



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: LDCF

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PART I: PROJECT INFORMATION

Project Title:	Ecosystem-Based Adaptation for Rural Resilience		
Country(ies):	Tanzania	GEF Project ID:	5695
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01255
Other Executing Partner(s):	Ministry of Agriculture and Food Security, Ministry of Water, VPO-DOE, NEMC, LGAs	Submission Date:	30 January 2014
		Resubmission Date:	10 June 2014
GEF Focal Area (s): LDCF, CC-5, SFM/REDD++, BD-1, LD-2,	Climate Change Adaptation	Project Duration(Months)	60
Name of parent programme (if applicable):		Agency Fee (US\$):	\$719,267

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCA-1	LDCF	5,955,085	19,900,000
CCA-2	LDCF	1,260,300	850,000
Project Management		355,848	800,000
Total Project Cost		\$7,571,233	\$21,550,000

B. INDICATIVE PROJECT FRAMEWORK

PROJECT OBJECTIVE: To strengthen climate resilience in rural communities of Tanzania by building adaptive capacities to implement EbA approaches and diversifying livelihoods.						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
Capacity to adapt to climate change.	TA	1. 1. Enhanced stakeholders' capacity to advance adaptation to climate change impacts and undertake resilience building responses.	1.1 A multi-disciplinary national committee established that facilitated cross cutting national dialogue on climate change adaptation in vulnerable sectors. 1.2 Local authorities, committees and user groups trained on supporting communities to adapt to climate change with a focus on using EbA approaches.	LDCF	780,300	660,000

			<p>1.3 A stocktaking exercise undertaken and revisions of existing climate change policies and strategies produced to identify entry points for climate change adaptation.</p> <p>1.4 Policy briefs and technical guidelines developed and distributed for policy – and decision makers on increasing the resilience of local community livelihoods to climate change using appropriate EbA approaches and knowledge gained from demonstration activities in Component 2.</p>			
2. Implementation of EbA measures for rural resilience.	INV TA	2. Reduced vulnerability in four vulnerable rural districts of the central Plateau and Zanzibar through demonstration of EbA approaches.	<p>2.1: Locally-specific climate change impacts, vulnerability and risks are identified and adaptations options are identified by local stakeholders.</p> <p>2.2 EbA pilot practices and climate resilient alternative livelihoods implemented in selected sites to increase resilience of vulnerable communities.</p>	LDCF	5,955,085	19,900,000
3. Knowledge management on climate change adaptation and up-scaling.	TA	3. Strengthened information base, up-scaling and knowledge on climate change adaptation are readily available for various uses.	<p>3.1 Project lessons and knowledge on climate change adaptation and resilient livelihoods using ecosystems captured, stored and widely disseminated among stakeholders at all levels.</p> <p>3.2 An up-scaling strategy developed based on lessons learned and best practices gained through project implementation.</p> <p>3.3 Project dedicated web-site established and linked to</p>	LDCF	480,000	190,000

			the relevant national and regional global networks.			
Sub-Total				LDCF	7,215,385	20,750,000
Project management cost					355,848	800,000
Total project costs					7,571,233	21,550,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Ministry of Agriculture and Food Security (MAFS)	Grant	10,075,000
National Government	Ministry of Water	Grant	10,075,000
Multilateral Agency	UNEP	Grant	600,000
National Government	Vice President's Office	In-Kind	800,000
Total Cofinancing			21,550,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
Total Grant Resources				\$	\$	\$

PURSUANT TO THE "MARGINAL ADJUSTMENT RULE" OF STAR,

E. PROJECT PREPARATION GRANT (PPG)

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

Amount Requested (\$) _____ Agency Fee for PPG (\$)¹

- (upto)\$200k for projects up to & including \$10 million **100,000** **9,500**

F.

Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
Total Grant Resources					

¹ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

PART II: PROJECT JUSTIFICATION

A. PROJECT OVERVIEW

A.1. Project Description

A.1.1. The project problem, root causes and barriers that need to be addressed

The Tanzanian economy is largely based on the primary sector (agriculture and livestock), which accounts for about 23.7% of GDP (2011), and 30.9% of exports earnings and employs about 75% of the total labour force. On average, crop production contributes about 19% of GDP while livestock production contributes about 5.9%. Food crop production accounts for about 65% of agricultural GDP while cash crops accounts for about 10%. Maize is the most important crop accounting for over 20% of total GDP. Food and cash crops account for about 70% of rural incomes.²

The climate in the country is characterized by two main rainy seasons namely the long rains and the short rains which are associated with the southward and northwards movement in the Inter-Tropical Convergence Zone. The long rains (“*Masika*”) begin in the mid of March and end at the end of May, while the short rains (“*Vuli*”) begin in the middle of October and continues to early December. In general, annual rainfall varies from 550 mm in the central part of the country up to 3690 mm in some parts of south-western highlands.³ Average rainfall in the central regions is around 600mm. Temperature varies according to the geographical location, relief and altitude. Along the coast and in the off shore islands the average temperature ranges between 27°C and 29°C, while in the central, northern and western parts temperatures range between 20°C and 30°C. Temperatures are higher between the months of December and March and coolest during the months of June and July.

Climate change and climate disasters

In the last 40 years, Tanzania has experienced severe and recurring droughts and floods with devastating effects to agricultural, livestock, wildlife, water and energy sectors, as well as on humans, property and infrastructure. Currently more than 70% of all natural disasters in Tanzania are hydro-meteorological⁴, and are linked to droughts and floods. Climate change projection indicates that the frequency and severity of those extreme climatic events will increase and is expected to have long-term consequences for the environment and the production systems of Tanzania, threatening agricultural production, food security, water availability and quality as well as economic and social activities. Climate change thus poses serious risks to the economy, to poverty reduction and to development.

In Tanzania, the impacts of climate change are already evident in almost all sectors of the economy and throughout the country. Given that Tanzania’s economic base is dependent on the climate sensitive natural resources, this makes the country’s economy extremely vulnerable to the adverse impacts of climate change.

Current and anticipated climate change impacts

Analysis of recent climatological data and observational evidence from local communities are overwhelmingly indicating some signals of increased climate variability and climate change over most parts

² United Republic of Tanzania, Division of Environment. (2012). *National Climate Change Strategy*. 118 p.

³ Chang’a L. B., Yanda P. Z., and Ngana J. (2010). « Indigenous knowledge in seasonal rainfall prediction in Tanzania: A case of the South-western Highland of Tanzania ». *Journal of Geography and Regional Planning*, vol. 3, no 4, pp. 066 – 072.

⁴ United Republic of Tanzania, Division of Environment. (2012). *National Climate Change Strategy*. 118 p.

of the country. Increasing temperature, notably over highland areas are observed in most parts of the country, and late rainfall onset and early withdraw (cessation), decreasing rainfall amount and seasonal shift in rainfall patterns are becoming more common. Most parts of the country, particularly the Central and Northern Zones, which are semi-arid, are very vulnerable to climate variability and they will be more vulnerable to the projected increase in frequency and amplitude of extreme climate events.⁵

Due to climate change, mean annual temperature for Tanzania is projected to increase by 1.7°C over north-eastern areas of the country and by 2.5°C over Western parts of the country.⁶ Regarding rainfall patterns, projections from Global Circulation Models (GCMs) are indicating that due to doubling concentration of CO₂ in the atmosphere by 2100, there will be an increase in rainfall in some parts while other parts will experience decreased rainfall.⁷ The areas with two rainfall seasons, that is the north-eastern highland and Zanzibar, the Lake Victoria basin and the northern coast, would experience an increase in March to May (long-rains) rainfall by up to 15 percent while southern, south-western, western and central areas will experience a decrease in March to May rainfall by up to 6%.

