United Nations Development Programme

Country: Tanzania

PROJECT DOCUMENT

Project Title	**Securing Watershed Services through Sustainable Land Management in the Ruvu and Zigi catchments (Eastern Arc Region), Tanzania**
UNDAP Outcomes	Outcome 2: Relevant MDAs, LGAs and Non-State Actors improve enforcement of environment laws and regulations for the protection of ecosystems, biodiversity and the sustainable management of natural resources
UNDP Strategic Plan Outputs and Indicators	Output 2.5: Legal and regulatory frameworks, policies and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation. Indicator 2.5.1: Number of countries with legal, policy and institutional frameworks in place for conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems.
Executing Entity/Implementing Partner	Ministry of Water and Irrigation (MOWI), Tanzania
Other responsible Partners	Vice President's Office – Division of Environment, National Land Use Planning Commission (NLUPC), Tanga Urban Water and Sanitation Authority (Tanga-UWASA), Dar es Salaam Water and Sanitation Authority (DAWASA), Morogoro, Dar es Salaam Water and Sanitation Authority (DAWASA), Morogoro Urban Water and Sanitation Authority (MORUWASA), Pangani and Wami-Ruvu Basin Water Boards (PBWB and WRBWB), Ministry of Agriculture, Livestock and Fisheries (MALF), Ministry of Energy and Minerals (MEM), Ministry of Natural Resources and Tourism (MNRT), Ministry of Land, Housing, and Human Settlement (MLHHS)

Programme period: 5 years	TOTAL BUDGET (US $): 27,648,858
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Project ID : 00093855	**Government:** 22,000,000
PIMS No.: 5077	**UNDP:** 2,000,000
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Management arrangements: NIM	
PAC Meeting Date: 21 July 2015	Other:

Agreed by (Government): PERMANENT SECRETARY MINISTRY OF FINANCE P. O. Box 9111 DAR ES SALAAM — 28.03.2016 Date/Month/Year

Agreed by (Executing Entity/Implementing Partner): MoWI — DEPUTY PERMANENT SECRETARY MINISTRY OF WATER AND IRRIGATION — 16.03.2016 Date/Month/Year

Agreed by (UNDP): — 30/3/16 Date/Month/Year

Brief project description:

This project will be implemented in the Uluguru and East Usambara Mountains of Tanzania. These mountains, which give rise to the Ruvu and Zigi Rivers respectively, form part of the Eastern Arc chain, and are amongst the most important catchment areas in the country. The forests in these catchments are recognised as globally important stores of carbon and centres of species diversity and endemism. They also provide critical watershed services, the continued functioning of which is being compromised by a host of human-induced pressures and poor land-use practices that are causing rapid land use change and land degradation. The situation is made worse by high levels of poverty and population growth; inadequate infrastructure for providing clean water to communities, low levels of compliance with water-use regulations and a lack of co-ordination amongst the various institutions and programmes operating in the catchments. The combined results of this are that both the quantity and quality of water in the Ruvu and Zigi river catchments is declining, undermining ecosystem services and functions and resulting in water shortages for people and the environment.

Despite an impressive baseline of existing interventions, the rate of deforestation and severity of land degradation in the Ruvu and Zigi catchments is unacceptably high. Sustainable Land Management (SLM) offers a comprehensive approach to management and governance of land and water resources and holds the potential to make significant and lasting differences both in the short and long term. Although the Government of Tanzania is committed to addressing the interconnected issues of land degradation, water security and poverty, its ability to resolve these problems by integrating SLM into watershed management is limited by: (i) lack of a collaborative institutional framework that enables water basin authorities and stakeholders to effectively plan, monitor and adapt land management and leverage investments for SLM; ii) staff, resource and technical capacity deficits; and (iii) inadequate demonstrated experiences in integrated watershed management approaches at the landscape level. It is these barriers that this Project will address.

This project has been organised under ***two components***, the first focussed on building institutional capacity and strengthening co-ordination amongst Water Basin Authorities and other relevant stakeholders, and the second on implementing practical Sustainable Land Management (SLM) interventions to address land degradation in forests, rangelands and farmlands, with the overall purpose of securing watershed services and improving livelihoods.

Component 1 provides for several areas of project support, including: (i) development and implementation of Integrated Land Use Management Plans (ILUMPS) and Village Land Use Plans; (ii) establishing or strengthening multi-sectoral stakeholder committees whose role will be to co-ordinate dialogue and action amongst stakeholders, and raise awareness about SLM; (iii) forming and strengthening Water User Associations and capacitating them to perform their roles effectively; (iv) improving compliance and enforcement; and, (v) increasing the funds available for SLM.

Component 2 will target the widespread adoption of SLM practices within agricultural and livestock production systems and the conservation and rehabilitation of degraded forests in the two river basins. Key areas of project support will include working with selected communities and relevant basin management authorities to: (i) reduce human-induced pressures (e.g. illegal harvesting and mining and unwise use of fire) and promote sustainable forest management and forest restoration both within and outside of protected areas; (ii) develop and test sustainable livestock management technologies; and (iii) increase household food production and incomes through uptake of SLM and Sustainable Rangeland Management practices, and the development of diversified, alternative sustainable livelihoods.

The total cost of investment in this project is estimated at US$ 27,648,858, of which US$3,648,858constitutes funding from the GEF, US$ 2 million represents co-financing from the UNDP, and a further US$22 million represents co-financing from the Government of Tanzania.

Contents

ACRONYMS

APR	Annual Project Report
BWB	Basin Water Board
BWO	Basin Water Office
CARE	Care International Tanzania (NGO)
CEPF	Critical Ecosystem Partnership Fund
CO	(UNDP) Country Office
CSO	Civil Society Organisation/ Community Based Organisation
DAWASA	Dar es Salaam Water and Sanitation Authority
DAWASCO	Dar es Salaam Water Supply Company
DC	District Council
DoE	Division of Environment (n the Vice President's Office)
EAMCEF	Eastern Arc Mountains Conservation Endowment Fund
ESARO	Eastern and Southern Africa Regional Office (IUCN)
EPWS	Equitable Payments for Watershed Services
FBD	Forest and Beekeeping Division (of the MNRT)
FNR	Forest Nature Reserve
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographical Information System
IFS	Integrated Funding Strategy (for SLM in Tanzania)
IGA	Income Generating Activities
IIF	Integrated Investment Framework
ILUMP	Integrated Land Use Management Plan
INRM	Integrated Natural Resource Management
IUCN	International Union for the Conservation of Nature
IWRM	Integrated Water Resource Management
JUWAKIHUMA	*Juyima ya Wakulima wa Kilimo Hai Usambara Mashariki* (Organic Spice Grower's Association)
LAFR	Local Authority Forest Reserve

LD	Land degradation
LGA	Local Government Authority
M&E	Monitoring and Evaluation
MAFC	Ministry of Agriculture Food Security and Co-operatives
masl	Metres above sea level (altitude)
MDA(s)	(Government) Ministries, Departments and Agencies
MDG	Millennium Development Goal
MJUMITA	*Mitandao ya Jamii ya Usimamizi wa Misitu Tanzania* (Community Network in Forest Conservation in Tanzania)
MKUKUTA	*Mkakati wa Kukuza an Kupunguza Umaskini Tanzania* (National Strategy for Growth and Poverty Reduction)
MLFD	Ministry of Livestock and Fisheries Development
MLHHSD	Ministry of Lands, Housing and Human Settlements Development
MNRT	Ministry of Natural Resources and Tourism
MORUWASA	Morogoro Urban Water Supply Authority
MOW	Ministry of Water
MVIWATA	*Mtandao wa Vikundi vya Wakulima* (Tanzanian Farmer's Association)
NAP	National Action Plan (for combatting land degradation now in version 2)
NAWAPO	National Water Policy
NFR	National Forest Reserve
NGO	Non-Government Organisation
NIM	National Implementation (Modality)
NLUPC	National Land Use Planning Commission
NSGRP	National Strategy for Growth and Reduction of Poverty (see also: MKUKUTA)
NWSDP	National Water Sector Development Programme
NWSDS	National Water Sector Development Strategy
PAMOJA	Pamoja Environmental Focus (Tanzanian NPO in the Environment Sector)
PBWB	Pangani Basin Water Board
PBWO	Pangani Basin Water Office
PC	Project Coordinator
PCU	Project Co-ordination Unit

PES	Payment for Ecosystem Services
PIR	Project Implementation Report
PLUM	Participatory Land Use Management
PPG	Project Preparation Grant
PMO-RALG	Prime Minister's Office – Regional Administration and Local Government
PSC	Project Steering Committee
RAS	Regional Administrative Secretary
RCU	Regional Co-ordination Unit (of the UNDP)
REDD	Reduced Emissions from Deforestation and Forest Degradation
RSPB	Royal Society for the Protection of Birds (an NGO)
SAT	Sustainable Agriculture Tanzania (an NGO)
SLM	Sustainable Land Management
Tanga-UWASA	Tanga Urban Water and Sanitation Authority
TaTEDO	Tanzanian Traditional Energy Development Organisation
TerrAfrica	NEPAD led initiative found in 24 countries
TFCG	Tanzania Forest Conservation Group (an NGO)
TFS	Tanzania Forest Service
TZS	Tanzanian Shilling
UMADEP	Uluguru Mountains Agricultural Development Project
UNCCD	United Nations Convention to Combat Desertification
UNDAP	United Nations Development Assistance Plan
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
URT	United Republic of Tanzania
USAID	United States Agency for International Development
UWAMAKIZI	*Umoja Wa Wajulima Wahifadhi Mazaringira Kuphuhwi-Zigi* (Farmers Association)
UWASA	Urban Water Supply and Sanitation Authority
VNRC	Village Natural Resource Committee
VPO	Vice Presidents Office(of the Government of Tanzania)

