsibility for water procurement and household care, roles in securing food and fuel wood, reliance on low technology for agriculture and greater exposure to risk in crisis and severe weather events that may have been by climate by climate change. For instance, it is now common practices in the district for women to undertake more responsibilities during famine and reconstruction of homesteads while most men often emigrate and take refuge to other places away. Moreover, climate change induced water scarcity and food shortage in the district has been linked with the **increased conflict within households**, including incidents of gender based violence and abandonment. Children especially school girls are also considered more at risk to climate change effects as they could more easily get sick or hurt due to the instability of the home and more often are pulled out of schools. The proposed project will take into consideration various gender roles in various activities and by use of such information develop gender sensitive and segregated adaptation mechanisms to combat adverse effects of climate change. For instance, representation of women members in COWSOs will be given more emphases, number of women groups and women stakeholders will be included in income generating activities including engaging in aquaculture activities, small- scale irrigation, bee keeping activities, ecological restoration activities and tree planting. The project will therefore ensure equal opportunity for both women and men to participate in stakeholders' meetings, implementation of project activities, and training for capacity building in order to build their climate resilience while addressing their differentiated vulnerability, and increase their adaptive capacity to adapt to climate change impacts.

1.3.Project objectives

The project will specifically target the most vulnerable groups who have less resource to adapt to climate change in Bunda and is built on the principles of local empowerment through engagement of vulnerable and grassroots communities such as farmer groups and village governments and community groups. Therefore, the overall objective of this project is to enhance resilience and adaptive capacity to effects of climate change while reduce vulnerability of selected communities in Bunda District. Specifically, the proposed project will address the following objectives*:- i)Enhancing Climate resilience for improved*

[23] ***Bwire,M.K*** *(2018) Tackling "Climate Change" in Bunda district: Can Integration of Ecosystem-Based-Approach (EBA) and Community-Based- Approach (CBA) be more effective? Perspectives from grass-root communities, unpublished paper*

[24] *Bunda district Ciuncil,2018*

access to rural water supply system in selected drought prone agro-pastoral communities of Bunda district; ii) Improve agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices; iii) Promote paradigm shift of small scale fishers for sustainable income and climate resilient rural livelihood through aquaculture innovations in selected villages of Bunda district; iv) Improve ecological and environmental services and functions to sustain climate sensitive rural livelihoods in selected rural communities of Bunda District; and v) Strengthening institutional capacity and knowledge management on climate change adaptation.

1.3 Innovation, Transformation and impact.

The investment underlying the proposed project entails a unique, new approach towards tackling increasing climate change impacts in the vulnerable rural district. The approach proposed here is structured to tackle specific challenges at local level related to climate change effects (with adverse impacts on livelihood systems), disruption of ecosystem and high incidence of poverty (especially income poverty). While the economy of Bunda district is mainly dependent on three climate sensitive agricultural sub-sectors (crop, fishery and livestock), the district is currently suffering in a myriad of both climate and other environmental change related drivers. The paradox of poverty amid all the advantages led to a number of initiatives being undertaken to improve the situation. There is alarming data on the declining availability of basic needs including food and water supply in rural areas of the district. With increasing impacts of climate change, the district authority will no longer be able to afford uncoordinated and low carbon development pathway. It is therefore imperative that, investments in development for poverty reduction have to be combined with investment in climate resilience and low carbon development pathways. Using integrated aquaculture innovations and Ever Green Agriculture (EVA) practices for climate resilient and low carbon development pathway, the project bears the potential to become an important future strategy for district and up-scaling the approach to national and regional levels. This will promote sustainability of multi-purpose climate actions, protection of natural resources and district climate resilience. Thus, impact of this project will be widely seen from adaptation and climate resilience potentials through smart field actions. It is expected that at least 400,000 people will be direct beneficiaries and are expected to adapt for their livelihoods so that they will be at the position of coping with current and future impacts of climate variability and change.

1.4 Alignment with national priorities and sustainable development strategies

The proposed project is and will be implemented in line and consistent with various development policies, strategies and plans of the United Republic of Tanzania. This will include: the Development Vision 2025, Tanzania's second Five year development plan (2016/2021), the Intended Nationally Determined Contributions (INDCs, 2014), the National Climate Change Strategy (URT, 2012), the Tanzania National Adaptation Programme of Action (NAPA, 2007), the First and the Second national Communication to the UNFCCC, the Roadmap of the National Adaptation Plan, and the Bunda District Strategic Plan (2016/2021) which recognize the growing negative impacts of climate change and sets initiatives of tackling its effects. In line with Sustainable Development Goals; to take urgent action to combat climate change and its impacts, it is necessary to develop the project with concrete actions in solving such problems for Bunda district which are not necessarily similar to other parts of Tanzania. Similarly, the project match to most of the seven outcomes and the 7 outputs of the results frameworks of the Adaptation Fund(AF). Alignment details with various national and international policies and strategies are described in the Adaptation Fund (AF) application form.