Notably, the effects associated with climate change are already evident in various economic sectors essential for Tanzania's livelihood and sustenance, including water resources, energy generation, food security, ecosystems/biodiversity and human health. In the most vulnerable communities, the impacts of climate change pose a direct threat to people's survival because this very survival is founded on the precarious health of ecosystems.

Tanzania's National Adaptation Plan of Action (NAPA) ranked agriculture and food security as the most vulnerable and important sector, severely impacted by climate change associated with global warming.^{8,9} In the past years, changing climate has resulted in a general decline in agricultural productivity, including changes in agro-diversity, particularly due to the increasing unreliability of rainfall. The prevalence of crop pest and diseases is also reported to have increased, posing more challenges to the agriculture sector. Recent studies by the Tanzania Meteorological Agency in 2009 indicated that some of the previous highly productive areas such as the southern and the northern highlands will continue to be affected by declining rainfall, frequent droughts and significant increase in spatial and temporal variability of rainfall with long term implications in the agricultural sector planning and resources allocation, such as seeds, pesticides and even the shifts in the types of agricultural produce. This has serious implications for food security.

Increasing rainfall variability and prolonged droughts also cause serious pressure in the country's available water resources, especially on important watershed and recharge areas, as well as wetlands. Severe and recurrent droughts in the past few years triggered a decrease in water flows in rivers, hence shrinkage of receiving lakes, and declines of water levels in satellite lakes and hydropower dams. Predictions of changes of lake levels and hydrological basins due to climate change in Tanzanian have indicated a potential decline of about 0.1m to 1.2 m, and up to about 3m for Lake Rukwa. Furthermore, some of the perennial rivers have changed to seasonal rivers and some wetlands have dried up. With increasing evapotranspiration as a result of increased temperatures, wetland water characteristics will also change with catastrophic consequences for the biodiversity within (for example, increased pH levels in Lake Natron is affecting the breeding sites of flamingos).

⁵ United Republic of Tanzania. (2007). National Adaptation Programme of Action (NAPA). 61 p.

⁶ United Republic of Tanzania, Division of Environment. (2012). *National Climate Change Strategy*. 118 p.

⁷ Matari et al., 2008

⁸ United Republic of Tanzania - URT (2008b). Study on strategies for addressing negative effects of climate change in food insecure areas of Tanzania. Ministry of Agriculture, Food and Cooperatives. Ministry of Agriculture, Food and Cooperatives, Dar es Salaam.

⁹ United Republic of Tanzania - URT (2009a). Climate change and agriculture policy brief. Vice President's Office, Division of Environment, Dar es Salaam.

In addition, this also has an effect on gender equality as women are the most affected where water sources are depleted or quality compromised.

Many ecosystems are overwhelmed by climate change related events. Of particular concern are the southern and central plateaux of mainland Tanzania, where climate change will seriously affect forest ecosystems and biodiversity. These areas possess one of the highest forest covers in Eastern and Southern Africa with a total of 35.3 million hectares of forests and woodlands.¹⁰ Loss of biodiversity, disappearance of wildlife habitats, increased risk of bush fires, limited availability of forest products (timber and non-timber products) and ecosystem shift (for example from forest to woodlands or woodlands to grasslands) are common impacts of climate change on forests. Increased temperature and changes in rainfall regimes will also affect the availability and quality of goods and services provided by the forests and rangelands, such as food, water, fuel (biomass accounts for 92% of the total energy consumption in the country), carbon sequestration, habitat to wildlife and cultural and religious value.¹¹

Additionally, variability in precipitation may have direct consequences in infectious disease outbreaks, like malaria and dengue fever. In Tanzania, there are already reported incidences of epidemic malaria especially in highland areas that were traditionally free from mosquitos and malaria¹². Studies undertaken in the Lake Victoria basin indicate that incidences of other diseases such as cholera have also increased as a result of climate change. These have had serious consequences on health and disproportionately affecting the underprivileged and poor, thereby exacerbating inequities in health status and access to adequate food, clean water and other resources.¹³

This project seeks to address the vulnerability of rural communities to climate change in Tanzania. Climate change impacts, such as rainfall variation and decline, higher mean annual temperature and climate-induced hazards (floods and droughts) are likely to exacerbate the prevailing fragility of ecosystems on which these communities rely and livelihoods by compromising ecosystem services and reducing water availability and distribution over the country, thereby leading to increased water scarcity and food insecurity. By implementing local ecosystem-based adaptation responses, combining resilient income generating activities (diversification) and restoring ecosystems, the project will strengthen the capacity of rural communities to face climate change and create a framework for resilient development at the local level.

The **problem** that this project seeks to address is the vulnerability of Tanzanian rural communities to climate change and lack of adaptive capacity to climate change. The project will concentrate mainly on the southern and central plateau of Tanzania, which have been characterized as particularly vulnerable areas, where food insecurity triggered by intense droughts and floods are already prevalent, but where little or no adaptation effort has yet been deployed. Areas of particular concern include Morogoro, Manyara, Dodoma, Ruvuma, Shinyanga and some agricultural areas of Zanzibar. In each region, districts have been selected based on consultations with district authorities, through a survey distributed to local authorities, the selected districts are as follows: Mvomero district (Morogoro region); Simanjiro district (Manyara region); Mpwapwa and Kondoa districts (Dodoma region); Kishapu district (Shinyanga region); Mbinga district (Ruvuma region); and Kijini in Zanzibar North, Tumbatu on Tumbatu Island and the Stone Town in Unguja region of Zanzibar.

¹⁰ This contribution is underestimated because of unrecorded consumption of woodfuels, bee products, catchment and environmental values and other forest products.

¹¹ URT, 2009

¹² Yanda et al. (2006). Climatic and socio-economic influences on malaria and cholera risks in the Lake Victoria Region of Tanzania. *ICIFAI Journal of Environmental Economics (IJEE)* 4 (3): 44-70; United Republic of Tanzania – URT (2009). *Climate Change Impacts Assessment Report - 2009*. Vice President's Office - Division of Environment, Dar es Salaam; Wandiga et al. (2010). Vulnerability to epidemic malaria in the highlands of Lake Victoria basin: the role of climate change/variability, hydrology, health and socio-economic factors. *Climate Change* 99: 473–497 [DOI: 10.1007/s10584-009-9670-7].

¹³ Yanda et al, 2006; Wandiga et al, 2010.

Within each district, local authorities have also suggested a list of potential priority wards and villages for intervention. Together these districts, wards and villages represent a total population of 245,000 potential project beneficiaries.

These regions, districts and wards have been selected based on the fact that little adaptation intervention has taken place in the Southern or Central plateaux, and therefore community needs in these areas are considered urgent. More specific targeting and confirmation of selected wards and villages, as well as estimated number of beneficiaries will take place during the Project Preparation Phase.

The problem of vulnerability and lack of adaptive capacity is also compounded by a number of human-induced **root causes**, which have been listed as follows:

- Extreme poverty in the rural areas has led communities to intensify their encroachment on water catchments for agriculture, which leads to a vicious cycle of degrading/declining water resources and declining productivity.
- Livelihoods remain based on rainfed agriculture, and little efforts have yet been made to diversify livelihoods in rural areas, or to provide irrigation. This highlights their vulnerability particularly in light of potential climate constraints on production in the mid- to long-term.
- Increasing human populations, coupled with changing land uses such as deforestation, agricultural expansion, irrigation of drylands for crops, damming of rivers to create man-made lakes and reservoirs, have put great pressure on Tanzanian ecosystems. The opportunities arising from pursuing sustainable natural resource management strategies have not been tapped yet by local authorities.
- Poor socio-economic and environmental conditions caused by low levels of economic growth, mismanagement of the process of urbanization, and inadequate social services have increased the vulnerability of rural communities, especially groups already highly vulnerable like women.