WAKUAKUVYAMA	*Wakiluma wa Kuhifadhi Ardhi na Kutunza Vyama vya Maji* – or 'farmers for soil and water-source conservation', a farmer's association and registered NGO
WCST	Wildlife Conservation Society of Tanzania (an NGO)
WRBWB	Wami-Ruvu Basin Water Board
WRBWO	Wami-Ruvu Basin Water Office
WSDP	Water Sector Development Programme
WUA	Water User Association
WWF	World Wide Fund for Nature

Note: *Only acronyms used five or more times in the text are included in the list. All other acronyms that are used less frequently are explained in the text.*

SECTION 1: ELABORATION OF THE NARRATIVE

Part I: Situation Analysis

CONTEXT AND GLOBAL SIGNIFICANCE

Administrative Context

1. Tanzania is the largest country in East Africa, covering an area of 945,000 km^2 (of which 886,000 km^2 is land). It is bordered by Uganda and Kenya to the north; Rwanda, Burundi, and the Democratic Republic of Congo (DRC) to the west; and Zambia, Malawi and Mozambique to the south (see Map 1, Section IV, Part II). The eastern borderof the countrylies along the 800 km long coastline (excluding the islands of Pemba and Zanzibar) with the Indian Ocean. The Capital City of Tanzania is Dodoma, and the major commercial city is Dar es Salaam. The official currency is the Tanzanian Shilling (TZS) and the national language is *Kiswahili*, with English widely used in official communication.

2. Tanzania is a unitary republic – the United Republic of Tanzania (URT) – formed by the union of Tanganyika and Zanzibar in 1964. There are two governments: the *Union Government* of the URT and the *Revolutionary Government of Zanzibar*. The Union Government has authority over all union matters in the URT and over all other matters concerning mainland Tanzania.

3. The URTs administration is organized into 30 regions (or "*mikoa*"),25 of which are on the mainland. Each Region is divided into Districts, which are, in turn, divided into Wards(including towns, villages and hamlets). District andLocal Government authorities assist central government in each administrative region.

4. All land in the URT[1] is vested in the President, who holds it in trust for present and future generations. Land can only be acquired through custom (tradition) or a grant by the Commissioner for Lands, who administers land on behalf of the President (as set out in the National Land Policy). Tanzanian legislation recognises three land tenure categories – 'reserved' land, 'village' land and 'general' land. Reserved land is land set aside by the government for a specific purpose (including forest reserves, game parks/reserves, public utilities/highways, 'hazardous land' and land designated under the Town and Country Planning Ordinance). Village land is land that is under the direct management of village governments[2] and includes land for settlement as well as local use, contained within the "village area". General land is a residual land category, and is broadly defined as the remaining land in Tanzania which is not classified as reserved land or village land[3].

5. All water resources in Tanzania are vested in the Presidentwho holds them in trust for and on behalf of the citizens of Tanzania. The Minister for Water is responsible for management of water resources and serves as their custodian, through the agency of various designated institutions.The Government has decentralised the management of water resources, using hydrologically-defined river basins as planning units. These are managed according to the principles of Integrated Water Resources Management (IWRM). There are nine river Basins (Pangani, Rufiji, Lake Victoria, Lake Nyasa, Lake Rukwa, Lake Tanganyika, Ruvuma and Southern Coast, Wami-Ruvu and the drainage of the Lake Eyasi-Lake Manyara-Bubu depression), each of which is administered by a Water Basin Office. The proposed Project will be implemented in the Ruvu River sub-basin, which forms part of the greater

[1] For the sake of brevity, the United Republic of Tanzania (URT) is termed 'Tanzania' for the remainder of this Project Document.

[2] Communities have a strong autonomy in the use of village land, based on the rightsdeveloped under President Nyrere's 'ujama' villagisation programme in the 1970s.

[3]The 1999 Village Land Act defines general land as '*all public land which is not reserved land or village land*'. The 1999 Land Act however defines general land more broadly as '*all public land, which is not reserved land or village land and includes unoccupied or unused village land*'. The terms 'unoccupied' and 'unused' are not explictly defined in the act.

Wami-Ruvu Basin, and the Zigi River sub-basin, which forms part of the greater Pangani Basin (see Map 2, Section IV, Part II).

Geographic Context

Geographical and Physical Features

6. Tanzania exhibits a wide variety of geographical and physical features, many of which are internationally famous as scenic attractions, such as the Serengeti Plains, the Great Rift Valley, the Ngorongoro Crater and Mount Kilimanjaro. The mainland rises froma narrow coastal strip characterised by sandy beaches, wetlands, mangrove swamps and other tropical vegetation, to between 900 and 1,800 masl in the highlands of the central interior. The greater part of Tanzania is an extensive central plateau comprising ancient and heavily eroded landforms which are covered by various savanna and woodland habitats, fringed by narrow belts of forested highlands and punctuated by numerous mountain ranges.

7. Themountains arising from the central plateau of the countryhave different geological histories and characteristics, but all supporta variety of natural forest, grassland and 'heath' vegetation types. Extending in a broad arc from Mount Kilimanjaro in the north to south-western Tanzania, is a series of uplifted blocks of ancient, crystalline rock forming the Eastern Arc Mountains (See Map 3, Section IV, Part II)and the associated Southern Highlands. These mountains are important watersheds giving rise to numerous rivers and drainage systems, including those of interest to this project.

8. ***The Uluguru Mountains***, located at 06 ^{o}51' – 07^{o}12'S and 37^{o}30' – 37^{o}45'E in Morogoro and Mvomero Districts (Morogoro Region), are situated to the south-east of the main Eastern Arc chain, some 180 km inland from Dar es Salaam. They occupy an area of about 1,477 km^{2}and form a continuous 45 km long ridge that is divided into the northern and southern Uluguru mountain blocks by the lower-lying Bunduki (or Mgeta) gap. Rising steeply from the Mgeta and Mvuha floodplains, the Ulugurus reach their highest point at Lukwangule Plateau (2,638 masl – also the highest point in the whole Eastern Arc range) with a second peak at Kimhandu (2,634 masl) a little further south.The topography of the Uluguru Mountains is rugged, characterised by steep peaks with naturally forested slopes (though much of this forest has now been lost), interspersed with exposed granite surfaces that are partly covered in dense herbaceous vegetation and surrounded by stands of bamboo. The lower slopes are less steep, and to the south and south-west there is a roughly 20 km-wide band of undulating foothills (at about 500 masl), which border the adjoining swampy lowland plains. The Uluguru Mountains are the watershed of the Ruvu River and its tributaries.The area around the headwaters of the Ruvu River is topographically complex, including a mosaic of steep limestone hills and lower-lying areas (Burgess *et al.,* 2007; MNRT, 2010).

9. ***The East Usambara Mountains***, located at 04^{o}45' – 05^{o}20' S and 38^{o}26' – 38^{o}48' E,fall almost entirely within Muheza District (Tanga Region), although small parts in the west fall into Mkinga (Nilo) and Korogwe Districts. Situated only 40 km inland from the coastal town of Tanga, the mountain block rises up steeply in the east from the surrounding plains, from an altitude of about 200 - 500 masl, and reaches its highest point at Nilo Peak (1,506 masl). The western side of the mountain block falls away sharply through a series of rocky escarpments (such as the Mnyunzi Scarp), down to the wide Lwengera Valley, which separates the East from the West Usambara Mountains,which lie to the north-west. The East Usambaras comprise a deeply scarred crystalline plateau, the main ridges of which run in a north-south direction. Occupying an area of about 1,082 km^{2}, the East Usambaras are one of the smallest mountain blocks in Tanzania (BirdLife International, 2013).As in the Uluguru Mountains, the topography in the East Usambarasis generally steep; the upper slopes (from an altitude of about 500 - 750 masl) are thickly clothed in dense, moist montane forest and deciduous lowland forest, with some montane grassland on the upper plateaus, whilst the lower slopes and surrounding lowlands support drier woodland and savanna habitats (MNRT, 2010). The Zigi River and its main tributaries drain the eastern slopes of the East Usambara Mountains.(See MAP3, Section IV,Part II)

Geology and Soils

10. The geology of the Uluguru and East Usambara Mountains includescrystalline, sedimentary and volcanic rocks of ancient origin. These rocks weather to form nutrient-poor, generally sandy and acidic soils that are arable but not very productive (except in higher altitude areas that were more recently forested, where the humic content is higher). Although the soils are not rich and are leached due to the high rainfall, they are generally more suitable for agriculture than the soils of the surrounding lowlands (MNRT, 2010). The alluvial valleys of rivers such as the Ruvu and Zigi include fluvisols that are more nutrient rich and are, therefore,favoured for agriculture.