2.0 Project location, Implementation arrangement and Stakeholders involvement

Project location: The project targets vulnerable rural population in Bunda district who are already vulnerable and impacted by adverse effects of climate change. Despite being one of the poorest districts in Tanzania with highest rates of income poverty in which more that 68% of the population are living below the basic needs poverty line, the District recognizes climate risks and is committed to implementing improved climate resilient and adaptation measures. This will include water management and aquaculture

innovations and sound biodiversity conservation plans to combat deforestation, reverse land degradation and combat desertification. Like at the national level, the District is also actively promoting gender equality and equity in its by-laws and education plans and programmes. Thus, the project will be implemented in vulnerable rural communities in selected agro-pastoral communities of Bunda District. *(More details are described in the attached AF application form).*

Implementation arrangement and Stakeholders involvement: Implementation values of this project are built on the principles of participatory, inclusiveness, financial transparency, vertical and horizontal institutional integration, environmental and gender considerations and mainstreaming. The project will be **Executed by** Bunda District Council and coordinated through the District Executive Director (DED), with a dedicated project implementation unit (PIU) to be based at the District headquarters with core technical and support staff(CVs are attached). Key stakeholders for smooth implementation of this project includes vulnerable rural population and community vulnerable groups (Women, Youth and Old people), Village Environmental Committees, Fishers, Livestock and Farmer Groups, Village and Ward Governments, Community Water Users Associations.

3.0 Summary of the project budget

Project component	***Cost in US$***
Component1:Enhancing Climate resilience for improved access to rural water supply system in selected drought prone agro-pastoral communities of Bunda	*450,000.00*
Component2: Improve agricultural productivity, livelihood and agro-ecosystem resilience through Climate Smart EVA practices	420,000.00
Component 3: Promote paradigm shift of small scale fishers for sustainable income and climate resilience livelihood through aquaculture innovations	*130,000.00*
Component4.Improving ecological and environmental services and functions to sustain climate sensitive rural livelihoods in Bunda District	*141,000.00*
Component 5. Strengthening institutional capacity and knowledge management on climate change adaptation	40,000.00
Project execution cost	110,000.00
Total project cost	1,151,000.00
Project cycle management fee charged by the Implementing Entity	109,000.00
Amount of financing requested	**1,400,000.00**

4. 0 Projected Calendar

Milestones	**Expected Dates**
Start of Project Implementation	July 2019
Mid-term Review	August 2021
Project Closing (6 months after project completion)	December 2023
Terminal Evaluation	September 2023

Annex 2: Project Formulation Grant Request (PFG)

Submission Date: **04/01/2019**
Adaptation Fund Project ID:
Country/ies: **United Republic of Tanzania**
Title of Project/Programme: ***Bunda Climate Resilient and Adaptation Project***
Type of IE (NIE/MIE): **National Implementing Entity (NIE)**
Implementing Entity: **National Environment Management Council (NEMC)**
Executing Entity/ies: ***Bunda District Council***

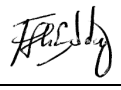
A. Project Preparation Timeframe

Start date of PFG	**March 18, 2019**
Completion date of PFG	**May 26, 2019**

B. Proposed Project Preparation Activities ($)
Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Desk work (Literature search)	Concrete literature review	1,000
Conduct site visit in community level consultations to validate the designs and inputs into the full proposal	Validated project design for the full proposal development	9,900
Consultation meetings with stakeholders to obtain technical inputs	Reports, stakeholders attitudes/technical inputs; refined methodology and project implementation plan	6,500
Critical analysis of technical project components and prepare project log frame	Concrete project components and log frame developed	4,900
Critical analysis of project budget to justify concrete project components	A concrete project budget developed in reconciliation with components	1,600
Full project document development	Project proposal developed for submission	6,000
Printing and binding of the project proposal documents	Printed and soft bound copies of full project proposal	100
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 Mulinda		04-Jan-2019	Julieth Ntuku	+255758985705	ntukuj@gmail.com

Annex 3: Government endorsement letter

THE UNITED REPUBLIC OF TANZANIA
VICE PRESIDENT'S OFFICE

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In reply please quote:

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40406 **DODOMA.**
TANZANIA.

Our Ref: AB.90/201/01/201

28th December,2018

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

Subject: Endorsement for **Bunda Climate Resilient and Adaptation Project**

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 Bunda District Council.

Sincerely,

Eng. Joseph K. Malongo
PERMANENT SECRETARY