The **preferred solution** is one where local communities have the capacity to understand their vulnerability, including in terms of economic and ecological aspects, and the capacity to respond in a proactive and reactive manner, including through ecosystem based adaptation approaches that support both the restoration of ecosystem services and the enhancement of livelihoods.

Ecosystem-based Adaptation (EbA) embodies this preferred solution, as it provides a low-cost and effective approach for building long-term adaptation and climate resilience of the communities in the southern and central plateau of Tanzania. EbA approaches reduce climate change vulnerability while providing multiple benefits to society and the environment by protecting, maintaining and rehabilitating ecosystems.¹⁴ Furthermore, EbA contributes to climate change mitigation by reducing emissions of greenhouse gases and contributing to carbon sequestration.

However, the implementation of such an approach faces a number of **barriers**:

- Low adaptive capacity among local communities to implement resilient ecosystem-based livelihoods, due to overdependence on rain-fed grain and livestock, lack of diversification and lack of opportunities for improving productivity at local level in a resilient manner, compounded by increasingly degraded productive ecosystems.

¹⁴ Jones et al. (2012). Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2: 504-509

- Low institutional capacity among local development stakeholders to assess, understand and analyze climate change vulnerability and impacts, and to undertake adaptation planning and risk and disaster management, constitute a key barrier to resilience and adaptation in Tanzania.
- Inadequate integration of climate change adaptation issues into sectoral policies, plans and programmes, leading to low levels of implementation of resilient technologies. This is compounded by low levels of awareness outside of the main circles of government.

In order to address these barriers, the project proposes to work with local government authorities (LGAs), decentralized stakeholders such as the Water Basin Offices, and national authorities to build the adaptive capacities of local communities in the central plains of Tanzania and Zanzibar.

A.1.2. The baseline scenario and any associated baseline projects

The baseline situation in rural Tanzania, particularly in the southern and central plateau and in Zanzibar, where this project will be implemented, is characterized by the following conditions:

- Local traditional coping mechanisms are becoming inadequate in the face of accelerating climate change and increasing variability. In addition, these coping mechanisms often further endanger the ecosystem services on which further resilience would be based. This results in a downward spiral where local communities are forced to overuse natural resources, to encroach upon forests and rangelands, and to migrate in unsustainable patterns in an attempt to derive basic livelihoods.
- Recent major investments in the agriculture and water sectors still do not benefit from or provide clear guidance on responding to climate variability and climate change, at the local level. As a result, major public and private sector investments are being made in the country without any due consideration of the potential impacts of climate, including the increased probability of droughts and floods, on their objectives. This creates a situation where maladaptation is becoming an increasing risk in Tanzania.
- Low levels of technical knowledge, know-how and technology at local level places local populations in an unsustainable position of attempting to produce more with less means, leading to increased levels of poverty. Local producers, who are too poor to be able to take risks and change their land and water use practices, remain engrained in a pattern of unsustainable and unproductive agriculture. Access to markets and public and private sector investment in agriculture and water infrastructure has remained low for many years.

The main projects that are addressing these baseline issues are the Agricultural Sector Development Programme (ASDP) and the Water Sector Development Programme (WSDP), two large government-led initiatives that also bring together local partners and private sector engagement. These two long-term programmes are aimed at providing new impetus, through technical support and investment, in the rural areas, for agricultural production, water mobilization and conservation.

The ASDP (2014-2018).¹⁵ The ASDP has two objectives: (i) to improve farmers' access to and use of agricultural knowledge, technologies, marketing systems and infrastructure, all of which contribute to higher

¹⁵ The present iteration of the ASDP was intended to last from 2005 to 2013. A next iteration of the programme is being prepared, with financial allocations and planning to be confirmed during 2013. The precise make-up of the ASDP programme for the next five years will be assessed during the project preparation phase.

productivity, profitability and farm incomes; and (ii) to promote private investment based on an improved regulatory and policy environment. The ASDP has two components, one local and one national. The local component supports agricultural sector activities at the village, ward and district levels. This is achieved through: (i) priority given to local agricultural investments made in accordance with district agricultural development plans on a cost-sharing basis, with beneficiaries contributing labour and locally available materials; (ii) a shift to contracting of agricultural services and greater control of resource allocation decisions by farmers; and (iii) the building of district planning capacity, agricultural reforms, farmers' empowerment and the development of private-sector service provision.

At the national level, the ASDP assists the agricultural sector lead ministries in implementing the policy and institutional reforms envisioned in the Agricultural Sector Development Strategy and to provide an enabling environment for commercial activity in the sector. This involves support to: (i) agricultural services, primarily research and extension; (ii) irrigation development; (iii) market and private-sector development; (iv) food security; and (v) coordination, monitoring and evaluation.

An innovative feature of the ASDP is that all funding for agricultural development (both external and domestic) has been brought together under a single sector programme and expenditure framework, owned and led by the Government, with development partners progressively aligning and harmonizing their procedures with country systems. The ASDP is funded by national budgets, as well as donors such as World Bank, IFAD, AFDB, and bilateral development partners. In 2013, the total funding for ASDP was estimated at 286 million US\$.

Current and upcoming ASDP activities in each selected district vary to some extent, as they are based on local demand and local plans, but are framed within a set of guidelines based on the overarching objective, which is mainly to improve agricultural productivity. A survey was conducted in each district asking for the list of activities already implemented or to be implemented under the ASDP. Table 1 shows at a quick glance of what activities are done in each district, based on summarized categories. Priorities may vary from one district to another, but in general, ASDP-supported activities can be grouped in 10 categories, as below:

1. Construction, rehabilitation and installation of irrigation schemes: construction or rehabilitation of irrigation intakes, headworks, lining canals, installation of hydraulic structures, charcoal dams, drip irrigation, reservoir dams; development of irrigation; establishment of block farms by using drip irrigation.
2. Construction, rehabilitation and stabilization of agricultural market places: construction or rehabilitation of warehouses, markets, slaughter slabs, abattoirs, crop storage structures, grain banks, feeder roads.
3. Improvement of cropping practices: increase of crop production; purchase of tractors, threshing machines, power tillers; management of plantations (e.g. cashew); procurement of modern farming implements; control of pests and insects; distribution of pesticides; facilitation of participatory crop research.
4. Facilitation of access to Quality Declared Seeds (QDS): seed distribution, multiplication (e.g. sorghum, coffee, beans, sunflower).
5. Procurement of value adding equipment and infrastructure: purchase and installation of pulping units, grain processing machines, cultivators and sorghum shelling machines; facilitation of technology transfer and quality control on hides and skins; establishment of processing plants; improvement of post-harvest practices in agro processing and proper crops marketing.
6. Improvement of livestock breeds and husbandry: increase of animal products production (milk, egg, cattle); decrease of livestock deaths; facilitation of genetic improvement; insemination of indigenous cattle and poultry using AI or breeding bulls; purchase of Heifers; construction of dip tanks, poultry houses, shade shelters; improvement of cow, bull, dairy goats and chicken breeds;

vaccination of animals against diseases; access to new technologies; construction of veterinary centers.

7. Facilitation of training and capacity-building : improvement of knowledge and skills of staff; facilitation of training to farmers and livestock keepers; strengthening of Water User Association (WUA); training for farmers on conservation agriculture; training on improved agricultural practices; establishment of Farmers and Livestock Field Schools; training of irrigators to practice their farming according to the National Comprehensive Irrigation Development guideline; establishment of agriculture and marketing cooperative societies (AMCOS); empowerment of agriculture projects implementation committees.
8. Diversification of local economies: promotion of bee keeping; fish farming and sustainable fisheries.
9. Promotion of sustainable environmental management: tree planting; soil and water conservation.
10. ASDP support services and extension services: facilitation of agriculture service delivery; monitoring and evaluation of projects; facilitation of budget preparation; purchase of motorcycles; improvement of working environment by ensuring housing, transport facilities, fuel and working gears and tools to field staff; construction or rehabilitation of ward resource centers (WARC); maintenance services to vehicles; implementation of Agriculture Routine Data System (ARDS); facilitation of participation to agricultural shows.