Rainfall

11. Tanzania is a predominantly semi-arid country, with an average annual precipitation of 600 – 800 mm, and more than half the country receives less than 750 mm per year. Mean annual rainfall varies greatly from one part of the country to the next, but averages at around 200 - 600 mm over the central plateau, while the coastal zone and southern and northern highlands receive higher rainfall of between 1,400 and 2,000mm per year (and rising to as much as 3,000 mm or more in the Eastern Arc Mountains). Total rainfall generally declines from north to south, but this is becoming less predictable with recent trends indicating increased variability in rainfall, shorter wet seasons and longer incidence of prolonged drought (Rowhani *et al.*, 2011). Seasonal rainfall in Tanzania is driven mainly by the migration of the Intertropical Convergence Zone (ITCZ). This causes the north and east of Tanzania to experience two distinct wet periods – the short rains (or "*Vuli"*) in October to December and the long rains (or "*Masika"*) from March to May – while the southern, western, and central parts of the country experience one wet season that lasts from October through to April or May. (McSweeney *et al.*, 2010& 2010a).

12. The ***East Usambara and Uluguru Mountains*** are amongst the few parts of the country (less than 4% of it) that regularly receive more than 1,250 mm of rain per year, making them critically important watersheds in a largely semi-arid landscape. The Uluguru Mountains, have an oceanic climate with bimodal orographic rainpeaking in April and November. The eastern slopes are wetter, receiving between 1,800 and 3,000 mm (or more)per year, with no notable dry season (at least 100 mm of rain falling every month of the year), whilst the western, leeward slopes are drier (receiving between 600 and 2,000 mm per year) with a marked dry season (WRBWO, 2010). The East Usambara Mountains, being close to the Indian Ocean, have a year-round warm and humid climate, and receive annual rainfall of between 1,500 mm and 2,000 mm, with rain spread across all months of the year. Mist is also a significant source of precipitation (MNRT, 2010).

Climate

13. Tanzania lies a little to the south of the equator (at 1 - 11^0S) and has a tropical climate with regional variations relating to topography. The coastal regions are warm and humid (with average temperatures between 27^o and 29^o C) and meanannual temperatures inland ranging between 17^o and 25^oC through most of the year. The highland regions are more temperate, with average temperatures dropping to between 10^o and 20°C during the cooler months (May to August), especially at higher altitudes. The hottest period (with average temperatures in the range of 25^o–31°C) falls between November and February,while the coolest period (average temperatures between 15^o and 20°C) occurs between May and August (McSweeney *et al*., 2010a). In the Uluguru and East Usambara Mountains there is an altitudinal gradient in temperature, with an average 1.9^odrop for every 1000' increase in elevation.

14. ***Climate Change***: Tanzania faces significant threats from the anticipated effects of climate change, especially due to its reliance on rain-fed agriculture for income and consumption. Current predictions are that the country will become on average hotter, especially during the cooler months, with an increased frequency of the days and nights considered as 'hot'. Although the current

observations of rainfall show statistically decreasing trends, and changes in seasonal patterns of rainfall will likely be complex and difficult to predict, the most probable climate change scenarios indicate an overall increase in annual rainfall (McSweeney *et al*., 2010). Areas that have two rainy seasons a year (such as the North-Eastern regions) may experience increases of 5 – 45%, and areas with one rainy season, or year-round rain (such as the Central, South and Western areas), may experience a decrease in rainfall of 5 – 15% (IUCN-ESARO, 2010).The amount of rain falling in wet seasons is expected to increase, with a greater proportion of it falling in 'heavy' events, resulting in an increased probability of flooding. It is also expected that the rainy periods will be interspersed with more prolonged dry spells and more frequent and intense droughts (McSweeney *et al.*, 2010a). Anecdotal evidence suggests that, in addition to these changes, the cloud bases in the Eastern Arc Mountains have moved further up the mountains and will continue to do so, further reducing the catchment values of these mountains (Burgess *et al.*, 2002).

15. Changes in rainfall patterns, soil moisture and mean temperature will affect evaporation and run-off into rivers and hold important environmental and socio-economic implications for the Ruvu and Zigi basins.Changes in dry-season rainfall patterns in particular, and increased seasonality of rainfall in general,are expected to lower annual river flows, decreasing overall water availability –in the Ruvu catchment, it is predicted that water flows could be reduced by as much as 10% (IUCN-ESARO, 2010).At the same time, more rain falling in heavy rainfall events would increase the risk of episodic flooding, causing erosion and loss of topsoil, inundation of previously arid soils, and increased leaching of nutrients. More marked seasonality in rainfall would increase the probability of droughts, which might lead to changes in natural vegetation, as well as having impacts on crop yields and livelihoods. When these impacts are viewed in the context of land use change, the potential effects on the hydrological cycle are even more significant. Increased surface runoff and reduced infiltration would increase the potential for erosion, especially on steep slopes that have been cleared for cultivation using unsustainable land use practices, resulting in increased sedimentation in streams and rivers and reduced base flows (Yandaand Munishi, 2007).

16. The impacts of these climate change scenarios on agriculture, food security and livelihoods in the Ruvu and Zigi Basins are likely to be significant (Rowhani *et al.*, 2011). Most people in these areas rely on small-scale, rain-fed agriculture (using slash and burn approaches, with little use of fertilisers)for feeding themselves and for generating income. Crop suitability and yields could be influenced by both increased and decreased rainfall, more marked seasonality in rainfall patterns and the increased occurrence of prolonged dry spells and floods. Not all crops will respond similarly to climatic changes, though, and regional climate change patterns may differ. This means that climate change may affect households in the Ruvu and Zigi catchment differently, depending on the crops they grow, their sources of incomesand their consumption patterns (Arndt *et al*., 2011). It is, however, safe to say that the low-income, small-holder farmers in thesecatchments will be vulnerable to the effects of climate change, whatever these may be. Theywill most likely experience an overall deterioration in food security and incomes, especially asthe cumulative economic impacts of repeated declines in production will be significant (Arndt, *et al.,* 2011). This underlines the importance of promoting climate- and water-smart production practices and adaptive water management that can strengthen the resilience of these communities to both expected and unexpected changes in climate (Lenton and Muller, 2009).

Environmental/Bio-physical Context

Biodiversity - Global Significance

17. Tanzania ranks amongst the top countries in tropical Africa in terms of representationof ecoregions and levels of species richness and endemism. There are 7 'Alliance for Zero Extinction' sites, 4 Natural World Heritage Sites and 4 Ramsar sites recognised in Tanzania as well as two areas designated by Conservation International as Global Biodiversity Hotspots (the Eastern African

Coastal Forests and the Eastern Afro-montane forests of the Eastern Arc and Albertine Rift), and eight WWF-designated Critical Eco-Regions, including the Eastern Arc Forests (MNRT, 2010).

18. ***The Eastern Arc Mountains*** are recognised internationally as one of the world's most important repositories of biodiversity, exhibiting extra-ordinarily high levels of species richness and endemism for plant and animal groups (Burgess *et al.*, 2007; Birdlife International, 2013). It is because of this that the Eastern Arc Mountains have been recognised as a Global 200 Ecoregion, a Global Biodiversity Hotspot and part of an Endemic Bird Area (MNRT, 2010). However, the Eastern Arc Mountainshave also been subjected to large-scale loss of natural habitats and, as a result,have among the highest numbers of rare and threatened species in East Africa (MNRT, 2010). ***The East Usambara and Uluguru Mountains*** (along with the Udzungwa Mountains) are considered by biologists to be the most important of the Eastern Arc Mountains in terms of species richness and numbers of endemics, but a high proportion of the endemic and near-endemic species are categorised by the IUCN as threatened. Almost all of these threatened species are closed-forest specialists, and, with less than 30% of the original extent of closed canopy forest remaining in these mountains, forest conservation in the Eastern Arc is considered to be a global priority (Burgess *et al*., 2007; MNRT, 2010a).

Vegetation and Habitats

19. ***Habitats in the Uluguru and East Usambara Mountains*** are dominated by various savanna, woodland and forest types, depending on elevation. More mesic vegetation occurs on the eastern, sea-facing slopes with drier habitats occurring on the western, leeward slopes (MNRT, 2010). The natural, altitudinal zonation of forest types in the Eastern Arc Mountains is for upper montane forests to occur between 1,800 and 2,635 masl, montane forests between 1,250 and 1,800 masl and sub-montane forests from 800 to 1,250 masl (Lovett and Pócs, 1993). In the East Usambaras, sub-montane forest occurs at lower altitudes (300 – 500 masl) than it does anywhere else in the Eastern Arc – this is because of the year-round rainfall and the high incidence of mist and enveloping cloud due to orographic effects(Birdlife International, 2013). The upper altitudinal limit of forest vegetation is determined by the incidence of frost which occurs from about 2,400 masl upward, and at this point the forest gives way to montane grassland and heathland communities (Burgess *et al.*, 2007). At lower altitudes, forests give way to woodlands, savannas and other habitats more typical of the coastal forest mosaic. The habitat types of the Uluguru Mountains are more varied than those of the East Usambaras, including coastal forest,dry lowland miombo woodland, transitional rainforest, sub-montane, montane and upper montane forest, as well as areas of boggy afromontane grassland on Lukwangule Plateau (MNRT, 2010).

20. The forests of the East Usambara and Uluguru Mountains are important not only for their biological diversity, but alsobecause they provide a large variety of essential resources for the many people living in these areas, and beyond. Of greatest significance, though, is their role in protecting and enhancing water supply for the two river systems to which they give rise – the Ruvu and its tributaries in the Uluguru Mountains, and the Zigi and its tributaries in the East Usambaras.

21. Only 263 km^2(representing about 20% of the original extent) of forest remains in the East Usambaras, and 278 km^2(representing about 32% of the original extent) in the Ulugurus (Burgess *et al.*, 2007; Hall *et al.*, 2009). Most of the remaining forest occurs within various Forest Reserves that are managed as Catchment Forests, such as the Amani and Uluguru Forest Reserves. Human-induced pressures have caused both a decline in the total area covered by forest and increased fragmentation of remaining forested areas. In the Ulugurus, the low altitude dry forest and savanna woodlands below 300 to 600 masl have been heavily modified for settlement, cultivation or livestock keeping, with the original vegetation mostly replaced by more open, nutrient poor, broad-leaf woodland dominated by *Combretum*, *Pterocarpus* and *Terminalia* species, or by dry secondary grassland (such as in the lower reaches of the Ruvu River). The sub-montane forests have been extensively cleared to make way for cultivation or are heavily degraded through various activities including charcoal making, logging and frequent use of fire. This deforestation has been particularly intense on the northern, southern and

western slopes, and extends as high up as 1,700 masl (Yanda and Munishi, 2007). In the East Usambaras loss of forest (through clearing for small-scale cultivation, settlement and replacement with either teak or tea plantations), has been significant, especially in sub-montane forests and riparian zones (WWF, 2013). Nonetheless, the catchment of the Zigi River is still reasonably well-vegetatedand is at less severe risk of erosion than the Ruvucatchment (IUCN-ESARO, 2010).

Water Resources

22. Tanzania is endowed with diverse and extensive water resourcesincluding rivers, lakes, wetlands, dams and reservoirs (NAP 2, 2014). Despite this, surface water is limited for most of the year due to the uneven distribution of rainfall, prolonged dry spells and generally arid or semi-arid conditions. For this reason, groundwater plays a major role in meeting water demand, especially in rural areas. Groundwater availability is,however,also unevenly distributeddue to the influence of geology and climate. Water shortages and poor water quality are, therefore, common problems in Tanzania. Water demand is increasingly exceeding supply and it is expected that by 2025 the annual average available water per capita will be reduced by 30% and that the country will face a water stress situation (MOW, *in prep.*).

23. ***The Ruvu River***: Thebasin of the Ruvu River (hereafter referred to as 'the Ruvu'), covering some 18,000km^2,forms the smaller part of the greater Wami-Ruvu Basin. The river arises at Kinazi in the Uluguru North Forest Reserve, 7 kms south-east of Morogoro, and runs for about 270 kmsbefore draining into the sea near Bagomoyo on the Indian Ocean coast (IUCN-ESARO, 2010). The main tributaries of the Ruvu include: the Mgeta (which arises on the west-facing slopes of the mountains, and flows southward along the northern boundary of the Selous Game Reserve, before joining the main Ruvu at Mikula); and the Ngerengere, which drains the northern slopes of the Ulugurus and flows first in an easterly direction, feeding into the Mindu Dam north of Morogoro and then flowing south-east to join the Ruvu near Ngerengere village(Yanda and Munishi, 2007). Between the Mgeta and Ruvu Rivers is an alluvial floodplain which becomes flooded in the wet season to form the Gonabis wetlands (NorConsult, 2012).

24. The Ruvu basin is divided into a number of sub-basins including the Main Ruvu, the Mgeta and Ngerengere (WRBWO, 2010). The Main Ruvu is further divided into Upper, Middle and Lower sections. Within the Upper Ruvu there are a number of smaller sub-catchments, named for the tributaries or streams at their outlet – these include the Ruvu (Kibungo), Mfizigo, Mvuha and Mtumbizi.The Upper Ruvu (200 – 270 kms from the mouth) flows through high, steep-sided mountains and rolling foothills, has steeply-sloping banks, a narrow channel and rocky substrate. The steep gradient results in fast-moving currents and frequent rapids. In its middle reaches (90 – 200 km from the mouth), the gradient is gentle, the channel is wider and the flow rate slower. The Lower Ruvu (from the mouth to 90 kms upstream, at the confluence with the Ngerengere) traverses a wide, flat alluvial plain, being joined by numerous tributaries, collectively referred to as the 'Coastal Rivers', some of which are seasonal. The river estuary is strongly influenced by the sea for up to 23 kms inland (IUCN-ESARO, 2010). The offtake for the water supply to Dar es Salaam is situated in the Lower Ruvu, near the road bridge over the main Dar-Morogoro Road.

25. Administratively the Upper Ruvu and Mgeta sub-basins fall into Morogoro Region (Morogoro and Mvomero Districts), while the Middle and Lower Ruvu fall into the Coast Region. The ***Ruvu River***supplies water for some 151,000 people living in the Uluguru Mountains, and is the main source of surface water for the city of Dar es Salaam (est. 4.5 million people) and smaller settlements such as Bagomoyo and Kibaha.Currently, there are no impoundments on the Ruvu, but a large dam (with a projected surface area of 51 – 71 km^2) is soon to be built about 168 km upstream of the river mouth, with the dam axis north of Kidunda village. The purpose of the Kidunda Dam will be to regulate water flows and the supply of water to Dar es Salaam, and to provide water for downstream irrigation schemes (NorConsult, 2012). The Ngerengere River has been impounded approximately 11 kms from its source to create the Mindu Dam which supplies water for domestic and industrial use in the town of Morogoro.

26. ***The Zigi River***: The Zigi River (hereafter referred to as 'the Zigi') forms part of the greater Pangani Basin. It arisesat an altitude of 1,130 masl in the Amani Forest on the eastern slopes of the East Usambara Mountains, and drains a catchment of some 1,082 $km^{2.}$. The Zigi flows for 115 kms with multiple changes in direction, before opening to the sea 40 kms north of the city of Tanga. It has two main tributaries – the Kihuhwi to the south and the Muzi to the north, as well as numerous smaller side streams including the Dondwe, Nanguruwe and Kwekuyu. Approximately 26 kms upstream from the coast, below the confluence of the Muzi and Kihuhwi with the main Zigi, the river is impounded to form the Mabayani Dam.Below the dam, the Zigi River is joined from the south by the Mkulumuzi River, which provides water for the town of Muheza. The Zigi River provides water for some 200,000 people living in the upper parts of the catchment and is the onlyreliable source of water for the city of Tanga (about 280,000 people).

27. The upper reaches of the Zigi catchment are mountainous and steep, flowing through dense forest interspersed with tea plantations. The lower reaches of the catchment are hilly and gently undulating and dominated by savanna and open woodland vegetation, with riparian forest (dominated by *Ficus, Newtonia, Albizia and Syzygium* species) and other dense herbaceous vegetation occurring in a narrow strip along the river banks (where the natural riparian vegetation has not been removed). A significant proportion of the landscape in the lower reaches of the river is cultivated commercially and is under crops such as sisal and sugar cane (IUCN-ESARO, 2009).

28. Administratively, the catchment of the Zigi falls mainly within the District of Muheza (Tanga Region), although small parts extend into the neighbouring districts of Mkinga and Korogowe. The Mabayani Dam, which is under management by the Tanga Urban Water and Sanitation Authority (Tanga UWASA), provides water for domestic and industrial use in Tanga and the surrounding areas.

Protected Areas

29. Protected Areas (PAs) are the principal instrument used by the Tanzanian Government to conserve the nation's biodiversity heritage. Different categories of PAs exist in Tanzania and have different legal requirements, ownership and tenure arrangements. Tanzania's PAs are grouped into seven categories, according to the degree of protection offered to the land and wildlife. These are (in order of greatest to least protection): National Parks (NP); Forest Nature Reserves (FNR); Game Reserves (GR); Forest Reserves (FR); Conservation Areas (CA); Partial Game Reserves (PGR) and Game Controlled Areas (GCA).

30. ***Forest Reserves and Forest Nature Reserves:*** The Forest Act (14 of 2002) provides for four types of forest reserves including:*National Forest Reserves* (NFR)[4];*Local AuthorityForest Reserves* (LAFR)[5];*Village Forest Reserves* (VFR), which include Village Land Forest Reserves (VLFR), Community Forest Reserves (CFRs) and forests which are not reserved but are on village land and are managed by the Village Council; and *Private Forests* which are: forests on village land held by one or more individuals under a customary right of occupancy; or Forests on general or village land of which the rights of occupancy or a lease have been granted to a person or persons or a partnership or a corporate for the purpose of managing the forest.

31. '*Forest Reserves'* fall under the legal authority of central government (NFRs), District Councils (LAFRs) or village government (VLFRs and CFRs). Most of the Forest Reserves are owned and managed by the central government, through the Tanzania Forest Services (TFS). The *Forest Nature Reserve* (FNR) category of NFR offers the highest level of protection under the Forest Act. FNRs are

[4]The Minister may declare, by order (published in the national gazette) any area of land to be a NFR.
[5]The Minister may declare, by order (published in the national gazette) any area of land to be a LAFR.

state owned and managed, and no extraction of woody or animal species is allowed[6]. Activities in FNRs are generally restricted to research, education and low impact nature-based tourism.