In Zanzibar both programmes run under a different name in this region Zanzibar Agricultural Transformation for Sustainable Development and the Zanzibar Water Authority Strategic Plan. However, the main activities are the same, therefore they are categorized in the table below.

As per the survey, the following activities are being conducted as follows in each district:

Table 1: Current and upcoming ASDP activities in each district

Activities	Mvomero	Mbinga	Kondoa	Mpwapwa	Kishapu	Simanjiro	Unguja, Tumbatu & Zanzibar North
1. Construct, rehabilitate and install irrigation schemes	X	X	X	X	X	X	X
2. Construct, rehabilitate and secure agricultural market places	X	X	X	X	X	X	X
3. Improve cropping practices	X		X	X		X	
4. Facilitate access to QDS	X	X	X	X		X	X
5. Procure value adding equipment and infrastructure		X	X	X	X	X	X
6. Improve livestock breeds and husbandary	X	X	X	X		X	X
7. Provide training and facilitate capacity-building	X		X	X	X	X	X
8. Diversify local economies			X	X			
9. Promote sustainable environmental management			X	X			
10. ASDP Support services and extension services	X	X	X	X	X	X	X

This program remains vulnerable to climate change impacts such as droughts, delayed rainfall and extreme flooding when rainfall occurs after long periods of drought. The program does not yet systematically assess local vulnerabilities and propose climate-resilient alternatives for agricultural development, production, or intensification. While it provides the basic investments through which rural communities can access productive assets, it does not consider the possible impacts of erratic rainfall, increased variability and extremes on its objectives. Furthermore, the ASDP does not consider systematically the role of ecosystems in the production of productive and protective services under a climate change scenario. Activities that build resilience, such as diversification and environmental management are infrequent, and conducted in an ad hoc manner (see table 1 above). Hence while it does sometimes promote the sustainable use of natural resources (through improvement of cropping and livestock practices), it does so only in a productivity perspective. A summary of the impacts of climate change to the baseline projects and the proposed adaptation measures can be found Annex A.

The WSDP (2005-2025). The Water Sector Development Programme is a framework plan by the Tanzanian government that seeks to address the multiple water-related challenges, from mobilization to treatment, sanitation, conservation and management, and including the management of water-related hazards. The WSDP promotes a Sector Wide approach (SWAp) to address shortfalls in urban and rural water supply infrastructure, to improve water resource management primarily through upgrading the country's nine Basin Water Offices (BWOs), and to strengthen the sector institutions and their capacities. It is further divided into three strategic objectives or sub-programs, including: water resources management, Rural Water Supply and Sanitation Services Provision, and Urban Water Supply and Sewerage. The total investment cost foreseen for the period under the WSDP is \$ 44.59 million.

In each district, the main WSDP activities are related to the improvement of water infrastructure:

- In Mvomero, the WSDP supports the construction, rehabilitation and expansion of pumped and gravity water schemes.
- In Mbinga, WSDP supports the construction, rehabilitation, supervision, monitoring and audit of water projects. This includes training communities, organizations and staff, and procurement of water facilities in department/office.
- In Kondoa, WSDP supports the construction, rehabilitation or expansion of water schemes infrastructure. This will include provision of consultancy service for rural water supply and sanitation projects while sensitizing community by the promotion of sanitation, hygiene and health.
- In Mpwapwa, WSDP will support the construction of water supply projects, such as boreholes, wells.
- In Kishapu, the program will support construction and rehabilitation of pumped and piped water schemes and also rehabilitate and install handpumps to deepwells and shallow wells.
- In Simanjiro, WSDP will drill boreholes and distribute water in villages.
- In Zanzibar, the program will support the establishment of water meters; the identification/development of new water sources; the extension and replacement of pipelines, worn pumps and electrical fittings; and the protection of water sources in urban areas.

The implementation of the WSDP currently depends on a business-as-usual water balance scenario. The WSDP planned investments do not currently take into consideration the possible impacts of climate change. These increased incidences of climate change hazards including increased temperatures, drought, delayed onset of the rainy season and flooding are expected to place more pressure on water resources and water availability. While it promotes the mobilization, conservation and management of water resources in an agricultural productivity context, the WSDP does not yet include climate risk management in its proposed approaches. As a result, the Water Basin authorities, as well as local water users, are not well equipped for

making decisions under a climate change scenario. A summary of the impacts of climate change to baseline projects and the adaptation measures proposed by the project is presented in a summary table in Annex A.

These two programs provide a framework for addressing the baseline issues affecting rural communities. However, neither of the two programs currently includes provisions to deal with climate change, and neither of the two is based on an analysis of current and future climate risks. Additional investment is therefore necessary to ensure that local communities implement the ASDP and WSDP in a climate resilient manner.

In addition to the two programs, the project will also benefit from a UNEP- led preparatory project for **Using Ecosystem-based Adaptation for Food Security in agriculture-dominated landscapes in Africa (EbAFoS)** which focuses on building ecological resilience of food systems and enhancing food security through ecosystem-based adaptation approaches in countries in Sub-Saharan Africa. The project will contribute parallel co-financing of US\$ 600,000 to the proposed LDCF project. One of the main activities of the project includes bridging the gap between science and policy that currently exists by gathering evidence from the demonstration of EbA approaches to ensure food security. This evidence can be applied to the proposed livelihood interventions proposed in this project.

A.1.3. The proposed alternative scenario, with a brief description of expected outcomes and components of the project

In alignment with priority activities identified in the Tanzania NAPA of 2007 and in its Climate Change Strategy, the proposed LDCF project will seek to increase the resilience of livelihoods and ecosystems in the southern and central plateaux of Mainland Tanzania and in Zanzibar. This will be achieved by complementing the WSDP and the ASDP in the project sites. The project will demonstrate best available technologies for climate resilient agricultural production, including diversification strategies to reduce local vulnerability, while working with local government authorities to strengthen their forward planning capacity. This will be achieved through the following components and activities:

Component 1 – Capacity to adapt to climate change.

This component will provide targeted capacity building among LGAs and decentralized natural resources managers to better understand, analyse and determine their own climate vulnerability. The project will seek to achieve one Outcome under this component: “Outcome 1 - Enhanced stakeholders’ capacity to advance adaptation to climate change impacts and undertake resilience building responses”. The component focuses on local government authorities as institutions that have not yet been the object of any strengthening with regards to adaptation, but that figure at the forefront of local efforts to achieve sustainable and resilient development. As institutions at the front line of implementation of the ASDP and the WSDP, LGAs and Water Basin Authorities are uniquely placed to advance efforts towards ecosystem-based adaptation. This Outcome will be achieved mainly by providing training on vulnerability and impact assessment for LGAs, as well as some targeted policy support for the identification and integration of adaptation measures. This will be supported by institutional processes at national and local level, including the creation of a multi-sectoral national committee to facilitate cross cutting national dialogue on climate change adaptation. A description of the adaptation scenario funded by LDCF resources is presented in Section A.1.4. Indicative activities to be supported under this component will include:

- Setting up of a national committee within the government to facilitate dialogue on climate change adaptation.
- Training on climate change vulnerability assessment, adaptation planning and risk and Disaster Management in vulnerable sectors.
- Review of key sectoral policies, plans, strategies and programmes to integrate climate change adaptation, risk and disaster management issues.

- Development of guidelines and operational manuals for local government authorities, rural communities and policy makers on appropriate ecosystem-based adaptation approaches and techniques.
- Sharing of the lessons learnt and best practices to policy makers, partners and the public.
- Revisions to existing adaptation plans for local government authorities, including a sustainable financial strategy and mainstreaming entry points.