32. Within the footprint of the proposed Project there are two Forest Nature Reserves – ***Uluguru Nature Reserve***in the catchment of the Ruvu River, and the ***Amani Nature Reserve*** in the catchment of the Zigi River. These are conserved and managed as catchment forests, with the primary objective of regulating water-flow, preventing surface run-off and soil erosion and providing water for drinking, power supply, industrial use and irrigation[7].

33. The Uluguru Nature Reserve (24,115ha) consists of two blocks, Uluguru North and Uluguru South , which have been connected through restoration of the intervening saddle of land known as the Bunduki Gap. The Amani Nature Reserve (8,380ha) has been reconnected to the Nilo Nature Reserve to the north, through restoration of the Derema Gap (Hall *et al*, 2014). In addition to these state-managed Nature Reserves are numerous small community-managed forest reserves.The catchment of the Ruvu includes the Ukutu Game Management Area, a conservation area which extends from the Mkulazi River to the boundary of the Selous Game Reserve and includes the wildlife-rich Gonabis floodplain (Norconsult/DAWASA, 2012). The Amani Nature reserve falls within the broader East Usambara Biosphere Reserve (WWF 2013).

Socio-economic Context

National Context

34. Tanzania has a population of about 45 million people, of which 22 million are males and 23 million are females. Of the total population, about 44 millionlive on the Tanzanian mainland and the annual average inter-censal growth rate is 2.9%.Nearly 74% of the total population lives in rural areas, whilst 26% live in urban areas, the majority of these in the coastal regions (Population and Housing Census, 2012).

35. The Tanzanian economy depends heavily on agriculture, which accounts for more than 25% of Gross Domestic Product (GDP), provides 85% of exports, and employs approximately 80% of the work force. Agricultural output is dominated by small-holder production, although commercial estates are important producers of sisal, tea, coffee, sugar, tobacco, rice and wheat. Cash crops such as coffee, tea, cotton, cashews, sisal and pyrethrum account for the majority of agricultural export earnings. Only 15% of the potentially arable land in Tanzania is being used for cultivation of crops and most agriculture is rain-fed, of low intensity and practiced without application of fertilisers. Irrigation infrastructure is weakly-developed, although the Government is starting to address this through the ***Kilimo Kwanzi*** and ***Big Results Now*** programmes. The agricultural sector operates under cyclical and structural constraints, is subject to frequent natural calamities and generally lacks adequate market linkages, inputs and access to credit (Rowhani, *et al.*, 2011).

36. Sectors of the economy that are exhibiting strong growth include transport, communications, mining and manufacturing, supported by public investment in infrastructure. One of the fastest growing sectors in the country is nature-based tourism – it accounts for an estimated 17% of Tanzania's GDP and in 2012 contributed more than 25% of foreign exchange earnings. Although the forestry sector accounts for little over 2% of GDP, itcurrently supplies more than 90% of the country's energy resources (primarily in the form of charcoal and firewood) and 75% of the country's construction materials. It also generates approximately 10-15% of exports and 10% of foreign exchange earnings.

[6] Except in limited cases – such as Amani FNR, where access agreements for collection of dead wood are in place.

[7]Most of the montane forests possess high water catchment value and are the main sources of major rivers, including the: Great and Little Ruaha; Kilombero; Wami; Ruvu; Kihansi; Pangani; and Zigi rivers.

37. In recent years Tanzania has performed well in maintaining overall macroeconomic stability, with a projected growth rate of 7% for 2014-2015 (AEO, 2014). However, economic growth is not sufficiently broad-based and Tanzania still has one of the poorest economies of the world in terms of per capita income(with a Gross National Income per capita[8] of US$570 in 2012, a Multidimensional Poverty Index of 0.322, and approximately 30% of households living below the poverty line (with household income of less than US$1 per day) (UNDP, Human Development Report, 2013; AEO, 2014).

38. Tanzania's Human Development Index (HDI) increased in recent years[9], positioning the country at 152 out of 187 countries and territories (UNDP Human Development Report, 2013) but progress towards achieving the Millennium Development Goals (MDGs) has been uneven (World Bank, 2014). In particular, the country is lagging with respect to achieving targets for primary education, maternal health, malnutrition, poverty eradication and environmental sustainability.Tanzania's Gender InequalityIndex (GII) is 50.56 (ranking the country 119 out of 148 countries included in the 2012 Index), and only 5.6 percent of adult women have reached a secondary or higher level of education (compared to 9.2 percent of their male counterparts). Female participation in the labour market, however, sits at 88.2% compared to 90.3% for men.

Socio-economy of the Ruvu and Zigi Catchments

39. There are an estimated 151,000 people living in the Upper reaches of the Ruvu and about 200,000 people living in the Zigi catchment. In both catchments, populationdensity increases with increase in altitude, as higher altitude areas are favoured for settlement due to the higher rainfall, which makes them desirable for the of cultivation of crops. Population density is highest at upper elevations in the Uluguru Mountains where it reaches 250 – 300 people per km^2, which is much higher than the average for other Eastern Arc Mountains (100 people/km^2) and for lower lying parts of the Wami-Ruvu Basin where population density averages 35 – 40 people/km^2(WRBWO, 2010).

40. Population growth rates in these catchments are estimated at 1.6 – 4.6 % per annum (with regional and localised variations within the two catchments). This means that there is growing demand for water, land and food and the various natural resources on which these communities depend for fuel, shelter and other needs. Population growth is driven in part by an influx into these catchments of people from other regions. In the Ruvu, the main reasons for this are that: (i) people move into the higher reaches of the mountains where the higher rainfall and better soils (closer to the forests) make it possible to grow crops nearly year-round; and (ii) pastoralists from further northare moving into the middle and lower reaches of the catchmentin search of better pasture. These two factors do come into play in the catchment of the Zigi, but they are of less significance than in the Ruvu. The main driver of migration into the upper reaches of the Zigi catchment is panning for alluvial gold and semi-precious stones (MNRT, 2006; MNRT, 2010).

41. The ethnic composition of the Upper Ruvu catchment is dominated by the Waluguru, whose main economic activity is cultivation of crops, although most households keep poultry and other small stock, and a few people make a living from fishing.In the middle reaches of the Ruvu, the Wakutu are well-represented – they are also principally farmers (cultivating crops), although cattle, chickens and goats are commonly kept. In recent years there has been an influx of people from the north, including the Maasai and Barabeig, who are livestock keepers practising transhumant pastoralism (in which cattle are moved seasonally but flexibly between wet and dry season pastures) and the WaSukuma who are agro-pastoralists. This has led to an increase in farmer-pastoralist conflicts (DAWASA/NorConsult, 2012).

[8] Using the ATLAS method (World Bank, 2013).

[9] It is however misleading to compare values and rankings with those of previously published reports, because the underlying data and methods have changed.

42. In the upper reaches of the Zigi catchment the Sambaa (or WaSambaa or Shambaa) are the dominant ethnic group. The Sambaa engage mostly in cultivation of crops, but dairy farming and bee-keeping are becoming more prevalent and many families also keep poultry and some small stock. The Sambaa live in large villages consisting of several family groups. Sambaa society is strongly patriarchal and most households (76%) are headed by men (National Sample Census of Agriculture, 2012). In the lowlands, the Bondei are the dominant ethnic group. They are mostly livestock keepers and fishermen (WWF, 2013).

43. In both catchments,average household sizes are large, falling in the range of 3-5 people in the Ruvu (NorConsult/DAWASA, 2012) and 6 - 10 people in the Zigi (Agricultural Census Report 2012). Literacy rates are about 65% in the Ruvu (IUCN-ESARO, 2010)and 71% in the Zigi (CARE Report, 2007), but in all cases are highest for urban males, and lowest for rural women.

44. Approximately 90% of household income in both catchments is earned from agriculture, much of which is practised at a subsistence level on small land-holdingsof 2 ha or less (IUCN-ESARO, 2009 and 2010; Rantala, 2013). The principal food crops are maize, paddy, sorghum, cassava, millet, bananas, beans, sweet potatoes and nuts, supplemented by other seasonal fruits and vegetables such as tomatoes, Irish potatoes, peppers and pumpkins. Other rural activities include livestock-keeping(goats, cattle sheep and poultry), bee-keeping and, to a lesser extent, fishing. The principal commercial cash crops are sugar cane, sisal and cotton, most of which is cultivated in the lower reaches of the catchments. In the Zigi catchment, and parts of the Ruvu (around Kinole, Kibungo Juu and Kibogwa) cultivation of spices such as cardamom, ginger, cinnamon and cloves, is widespreadand there has been an increase in the number of people who keep stall-fed dairy cattle. In the Ruvu catchment charcoal production iscommonly practiced, especially by young men, and for those who engage in this activity the economic returns are good (a 60kg bag fetching a mean price of between 16,000 and 30,000 TZS – equivalent to US$ 9 – 18, depending on location). In both the Zigi and Ruvu catchments, mining (for gold and semi-precious stones such as rubies) is practiced,mostly illegally and with serious environmental consequences, especially in wetlands and rivers. Some people operate as specialist miners whilst for others occasional mining is adopted as an opportunistic activity. Those who engage in mining can earn good incomes, with 1g of gold attracting payments of as much as TZS90,000 (equivalent to US$51).

45. Most rural people in the basins are self-employed in the informal sector. Surplus food crops are typically sold in local markets or ‘at the farm gate’ and some households generate small amounts of income from off-farm activities such as the manufacture of wood products and weaving. In urban and trading centres the majority of people operate as merchants, traders and shop-owners, with a smaller proportion formally employed in public and private institutions. In all cases, unemployment rates range from 25 – 40% and approximately 30% of people live below the poverty line.Annual cash income per household in rural areas averages at around TZS75,000 (equivalent to US$ 42)but can be much more – for example, dairy farmers in the Zigi catchment realise annual household incomes in excess of TZS 500,000 (equivalent to US$284).

46. Infrastructure in the upper catchments is generally poorly-developed. Roads between major urban centres are mostly good quality asphalt highways, but in the rural areas where the project will be implemented the roads are typically gravel or dirt, and are often impassable in the rainy seasons. Although electricity is generally available in urban areas, coverage in rural areas is poor, and in many instances installations are in a state of disrepair. Mobile phone network coverage is good and cell phones are widespread although poorer households cannot afford these items. A little over half of the houses are built using traditional methods and materials (poles and mud, with leaf or thatch roofs), with material such as bricks, mortar and metal sheeting generally only being used in more affluentvillages, especially for public buildings such as schools and clinics. The majority of people do not have access to piped water (either because no infrastructure exists or because the systems are not working). In the Ruvu catchment a higher proportion of people have access to piped tap-water at fixed

points (IUCN-ESARO, 2010). Mostly, people rely directly on rivers for their water needs, and make use of pit latrines for disposal of human waste.

47. A dual land tenure system of village and customary land user rights operates in the both the Zigi and Ruvu catchments. Inprinciple, the Village Council is the allocating authority and villagers only have a derivative right on land use and occupancy. However, once a villager has been allocated land by the Village Council, then customary land user rights come into effect, although in most cases no formal title deeds are held by the customary owner. Through customary land user rights the land can be accessed by clan members through inheritance. Land canalso be accessed by non-clan members through renting or sale, but neither of these practices is common in the Ruvu and Zigi catchments and it is difficult for outsiders who have no clan associations to acquire land (Chamshama, Iddi & Mvena, 2008). Customary law in Tanzania is not necessarily aligned with international thinking on human rights, as it often restricts inheritance to the male line (as is common in the Zigi catchment), thereby heightening the vulnerability of women and perpetuating the cycle of poverty. In the Ulugurus, much of the land is owned by particular clans (‘*ukoo’*), which results in unequitable ownership patterns, in which some individuals have ample land that has been passed down from their parents, whilst others have little or nothing.The Waluguru (the dominant ethnic group in the Ulugurus) are a matrilineal society (Blomley 2013), and land can be inherited through the families of women. However, some women still access land through their husbands (CARE Report, 2007), especially where families observe the Muslim faith (NorConsult, 2012). In the Zigi catchment, where the dominant ethic group is the Sambaa (a strongly patriarchal society), most women do not have direct access to land. Due to increasing land scarcity, however, growing numbers of men are moving to urban centres in their efforts to seek employment, leaving women to head the households and manage the land.

48. Availability of creditis limited and capacity to save money is weak. More than 75% of the households in these areas are categorised as poor, although there is great variation from one place to the next, due to the types of economic activities, altitude (and, therefore, rainfall), location relative to markets, the condition of roads and access to other facilities such as water services and electricity.

The Institutional Context

49. A high degree of inter-connectedness characterises integrated watershed management, requiring the participation of a wide range of institutions fromvarious sectors in government, the private sector and civil society. There are also strong links between land-use planning, land management and water use by a variety of sectors. In Tanzania, the institutional framework for water resources management is strongly decentralised and organised around numerous participatory and representative forums cutting across five levels of basin management – national, basin, catchment, district and community levels.The result of this is that the institutional context for the implementation of this project is complex, and spans numerous sectors including water, land use planning, agriculture, livestock and fisheries, forestry, mining, human settlement and social development. During the PPG, an institutional analysis was undertaken to identify all of the key institutions that are involved in water resources management and SLM, and these are described briefly below.

Institutions that are directly mandated with the management of water resources

50. ***Ministry of Water (MOW)*:** The Ministry of Water is responsible for sustainable development and management of water resources for social and economic development in Tanzania. It also co-ordinates the implementation of national water policy and legislation, and manages urban and rural water supplies, sanitation systems and related services. Key functions of the Ministry include: sectoral co-ordination, monitoring and evaluation; review of policy and legislation; formulation of technical standards and water resource management guidelines; co-ordination of trans-boundary water issues; water quality monitoring; co-ordination of data collection and monitoring of water resources; and supervision of the Basin Water Boards and other water resources agencies (the Water Resources

Institute and the Dam Drilling and Construction Agency). The Minister responsible for Water is advised by a National Water Board. Under the Minister, there is a Permanent Secretary and four technical directorates: Water Resources, Rural Water Supply and Sanitation, Urban Water Supply and Sanitation and Water Quality. Below the Director for Water Resources are four Assistant Directors for Assessment and Monitoring, Planning and Research, Protection and Environment and Transboundary Water Resources. The Water Resources Directorate is responsible for managing theninneWaterBasin Offices (WBOs). The MOW has been appointed as the Implementing Partner for this Project.

51. ***Basin Water Boards and Water Offices***: Tanzania is divided into nine major river basins, each with a Basin Water Office reporting to a corresponding Basin Water Board. Amongst the key functions of the Basin Water Boards are to: collect, process and analyse data for water resource management, monitoring and assessment; co-ordinate technical aspects of trans-boundary water issues; co-ordinate and approve basin water resource management budgets and plans; approve, issue and revoke water use and discharge permits; enforce water use permits and pollution control measures; facilitate co-operation between sectors at local level; resolve conflicts, co-ordinate stakeholders and integrate district plans.

52. The two Basin Water Boards of relevance to this project are the ***Wami-Ruvu Basin Water Board*** (which has its head office in Morogoro and satellite offices in Dar es Salaam and Dodoma) and the ***Pangani Basin Water Board*** (which has its head office in Moshi, with satellite offices in Arusha and Tanga). The Basin Water Boards are multi-stakeholder institutions, comprising seven to ten members appointed by the Minister of Water. Membership of the Boards is drawn from public and private institutions including Catchment Water Committees, Local Government Authorities, Urban Water and Sanitation Authorities, the MOW and private sector partners. The Basin Water Offices are the executive offices of the Basin Water Boards and each is headed by a Basin Water Officer, supported by a staff comprising hydrologists, hydro-geologists, environmental engineers, chemists, community development officers, technicians and financial and administrative support staff. For daily technical work, the Basin Water Officer reports to the Director of Water Resources in the Ministry of Water, although the Basin Water Boards are financially and administratively autonomous institutions. Basin Water Offices are mandated to:issue water-use permits, collect water user fees and use them for office operations; monitor and regulate water use according to natural availability; control and take legal measures against water polluters; resolve water-use conflicts; sensitize stakeholders on sustainable use of water resources; facilitate the formation of Catchment and Sub-Catchment Committees and Water User Associations; operate and monitor water resource monitoring stations; assess the quantity and quality of water in the basin; and co-ordinate the development and implementation of water resources management plans.

53. ***Catchment Water Committees:*** The national water resources management structure makes provision for the establishment of Catchment Water Committees. These are multi-stakeholder institutions that co-ordinate integrated water resource management at the catchment/sub-catchment level. They play an important role in resolving water use conflicts and may perform other delegated responsibilities from the Basin Water Board or its executive office. Catchment Water Committees are headed by catchment/sub-catchment water officers who are appointed by the Water Basin Board. The Pangani Basin has been divided into 4 catchments including the main Pangani (30,340km^2), the Mkomazi (5,340km^2), the Kikuletwa (13,260km^2) and the Umba-Zigi (10,300km^2). The Pangani Water Basin Board has initiated the process of establishing catchment committees in the Kikuletwa and Umba-Zigi catchments. Catchment Water Committees are yet to be established in the Ruvu Basin.

54. ***Water User Associations (WUAs):*** TheNational Water Policy (NAWAPO)makes provision for the existence of Water User Associations (WUAs) or Water User Groups (WUGs), which represent the most decentralised level of management within the Tanzanian water management structure. The purpose of WUAs is to assist the Water Basin Offices with local-level management of water resources. Their key responsibilities are to: manage local-level water allocation; mediate disputes;

collect information; participate in the preparation of water utilisation plans; enforce water basin regulations; collect water user fees, and conserve and protect water resources.

55. WUAs are legal entities registered by the Basin Water Boards. They are guided and bound by their own constitutions and are led by management committees as stipulated in the Water Resources Management Act (Act 11 of 2009). WUAs are represented on Catchment Committees (where these exist) and on the Basin Water Boards. They are umbrella organisations made up of multiple water users who rely on a common water source (e.g. an entire river, a section of a river or common drainage system). WUAs can apply for water rights on behalf of their members for activities such as irrigation or watering of livestock, and they are responsible for collecting the water user fees required to pay for these water rights.