Component 2 – Implementation of EbA measures for rural resilience.

This component will seek the implementation, demonstration and dissemination of best ecosystem-based adaptation practices in the agricultural sector for leveraging short and long-term resilience. Activities under this component are targeted towards the achievement of one outcome, “Outcome 2 – Reduced vulnerability in four vulnerable rural districts of the central Plateau and Zanzibar through demonstration of EbA approaches.” As a first step under this component, local authorities and planners will be empowered to perform their own impact and vulnerability assessment, in order to better assess local climate risks, including the risks of floods and droughts, and their physical and economic impacts. This will be conducted using the PROVIA guidelines, toolkits and methodologies co-developed by UNEP, in a participatory manner, so as to strengthen local understanding of risks, vulnerabilities and adaptation options. Tools for local-decision making will be developed, such as risk maps and economic risk assessments. The project will also develop a local diagnostic of ecosystem services affected by climate change and contributing to adaptation and resilience, using recognized methodologies such as the ToolKit for Measuring Ecosystem Services developed by UNEP-World Conservation Monitoring Center.¹⁶

The project will then support a set of actions designed to rehabilitate and restore degraded ecosystems that provide the basis for livelihoods. This will include measures to rehabilitate productive functions of agricultural lands and rangelands, such as moisture retention, flood control, nutrient cycling and soil fertility. This will be associated with activities designed to promote the most resilient practices for agriculture, land use, water management and livelihoods, including some diversification measures to ensure local capacity to resist climate shocks, based on best available ecosystem-based adaptation technologies, as well as on lessons from currently implemented income generating activities in the context of the ASDP. Training in resilient agricultural practices will be provided at local level to support investments into natural resources. A description of the adaptation scenario funded by LDCF resources is presented in Section A.1.4. Indicative activities to be supported by the LDCF under this component include:

- Undertake climate change vulnerability impact assessments (assisted by guidelines for VIA under PROVIA) and identify recommended adaptation actions using participatory vulnerability assessment tools.
- Develop a diagnostic of climate-change affected and resilience-building ecosystem services, based on recognized methodologies for measuring ecosystem services such as the UNEP-WCMC ToolKit.
- Establish a map of drought, flood, pest and diseases risk zones in selected regions (baseline and based on a climate change scenario).
- Assess the physical and socio-economic impacts of climate change on selected regions.
- Restore ecosystems in selected sites to increase water infiltration and agricultural production in order to make them more resilient to a changing climate (e.g. rangeland rehabilitation, reforestation, watershed rehabilitation, land reclamation, conservation/fallow, and riverbank rehabilitation).
- Institute locally-driven community-based systems and practices for continued sustainable use of ecosystem services and commons.
- Introduce locally designed alternative livelihoods and income-generating activities that are climate resilient and diversified for vulnerable groups, particularly women, such as e.g. apiculture, ecotour-

¹⁶ <http://www.unep-wcmc.org/medialibrary/2011/10/26/9688cf08/MeasuringMonitoringEcosystemServicesattheSiteScale.pdf>

ism, crafts, natural products transformation and value-added services, silvo-pastoral/agro-silvo-pastoral practices. The selection of activities in each ward/village would be based on participatory processes led by district administrations during the PPG phase.

- Provide training and support to LGAs, extension services and key producer groups on climate resilient livelihoods.

Component 3 - Knowledge management on climate change adaptation and up-scaling.

This component comprises one outcome, Outcome 3: “ Strengthened information base, up-scaling and knowledge on climate change adaptation are readily available for various uses.” Under this component, the project will seek to devise innovative ways in which lessons learned can be up-scaled and widely disseminated. This will including the development and implementation of a comprehensive awareness raising program, and an up-scaling strategy. A description of the adaptation scenario funded by LDCF resources is presented in Section A.1.4. Indicative activities to be supported under this component include:

- Develop and implement a comprehensive climate change adaptation awareness programme.
- Collect and document information related to lessons learnt and best practices EbA approaches from pilot activities.
- To prepare a comprehensive knowledge management plan
- Preparation of various materials (radio and TV programmes, popular versions, etc) for disseminating lessons learnt and best practices in various events.
- Develop an up-scaling strategy using lessons learned through project implementation.
- Establish a project dedicated web-site and link it to the relevant national and regional global networks.

In addition, a summary of the climate change impacts on these baseline projects and the adaptation measures proposed by the project are provided in a table in Annex A.

A.1.4. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing.

The incremental and additional benefits to be generated by this project are as follows:

Component 1 – Capacity to adapt to climate change.

Under the *business as usual scenario*, adaptation issues are treated separately from the mainstream of policy and program decisions in the country, whether at national or local level. There is currently no forum where adaptation issues can be actively debated, and where adaptation policy can be discussed in a multi-sectoral manner at national level, leading to multiplication of initiatives. Second, while some progress has been made in order to integrate climate change issues into planning at the national level, this progress has not yet reached the local level, where the most crucial decisions are being made regarding natural resource use, land use planning and poverty reduction. Local authorities lack the knowledge, methods, know-how and capacity to understand local vulnerability, to plan for adaptation and to assess the need for climate-risk and disaster-risk management. In addition, whereas some policies have been updated to integrate climate change, other crucial policies, regulations and norms have not benefited from appropriate attention in this regard.

Therefore, without this project, programs such as the ASDP or the WSDP, that channel significant amounts of investments to local land users, will continue to be designed and implemented without due consideration of climate change, which could ultimately lead to maladaptation in rural areas. Co-financing activities for this component represent an estimated \$660,000.

Adaptation Alternative: The LDCF funds (US \$ 780,000) will be used to identify entry points for adaptation in key policy and program frameworks, as well as provide training on climate risk management, climate disaster management and adaptation for local government authorities, who have to date yet to benefit from any adaptation related knowledge-transfer. This will include stocktaking of policy progress and the establishment of a multi-sectorial dialogue at national level, on adaptation issues, to further enhance national capacity to integrate and address climate change issues into development. In addition, LDCF funds will be used to supplement the ASDP and WSDP by providing training to LGAs on vulnerability assessments, adaptation planning and risk and Disaster Management.

Component 2 – Implementation of EbA measures for rural resilience.

Under a *business as usual scenario*, investments in the agriculture sector will continue without any due consideration of climate change and ecosystems will continue to degrade due to combined human and climate pressures. Large scale initiatives such as the ASDP and WSDP, that provide technical and investment support to local communities for increasing agricultural productivity, will continue to do so without giving due consideration to climate risks, leading to potential maladaptation at local level. These investment frameworks are conceived according to a climate-as-usual business model, and target the technical barriers to productivity only, meaning that they will address access to market issues, post-harvest losses, roads and water infrastructure, along with technical support in traditional agricultural practices. Neither of these two programs consider the state or value of ecosystem services, and neither foresee the rehabilitation of ecosystems to support agricultural productivity or resilience in the longer term. As a result, water and agricultural development may not be sustainable and may also not be resilient, if communities are not equipped to deal with increased climate shocks and variability. In addition, local authorities lack the appropriate scientific knowledge to guide such large-scale investments, including knowledge of local aspects of vulnerability or productivity assets, climate and climate extreme risks, and the economic impacts of climate change in their respective areas of jurisdiction. Co-financing under this component represents an estimated \$19.9 million.