56. Currently there are 11 registered WUAs in the greater Pangani Basin, including one WUA that covers the entire Zigi-Mkulumuzi Catchment – it includes 250 founder members and serves some 84 villages. Although it is active in the catchment, it faces many challenges that will have to be overcome for it to become effective. In the Ruvu there are currently four registered WUAs (at Mfizigo, Upper Ngerengere A and B, and Lower Ngerengere), but none of these is fully functional. A fifth WUA is currently under formation in the Mzinga River (Mgeta sub-catchment).

57. ***Urban Water and Sanitation Authorities (UWASAs***): Tanzanian Water Policy separates water resources management and regulatory functions from service delivery. Urban Water and Sanitation Authorities are parastatal organisations that are licensed in accordance with the Energy and Water Utilities Regulatory Authority Act (2001) and whose operations are governed by this legislation. They are responsible for preparing business plans to develop and provide water supply and sewerage services including capital investment plans. There are three UWASAs of relevance to the proposed Project: Tanga-UWASA (serving Tanga City), MORUWASA (serving Morogoro Urban) and DAWASA (serving Dar es Salaam, Bagomoyo, Kibaha and other small settlements along the two transmission mains of Upper and Lower Ruvu). Under the provisions of the Act, DAWASA has contracted a Private Operator, DAWASCO (the Dar es Salaam Water Supply Company) to perform some of its operational functions, including making some of its assets available for the provision of water and sewerage services.

Institutions that are indirectly involved in Integrated Water Resource Management (IWRM)

58. ***The National Land Use Planning Commission (NLUPC)and the Ministry of Lands, Housing and Human Settlements Development (MLHHSD):***The MLHHSD is mandated with the allocation, registration, mapping and planning of land use in Tanzania. It has a number of agencies dealing with these matters, including the *National Land Use Planning Commission* (NLUPC). The National Land Use Planning Commission (NLUPC) was originally brought into being in 1984 to co-ordinate the activities of the numerous sector departments involved in land use planning activities (IIED, 1993). The National Land Use Planning Act (of 2007) defines the principal functions of the NLUPC as being to: prepare regional physical land use plans; formulate land use policies for implementation by government; and specify criteria, norms and standards for protection of land resources. As an advisory organ of state, the NLUPC recommends measures to ensure that sectoral policies take adequate recognition of their impacts on land use and the maintenance of land quality. The NLUPC is responsible for stimulating public and private participation in programmes and activities related to land use planning. Towards these ends the MLHHSD and the NLUPC have developed a set of Guidelines for Participatory Village Land Use Planning, Administration and Management in Tanzania (NLUPC/MLHHSD, 2013). The NLUPC will play an important role in supporting and providing technical inputs to theland-use planning to be carried out under the proposed Project.

59. **The *Division of Environment* (DoE) in the *Vice President's Office*** (VPO) has overall responsibility for overseeing the formulation and implementation of environmental policy and

regulations. The Division of Environment is led by a Director and comprises three Sections: Environmental Natural Habitats Conservation; Environmental Management of Pollution; and Environmental Impact Assessment (EIA). The coordination of biodiversity management – including forest biodiversity – falls within the mandate of the Environmental Natural Habitats Conservation section. The DoE is the national focal point for implementation of the United Nations Convention on Combatting Desertification (UNCCD) and serves as the National Secretariat to combat land degradation and desertification. It is also the Focal Point in all matters relating to Global Environment Facility (GEF) activities. It plays an important role in ensuring the involvement of all stakeholders in relevant projects and in communicating the results of these projects to the broader public.

60. **The *Ministry of Natural Resources and Tourism* (MNRT): The MNRT** has responsibility for overseeing the management of all natural, cultural and tourism resources in Tanzania. The *Forest and Beekeeping Division* (FBD) within the MNRT is, in turn, directly responsible for the development of forest policy, laws and regulations and for supervising their implementation in the forestry sector. The FBD is responsible for managing natural and plantation forest reserves on public land, including the protection of catchment areas, which it does through The *Tanzania Forest Service* (TFS). The TFS is an executive agency under the FBD (in terms of the Executive Agencies Act Cap 245, through the Establishment Order GN 269 of July 2010) that is mandated with the establishment and management of national Forest Reserves (both natural and plantations), Bee Reserves and forest and bee resources on reserved land. According to the Establishment Order, TFS owns all central government forest reserves (including mangrove forests, nature reserves, catchment forests, coastal forests, productive forest reserves and proposed bee reserves), an area of ~15 million ha. It also manages industrial tree plantations.The TFS is responsible for the management of the Amani and Uluguru Nature Reserves that fall within the footprint of this Project.

61. ***The Ministry of Agriculture, Food Security and Co-operatives (MAFC***):The mission of the MAFC is to provide high quality agricultural and co-operative services, create a supportiveenvironment for stakeholders, build agricultural capacity in local government authorities and facilitate involvement of the private sector in contributing effectively to sustainable agricultural production, productivity and co-operative development. Its specific functions include: formulating, co-ordinating and monitoring the implementation of agricultural policies; collaborating with Local Government Authorities, the private sector and other service providers to provide a relevant technical extension service; monitoring crop production to maintain strategic food reserves and promote appropriate post-harvest technologies; and stimulating, undertaking and co-ordinating agricultural research, development and training. As this Project has identified capacitation of agricultural extension services as one of its key areas of intervention, and farming practices are a key area of focus, close collaboration with the MAFC will be required.

62. ***The Ministry of Livestock and FisheriesDevelopment (MLFD***): The MLFD is mandated with the overall management and sustainable development of livestock and fisheries resources for achievement of the Millennium Development Goals relating to food security and the eradication of poverty. Its functions include developing and implementing a national strategy for improving the livelihoods of communities dependent on livestock and fisheries in ways that do not compromise animal welfare or conservation of environmental resources. The MLFD works to build the technical and professional capacity of local government authorities and private sector partners and to develop and upscale appropriate technologies for sustainable livestock and fisheries productivity. Engagement with the MLFD will be vital for successful delivery of the parts of this Project that deal with livestock and rangeland management.

63. **The *Prime Minister's Office-Regional Administration and Local Government*** (PMO-RALG): The office of the Regional Administrative Secretary (RAS) is responsible for all development planning at the regional level. The RAS is the Chief Executive in each Region and co-ordinates Government personnel representing sectoral line ministries at regional level. Each RAS is

supported by a Regional Commissioner who is the administrative overseer and the Presidential Representative in each Region. The Office of the RAS works in close collaboration with the District development structures that are co-ordinated by ***District Councils***. In respect of water resources management, the Regional Sectretariat is represented on the basin Water Boards. The Regional Administrative Secretaries of of Tanga and Morogoro Regions will participate on the Project Steering Committee for this project.

64. ***District Councils*:**Under the Office of each RAS there is a District Administrative Secretary (DAS) and a District Executive Director (DED). The District Executive Directors (DEDs) are the technical heads of all regional development and are responsible for managing resources for the delivery of basic services.The Regions are divided into District and Municipal Councils and Wards . Each Ward inlcudes a number of villages (typically two to four), each with its own Village Council. In respect of water resources managament, District Councils are responsible for co-ordinating physical planning with Urban Water and Sanitation Authorities (UWASAs) and for co-ordinating UWASA budgets within the Council fiscus. They are represented on Basin Water Boards and Catchment Committees, formulate and enforce by-laws, promote efficient water utilisation thorugh the agency of the District Water Engineer and prepare district plans.

65. ***Village Councils***: Village Councils are democratically-elected executive institutions responsible for planning and co-ordinating development activities at the local level and for rendering assistance and advice to villagers in respect of agriculture, forestry, water use and related issues. The Village Council is elected every five years by the Village Assembly (all the adults resident in a village). Each Village Council is headed by a Village Chairman and has numerous sub-committees for managing different matters such as finance, development, education, water and the environment. Village Natural Resource Committees (VNRC,or Village Environmental Committees, VECs) are responsible for overseeing the protection, conservationand lawful utilisation of natural resources (including water)at the village level. Village Councils are the primary users, managers and guardians of water resources and will be important roleplayers in this Project.

Other institutions of relevance to watershed management and SLM

66. ***Community Associations****:* There are a variety of community-level institutions in the Ruvu and Zigi catchments that play an important role in using and managing water and land resources. These include (but are not limited to: (i) UWAMAKIZI (*Umoja Wa Wajulima Wahifadhi Mazaringira Kuphuhwi-Zigi*), a farmer's association that was formed as executor of land-use changes linked to the Equitable Payment for Watershed Services (EPWS) project that was implemented in the Zigi catchment; they have received support from Tanga-UWASA and have an ongoing interest in implementing sustainable land management practices in the Zigi catchment. They have a current membership of 470 people (out of a potential 5,977) in 5 villages; (ii) The JUWAKIHUMA (*Jumuiya ya Wakulima wa Kilimo Hai Usambara Mashariki)* Organic Spice Grower's Association is a well-orgnised farmer's group that produces and markets organic spices in Muheza District. Their formation in 2008 was facilitated by a grant from the African Development Foundation (ADF). With a membership of over 600 farmers, Juwakihuma has an interest in building more sustainable livelihoods around organic spice growing and in expanding the land under organic spice-growing by 2,000 ha per year, but they need to be empowered to do this; (iii) WAKUAKUVYAMA (*Wakiluma wa Kuhifadhi Ardhi na Kutunza Vyama vya Maji* – or 'farmers for soil and water-source conservation), is a farmers' association that was originally formed under the CARE/WWF PES project that was implemented in the Mfizigo sub-catchment in the Uluguru Mountains; it is now a formally registered NGO with a management committee made up of representatives from 19 member groups in the Mfizigo sub-catchment of the Upper Ruvu. They need resources and technical support to continue and expand their operations; (iv) The JUKUMU Management Committee,with members from 21 Villages, manages the Ukutu Game Managament Area (which lies in the lowlands of the Ruvu catchment, taking in the alluvial plains between the Mkulazi River and the boundary of the Selous Game Reserve). They could play an important role in mainstreaming awareness about SLM.