Under the *adaptation alternative*, with LDCF support (US \$5,955,085), the project will supplement the ASDP and WSDP by supporting investments into innovative ecosystem-based adaptation measures, which include for example rangeland rehabilitation, reforestation, watershed rehabilitation, land reclamation, conservation/fallow and riverbank rehabilitation. In addition the project will support climate resilient agricultural and water management practices, including agro-forestry, crop-livestock systems, alternative climate resilient crops and cropping methods, and better land and water conservation and mobilization practices. These methods will ensure that natural resource use is undertaken with a perspective of increasing scarcity in the face of a changing climate, in particular for water. Conservation of water and land will ensure that productivity can remain stable even in cases of prolonged droughts. In addition, alternative cropping systems such as agro-forestry, crop-livestock integration and other technologies will help increase productivity while avoiding expansion or undue intensification, limiting damage to the environment while allowing for increased income for producers. This will allow communities to be more resilient to and resist climate shocks. Investments into ecosystem rehabilitation will help restore the crucial ecosystem services that are at the basis of all rural economies, including nutrient cycling, erosion control, retention of soil moisture, and agro-biological diversity, without which rural livelihoods would not be possible. These investments will be guided by a science-based analysis of ecosystem services and by participatory vulnerability assessment exercises that will help ensure local buy-in, the early adoption of best EbA technologies, and locally appropriate solutions.

This will also be supplemented by support to local communities for diversification in and outside of agriculture, to reduce their dependency on climate-sensitive agriculture and improve their resistance to climate-induced shocks and variability. Support will be channeled to vulnerable groups based on a participatory opportunity identification process that will assist districts to guide local groups to identify best suited diversi-

fied opportunities. To support these investments and to ensure their long-term uptake by all stakeholders, the LDCF project will also provide training for extension workers and LGAs and the development of guidelines and operational manuals for local government authorities, rural communities and policy makers on appropriate ecosystem restoration techniques. Adaptation plans will be developed or revised at local level so as to ensure sustainability of actions and long-term financial planning.

Component 3 - Knowledge management on climate change adaptation and up-scaling.

Under the *business as usual scenario*, Tanzania would continue to implement small scale pilot adaptation initiatives without being able to generate the critical mass of policy and behavioural change required to truly leverage resilience throughout the country. To date, there have been no comprehensive efforts to gather knowledge and lessons from the few adaptation initiatives or to significantly raise the awareness of the general public, particularly in remote rural areas, of adaptation. The co-financing leveraged under this component represents an estimated \$190,000.

Under the *adaptation alternative*, LDCF will contribute additional resources (US \$480,000) to facilitate an up-scaling and replication strategy so that the Tanzanian government and agriculture practitioners can build on project achievements to leverage continued progress across the country. Under the business as usual scenario, project results would not likely to be continued after the project funding ends, and the country would not be able to identify the most appropriate pathways for generating transformational activity in the rural areas, where people continue to be most vulnerable. With LDCF funding, the project will develop and implement a comprehensive adaptation awareness raising programme, which will include the development of targeted messages for all groups of society and all decision makers. In addition, the project will also facilitate the development of project lessons and briefs on project achievements, towards the development of a replication and up-scaling strategy, including the exploration of continued funding avenues at national and international levels, for continued sustainability and momentum.

A.1.5 Adaptation benefits (LDCF/SCCF)

The project will generate many adaptation benefits. At local level, the project is expected to support the rehabilitation of ecosystems that ensure livelihoods and provide services that enhance the resilience to climate change. This will lead to the generation of Global Environmental Benefits including the conservation of biodiversity, land conservation and soil fertility maintenance, as well as better water management and conservation. By vegetating some areas and promoting reforestation activities, the project is also expected to generate some benefits in terms of carbon sequestration and reduced emissions. From an adaptation perspective, the restored ecosystem functions will support increased agricultural productivity, which will in turn lead to increased income and nutrition among rural communities, leading to reduced vulnerability. Diversification is also expected to lead to increased income, and training on climate risk management is expected to lead to the increase in capacity to anticipate and react to climate shocks, all of which are factors of reduced vulnerability.

At national level, the project is expected to lead to increased institutional capacity to understand, and address climate change and adaptation issues. By providing training at local and national level, and by supporting awareness raising on climate change issues, the project is expected to support the gradual changes in policy-making that are necessary to better integrate climate change into policies.

A.1.6 Innovativeness, sustainability and potential for scaling up

The project seeks to demonstrate how ecosystem-based adaptation can help support resilient agriculture at the local level. Its innovativeness lies in the fact that the project intervenes at the nexus of rural

sustainability and resilience, by helping strengthen ecosystems as a basis for continued local development. Until now, in Tanzania, agricultural development programs have all taken a starting point of productivity, without considering the ecosystem-driven basis of such productivity. This project innovates in that it provides local communities with the tools and empowerment to achieve increased productivity through ecosystem-based adaptation approaches. The mix of science-based and locally driven approaches used for determining locally specific solutions will also provide an innovation in the way such programs are done, by introducing a continuous feedback loop.

In addition, the project will work directly with local government authorities and rural communities, whereas previous projects were focused on national-level stakeholders and pilot activities. This project has a high level of potential for scaling up and will seek to demonstrate practices that can be used throughout the country, by leveraging increased socio-economic benefits at local level and policy change at national level. Scaling up will be ensured through Component 3.

Sustainability in the project relies on its ability to leverage national investments and policies that are central to the Tanzanian poverty reduction and growth. In addition to demonstrating socio-economic gains at local level, the project will create the conditions for sustainability by creating capacity at the institutional level locally, so that local planners and decision makers are also better equipped to guide communities upon a more resilient development pathway.

A.2. Stakeholders

The project will use a thorough participatory approach with stakeholder participation and validation for all major activities. Stakeholder consultations around proposed activities will mobilise local communities, initiate discussions and promote buy-in. Consultations at national level will include ministries, NGOs, international partners and, where relevant, the private sector and the media. Consultations at local level will include municipal and district authorities (LGAs), councils and traditional authorities and leaders. Key ministries involved in this project will include the Ministry of Agriculture and Food Security, and the Ministry of Water, along with the Prime Minister's Office Directorate of Local Government (PMO-RALG). The project's executing partner will be the Vice President's Office, Division of Environment, which coordinates adaptation issues in the country. Additional assistance and participation will be sought from the National Environmental Management Council (NEMC), which will participate actively in Components 1 and 3.

Key stakeholders in this project include the following:

- Rural communities who are the intended beneficiaries of the project's investments, and who will be the primary target for awareness raising, ecosystem rehabilitation, and agricultural and water investments. Rural communities will be actively engaged throughout the project design and implementation. Furthermore, they will provide traditional/indigenous knowledge as relevant to this project, and will have a key role in determining the alternative livelihoods strategies and adaptation measures to be implemented in their areas. Among these groups, women's groups and women-headed households will also be specifically targeted for additional support. Gender-disaggregated indicators will be developed for all activities during project preparation.
- Local associations, community-based organizations and NGOs, who will be called upon to participate in training and in the environmental rehabilitation components of the project.
- Private sector at local level, including smallholder producers and other small enterprises who will benefit from training and support for diversification.
- Local Government Authorities (LGAs) who will be the primary interlocutors and beneficiaries of training and capacity-building at institutional level.
- Sectoral ministries, in particular the Ministry of Agriculture and Food Security and the Ministry of

Water, who will be called upon for partnership and with whom close coordination will be sought as part of this project's links to the ASDP and WSDP.

- Central Agencies, in particular the Prime Minister's Office –Regional Administration and Local Government and Disaster Management Departments, and the Vice-President's Office – Division of Environment, who coordinates the policy issues related to adaptation and climate change.

A.3 Risks

Risk	Level	Mitigation Strategy
Environmental risks due to both the natural vulnerability and to climate change, could impact the project and the communities within the project sites	Medium	There is a risk that flooding or droughts could delay some of the project activities. However, this project is expected to benefit from progress under the Early Warning Systems Project that is beginning implementation. To the extent possible, this project will link with the Tanzania Meteorological Agency in order to benefit from up to date climate information. In addition, the project will link with ongoing efforts to beef up the disaster management context in Tanzania.
Operational risks , due to limited government capacity at local level, could impact project delivery.	Medium	The project will benefit from support from central ministries and agencies including the PMO-RALG, VPO and the Water Basin Authorities that can help support LGAs in their participation in this project. The project will provide targeted and tailored capacity-building for LGAs throughout the project.
Operational Risks , due to the potential resistance of local stakeholders to some of the proposed alternative production technologies and alternative livelihoods	Low	The project will work with local communities to develop and design alternative land use, water use and agricultural production techniques that are adapted to local needs, increase productivity. The participatory approach taken by this project will ensure that stakeholders are aware of the risks and benefits of all project interventions. Increased productivity and local benefits will serve as demonstrations of potential economic benefit of implementing resilient agriculture.
Operational Risks , due to the lack of capacity of local stakeholders to undertake the environmental rehabilitation and restoration activities.	Low	The project will mitigate this risk by working with local associations and NGOs for the completion of the restoration works, with support from the VPO-DOE and other environmental partners. Adequate budgets will be provided to complete environmental impact assessments and feasibility studies to ensure the works are undertaken in accordance with latest standards.
Political risks , due to a potential change in government at local, district, regional or national level.	Low	Elections are due in Tanzania in 2015, however, the country has a stable administration and structures, and local systems are in place to prevent any disruptions of work during and after electoral periods. The project works in sectors that have remained high priorities for the country for many years, regardless of the governmental situation.

A.4. Coordination

This project will link with a number of ongoing initiatives that are supported by GEF and other partners, chief among those will be the ongoing investments planned under ASDP and WSDP, and to which various donors are participating under the basket-funding modalities. The project will also link with ongoing and planned GEF initiatives, including the following projects:

- **Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones of Tanzania** (LDCF-UNEP): This project seeks to implement urgent and immediate adaptation measures in the coastal areas of Pangani and Rufiji, in response to sea level rise, the infiltration of salt water in coastal aquifers, and erratic rainfall. The project includes ecosystem-based interventions such as the rehabilitation of mangroves and infrastructure measures such as the rehabilitation of coastal defences. The project is coordinated through the VPO-DOE. (UNEP-GEF, \$3 million)
- **Implementation of Concrete Adaptation measures to reduce vulnerability of livelihoods and economy of coastal communities of Tanzania:** The objective of the project is to reduce vulnerability of ecosystems, infrastructure and economy in Tanzania through implementation of concrete and urgent adaptation measures. This project responds to the impacts of sea level rise and changes in precipitation patterns caused by climate change and their direct and indirect effects, such as droughts, floods, infrastructure degradation and environmental degradation. This project is also coordinated through the VPO-DOE. (AF-UNEP, \$5 million)
- **Strengthening Climate Information and Early Warning Systems in Tanzania to Support Climate Resilient Development and Adaptation to Climate Change:** this project works to develop the infrastructure and capacity of the national hydro-meteorological system in Tanzania, mainly through the Tanzania meteorological Agency and the Water Basin Authorities, to monitor, anticipate and analyse climate information in support of Early Warning and long-term development planning. The project has been approved by the LDCF in 2013, and is expected to begin implementation in 2014. (UNDP-GEF, \$ 4 million)
- **SFM: Sustainable Management of the Miombo Woodland Resources of Western Tanzania** (GEF-UNDP). This project addresses a number of challenges including the degradation of Miombo woodlands which is well recorded in the moist west of Tanzania. While the project focuses on 28 villages in 4 districts in the regions of Tabora and Katavi, the lessons learned will contribute to improving the sustainability of Miombo woodlands. (UNDP-GEF, \$2.75 million)

Concrete linkages with these and other ongoing initiatives will be identified through the coordination of the Vice-President's Office, who is in charge of climate change issues in the country, during the project preparation phase.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.:

This project is a direct contribution to the Tanzanian NAPA (2007) and its follow-up, the National Climate Change Strategy (2013). The project implements priorities 1, 2, 4, 5, 6, 7 and 8 of the NAPA under the Agriculture and Food Security theme, as well as priority 1 under the Forestry theme, and priority 4 under the Human Settlements theme. Thus, the project contributes to several of the 14 most urgent priorities listed in

the NAPA (i, ii, iii, iv, vii, ix, xii, xiii, xiv). The project will also benefit NAPA priority project 1, which proposes use of drought tolerant food crops in drought prone areas, and NAPA priority project 2 which ensures sustainable utilization of water in the drought-stricken areas of the country

Besides, the project also directly contributes to the implementation of the Climate Change Strategy of 2012 whose objectives are:

- a) To build the capacity of Tanzania to adapt to climate change impacts.
- b) To enhance resilience of ecosystems to the challenges posed by climate change.
- c) To enable accessibility and utilization of the available climate change opportunities through implementation.
- d) To enhance participation in climate change mitigation activities that lead to sustainable development.
- e) To enhance public awareness on climate change.
- f) To enhance information management on climate change.
- g) To put in place a better institutional arrangement to adequately address climate change.
- h) To mobilize resources including finance to adequately address climate change.

The project will also indirectly contribute to the implementation of priorities under the CBD and the UNCCD, by promoting sustainable land use, and conservation and sustainable use of rural biodiversity in an agricultural context.

The project is in line with national policies and legislation, including in particular:

- The national Strategy for poverty reduction and economic growth (MKUKUTA II), of 2010, which identifies agriculture as a growth driver, and identifies the lack of incentives for sustainable environmental governance at the local level as a potential obstacle to achieving growth. The Strategy aims at enhancing efficient use of the factors of production (including water resources, mineral deposits, and other natural resources such as wildlife, fishery, and forestry). The Strategy also emphasizes the need for “Ensuring food and nutrition security, environmental sustainability and climate change adaptation and mitigation”.
- The Agriculture Sector Development Strategy identifies among the major constraints to agriculture the erosion of natural resources, inappropriate technology, over dependence on rain-fed agriculture, environmental degradation in cultivated areas and rangelands. The Strategy, which is the framework in which the ASDP is being implemented, aims at reducing the proportion of rural poor and food poor in rural areas throughout the country. The objective of the Agricultural Sector Development Strategy (ASDS) is to achieve a sustained agricultural growth rate of 5 percent per annum primarily through the transformation from subsistence to commercial agriculture.
- The Water Sector Development Strategy and policy, whose main objective is to increase sustainable availability of water in all regions, through a combination of mobilization, conservation and management. The Water Sector Development Strategy also provides the overarching framework for operation of the Water Basin Authorities.
- The decentralization policy, which provides gradually increased devolution of power to local government authorities for undertaking regular development planning and coordination activities, along with resources and budgets.

B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:

The proposed LDCF project has been developed using the Updated Results-Based Management Framework for the Least Developed Countries Fund (LDCF) and Adaptation Monitoring and Assessment Tool (GEF/LDCF.SCCF.9/Inf.4 October 20, 2010). By building local capacity to undertake resilient agriculture and natural resource use, it meets the following objectives for adaptation:

- **CCA 1 and CCA 2:** “Reducing vulnerability: reduce vulnerability to the adverse impacts of climate change including variability, at local, national, regional and global level”, and “Increasing Adaptive Capacity”.

Under Component 1, the project will improve stakeholders’ capacity to adapt to climate change impacts and undertake resilience building responses by providing support to coordination at all levels, training for local government authorities, as well as policy tools for updating and revising relevant policy and planning instruments (CCA-2). Under Component 2, the project will reduce vulnerability of local communities in the southern and central plateau to climate change impacts by promoting resilient agriculture and the restoration of degraded productive ecosystems (CCA-1). This will be accompanied by measures designed to build the scientific and technical capacity of local stakeholders to understand local vulnerability (CCA-2).

The project meets the eligibility criteria and programming priorities of the LDCF: it fits with the strategic objective of the LDCF to “meet the urgent and immediate adaptation needs of the Least Developed Countries, as identified in their NAPAs” (Decision 7/CP.7), by focusing on extremely vulnerable communities and priorities identified in Tanzania’s NAPA and National Climate Change Strategy of 2012. The proposed LDCF project will use LDCF resources to finance the additional costs needed for increasing the climate change resilience of local community livelihoods. The proposed LDCF project has been designed specifically to meet the urgent and immediate adaptation needs of Tanzania’s vulnerable local communities in the southern and central plateau, as identified in the 2007 NAPA and the 2012 Climate Change Strategy. The proposed project is entirely country-driven and coordinated with a number of GEF and non-GEF initiatives in the country (see Section A4). In line with the LDCF guidelines, the project has been developed and will be implemented using the following approaches: i) participatory (communities and relevant stakeholders); ii) learning-by-doing; iii) multi-disciplinary; iv) complementary; and v) gender sensitive. It will take a two-pronged approach for building the climate change resilience and adaptive capacity of on-going government investments in vulnerable areas/communities.

B.3 The GEF Agency’s comparative advantage for implementing this project:

UNEP’s considerable experience in implementing 90 adaptation-related projects including SCCF, LDCF and AF projects throughout Africa and Asia-Pacific provide experience upon which the agency will draw during the implementation of the LDCF project. Furthermore, UNEP has a proven international and national record for its strong technical and scientific background in the field of climate change, and as such is an appropriate agency for providing EbA capacity-building and implementation support within Tanzania. UNEP’s experience in community-based projects, natural resource management and support for the development of national environmental policy is well recognized in Africa.

UNEP’s Flagship Programme: ecosystem-based adaptation represents a ground-breaking shift in focus in the realm of climate change adaptation, which has been commended by the Conference of the Parties to the UNFCCC (CoP). The EbA approach is multidisciplinary in nature, and involves managing ecosystems to build their resilience, and use ecosystem services to promote climate change adaptation and disaster risk management. This approach has been endorsed by IUCN and the EC, and provides a platform for engaging a broad range of stakeholders and sectors in the adaptation process. This approach, furthermore, has recently

been endorsed by GEF through the Operational Guidelines on “Ecosystem-Based Approaches to Adaptation” GEF/LDCF.SCCF.13/Inf.06 October 16, 2012.

UNEP’s comparative advantage stems from its mandate to coordinate UN activities with regard to the environment, its ability to engage with different stakeholders to develop innovative solutions and its capacity to transform these into policy- and implementation-relevant tools. UNEP’s comparative advantages in the GEF are aligned with its mandate, functions and Medium Term Strategy and its biennial Programme of Work (2014-2015).

The proposed project is consistent with the Ecosystem management and Climate Change thematic priorities expressed in UNEP’s Medium Term Strategy. The proposed project is consistent with the expected UNEP accomplishment to support improved land use, reduced deforestation and reduced land degradation, increased adaptation, and to support country policymakers and negotiators, civil society and the private sector in their access to relevant climate change science and information for decision-making. This proposed project is in line with UNEP’s role in the GEF to catalyze the development of scientific and technical analysis and advancing environmental management in GEF-financed activities.

UNEP has a very strong relationship with the Tanzanian government and has been very active in the country including through GEF and Adaptation Fund support. In developing and implementing the NAPA and National Communications with Tanzania, UNEP has fostered positive working relationships with national teams and various stakeholders. UNEP has experience in implementing similar projects in Tanzania, including at local level. UNEP has a country officer based in Tanzania who can provide crucial support during project preparation and implementation, in addition to the Regional Office for Africa, who can also provide targeted expertise and management support. In addition, UNEP participates actively in national donor coordination forums, through the one –UN venues.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OPF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
DR J. K NINGU	GEF OPF	VICE PRESIDENT’ OFFICE	01/23/2014

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Brennan VanDyke, Director, GEF Coordination Office, UNEP		June 10, 2014	Ermira Fida, Head, UNEP-GEF Adaptation Portfolio	Tel: (254-20) 76 23113	Email: ermira.fida@unep.org

Annex A. Adaptation benefits of the proposed LDCF Project

Baseline projects goals and activities	Climate change hazards affecting the project area	Impacts to the baseline projects and targeted populations as a result of climate change	Adaptation measures supported by the LDCF project	How the proposed LDCF project will contribute towards increasing the resilience of the baseline projects
<p>Project targeted vulnerable sites and communities: local communities in the Southern and Central plateau districts of the regions of Morogoro, Manyara, Dodoma, Ruvuma, Shinyanga (Kishapu) and some agricultural areas of Zanzibar. Respectively, targeted communities in each district are: Salawe, Doma and Melela (Mvomero); Msitu wa Tembo, Naberera and Oljoro No. 5 (Simanjiro); Wiyenzele, Iwondo, Mbori, Mima, Sazima, Ghambi, Kimagai, Kinusi, Chitemo and Rudi (Mpwapwa); Hurui and Mnenia (Kondoa); Mpapa, Mkako and Kigonsera (Mbinga); Kiloleli, Masanga and Lagana (Kishapu).</p>				
<p>Agriculture Sector Development Programme (ASDP)</p> <p>Support for strengthening policy and governance at local and national level</p> <p>Investment into developing private sector initiatives in agricultural sector</p> <p>Support for: irrigation and water management, Range management, Livestock development and animal health, Better land husbandry, Crop production and protection, mechanisation, storage and post-harvest, agro-processing.</p>	<p>Droughts and frequent dry spells during “rainy” seasons</p> <p>Delayed rains</p> <p>Severe rainfall events</p> <p>Floods</p> <p>Increase in temperatures and evapo-transpiration</p>	<p>Increased water stress and scarcity and greater demand for irrigation</p> <p>Reduced household income and food security as a result of decreased agricultural productivity</p> <p>Reduced quality of water for all uses</p> <p>Losses of life and property from flooding</p>	<p>Strengthening capacity of local and national institutions to understand and plan adaptation at local level</p> <p>Implementation of alternative agricultural practices that reduce need for water and land</p> <p>Implementation of alternative livelihoods to reduce dependency on rain-fed crops</p> <p>Strengthening the information base and awareness of users</p> <p>Restoring degraded productive ecosystems, such as agricultural lands, forests and rangelands</p>	<p>Increased natural capital and availability of ecosystem services</p> <p>Increased water availability through conservation and reduced use</p> <p>Introduction of climate-resilient agricultural practices and crops</p> <p>Introduction of non-agricultural income generating activities for increased income</p> <p>Increased food security from enhanced agriculture</p> <p>Increased scientific knowledge and planning capacity</p>
<p>Water Sector Development Programme (WSDP)</p> <p>Increase water supply and sanitation to all areas of the country</p>	<p>Droughts and frequent dry spells during “rainy” seasons</p> <p>Delayed rains</p>	<p>Increased water stress and scarcity and greater demand for irrigation</p> <p>Reduced quality</p>	<p>Strengthening capacity of local and national institutions to understand and plan adaptation at local level</p>	<p>Increased natural capital and availability of ecosystem services</p> <p>Increased water availability through conservation and</p>

<p>Investments in water infrastructures, such as wells, boreholes, irrigation infrastructure</p> <p>Management of water resources through Water Basin Authorities</p>	<p>Severe rainfall events</p> <p>Floods</p> <p>Increase in temperatures and evapo-transpiration</p>	<p>of water for all uses</p> <p>Losses of life and property from flooding</p>	<p>Implementation of alternative agricultural practices that reduce need for water and land</p> <p>Implementation of alternative livelihoods to reduce dependency on rain-fed crops</p> <p>Strengthening the information base and awareness of users</p> <p>Restoring degraded productive ecosystems, such as agricultural lands, forests and rangelands</p>	<p>reduced use</p> <p>Introduction of climate-resilient agricultural practices and water management techniques</p> <p>Reduced flood damage from restored protective ecosystems</p> <p>Increased scientific knowledge and planning capacity</p>
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