67. ***Academic and Research Institutions***: There are a number of institutions that undertake research and training and provide consultancy servicesthat will be of relevance to integrated watershed management, land use planning and sustainable land management. Partnerships with these institutions will be essential for successful delivery of the project Outputs. The institutions include, but may not be limited to: (i) The *Tanzania Forestry Research Institute* (TAFORI), a National Institution (established by Act 5 of 1980) whose primary mandate is to conduct, co-ordinate and promote forestry-based research activities and to document and disseminate the results of this research.Its Head Office is in Morogoro, with seven research centres located in different ecological zones of the country ; (ii) The *Institute for Resource Assessment* (IRA) of the *University of Dar es Salaam* (UDSM) focuses on basic and applied research in natural resources and environmental management, agricultural production systems, water resources management, populations and human settlements and remote sensing. It also hosts the Tanzanian Natural Resources Information Centre (TANRIC) which has a national mandate for co-ordinating Geographic Information Systems (GIS) in the country; (iii) *Ardhi University* (formerly the University College of Lands and Architectural Studies, UCLAS), also located in Dar es Salaam, is involved in research, training and consultancy in the fields of environmental sciences, geospatial science and technology and urban and regional planning. Through its *Institute for Human Settlement Studies* (IHSS), the university contributes to the improvement of human settlements, living conditions and quality of life for people in both rural and urban areas;(iv) The *Sokoine University of Agriculture* (SUA), with its main campus in Morogoro and four satellite campuses in other parts of the country, offers degree programmes in the broad field of agriculture. It serves as a centre of research excellence in agriculture and related fields, with emphasis on practical skills, entrepreneurship, and the integration of basic and applied knowledge. SUA has been active in promoting research and training in SLM-related and livelihoods-orientated fields through its Centre for Sustainable Rural Development and its Development Studies Institute.

68. ***NGOs***: A large number of international and national Non-Government Organisations (NGOs)and Civil Society Organisations (CSOs) have been, or are currently directly involved inSLM, land degradation, watershed management, forest conservation and community development initiatives in the Uluguru and East Usambara Mountains (and elsewhere in Tanzania). Of particular relevance to this Project include: *Tanzania Forest Conservation Group* (TFCG); *World Wildlife Fund – Tanzania Country Office* (WWF-TCO); *IUCN East Africa Regional Office* (IUCN-EARO); *CARE International* (Tanzania Country Office); The *Wildife Conservation Society of Tanzania* (WCST); *BirdLife International*; the *Royal Society for the Protection of Birds* (RSBP); the *Eastern Arc Mountains Conservation Endowment Fund* (EAMCEF); *Sustainable Agriculture Tanzania* (SAT, based in Morogoro); MJUMITA (*Mitandao ya Jamii ya Usimamizi wa Misitu Tanzania* - a c*ommunity network for forest conservaiton Tanzania*); and MVIWATA (*Mtandao Wa Vikundi Vya Wakulima Tanzania – a farmers assocation registered as a Trust).*In addition to these organisations, the *Ujamaa Community Resource Group*, who have worked mainly in north-eastern Tanzania, could play an important role in transfering to this project the lessons learnt in community-based land-use planning, especially in the context of sustainable rangland management.

69. ***Development Partners***play a critically important role by providing funding, development and technical support to SLM and integrated water resource management in Tanzania. Some of the main development partners include: *Royal Norwegian Government*;*United Kingdom Department for International Development (DFID)*;*The African Development Foundation (ADF) Food and Agricultural Organisation for the United Nations (FAO)*; *United Nations Environment Programme* (*UNEP)*; *Government of Finland;Deutche Gesellschaft für Internationale Zusammenarbeit* (*GIZ); United States Agency for International Development (USAID)*;*United Nations Development Programme (UNDP)*;*Global Environment facility (GEF); Danish International Development Agency (DANIDA)*; *World Bank(WB); the Critical Ecosystem Partnership Fund (CEPF); European Union (EU), World Land Trust* and *Japan International Cooperation Agency* (*JICA)*. The *Development Partners Group* (DPG), established in 2004, currently includes 17 bilateral and 5 multilateral development agencies. The collective approach of the Development Partner's Group to management of aid in Tanzania is guided by the Joint Assistance Strategy (JAST).

Policy and Legislative Context

70. Tanzania has a robust legislative and policy framework for promoting integrated water resource management, participatory land-use planning and landscape-level implementation of Sustainable Land Management. The key legislation and policies of most direct relevance are described briefly below.

Policies and legislation that have a direct bearing on watershed management

71. At the broadest level, major policies, and their respective legislation, that have a direct bearing on the management of water resources and watersheds include,*inter alia*: the National Vision 2025; *Mkakati wa Kukuza an Kupunguza Umaskini Tanzania* (the National Strategy for Growth and Poverty Reduction, known as MKUKUTA II); The National Water Policy (NAWAPO); the National Water Sector Development Strategy (NWSDS) and Water Sector Development Programme (WSDP); The Water Resources Management Act; the Urban Water And Sanitation Authorities Act; and the Operational Plan for the Protection of Water Resources (currently under development).

72. The ***National Development Vision 2025*** and the ***National Strategy for Growth and Poverty Reduction (MKUKUTA II): The National Development Vision 2025,*** was adopted in 2001 to provide broad guidance on the strategic goals of social and economic development in the country. It aims to raise the general standard of living of Tanzanians to the level of a typical medium-income developing country by 2025 through achieving high quality livelihoods, attaining good governance through the rule of law, and developing a strong and competitive economy. Fast growth will be pursued whilst effectively reversing current adverse trends in the loss and degradation of environmental resources (such as forests, fisheries, fresh water, soils, climate, and biodiversity). ***MKUKUTA II*** is the National Strategy for Growth and Development in Tanzania. Both the National Development Vision and MKUKUTA IIrecognize that access to water and sanitation services is important for improved quality of life, as well as for economic growth. These strategies emphasize the importance of strengthening water resources management to cater for socio-economic activities (irrigation, hydropower generation, industrial and domestic use) as well as for maintaining ecosystem functioning.

73. ***The National Water Policy, 2002*** (NAWAPO): This sets out the policy framework for the water sector in Tanzania. It is oriented towards achieving the Millenium Development Goals for water and sanitation and incorporates the overall development goals set out by the Vision 2025 and MKUKUTA II. NAWAPO sets out a holistic basinapproach for integrating multi-sectoral planning and objective-setting and promotes Integrated Water ResourceManagement (IWRM) approaches. It provides a national framework for protection of water catchment areas, conservation and restoration of degraded wetland areas, promotion of appropriate technologies for efficient water use and wastewater treatment and recycling, and adoption of user-charges that reflect the true economic value of water in different sectors. In general, the policy aims to improve health and alleviate poverty of the population through improved access to adequate and safe water and sanitation.

74. *The* ***National Water Sector Development Strategy , 2006 - 2015 (NWSDS)and Water Sector Development Programme, 2006 – 2025 (WSDP):*** *The* Government adopted the National Water Sector Development Strategy (NWSDS)in 2006 as the vehicle for implementation of the National Water Policy (NAWAPO). This Strategy is framed on the principles of Integrated Water Resource Management (IWRM) and promotes a decentralised and participatory approach to water governance. It underscores the need for environmental protection and conservation for the sustainability of all aspects of water development, management and use. The National Water Sector Development Strategy is operationalised through the National Water Sector Development Programme (WSDP, 2006 - 2025) which provides the strategic background for implementation of plans and interventions for the achievement of national water resource management targets. The Water Sector Development Programme has five components including: Water Resources

Management, Rural Water supply and Sanitation; Urban Water Supply and Sanitation; Sanitation and Hygiene and Programme Delivery Support. The WSDP will establish an Environmental and Social Safeguards Unit within the Ministry of Water; this will facilitate effective enforcement, capacity building and monitoring.

75. ***The Water Resources Management Act (WRMA), No. 11 of 2009:***This Act replaces the earlier Water Utilisation Act (Act 42 of 1974, with its subsequent amendments) under which the Minister for Water in 1989 gazetted nine water basins for the purposes of water resources administration and management. It was under this Act that the Government established Water Basin Boards and Offices in each of the nine basins, including the Pangani and Wami-Ruvu Basins. The Water Resources Management Act of 2009 provides the institutional framework for sustainable management and development of water resources and outlines principles for water resources management. It also outlines measures for prevention and control of water pollution and for participation of stakeholders and the general public in implementing the National Water Policy. The Act introduces legal requirements for any person who diverts, dams, stores, abstracts, or uses water from surface or underground sources for any development.

Policies and legislation that have bearing on the integration of SLM into the water sector

76. **The *National Environment Policy*(1997)**: The National Environment Policy (NEP) articulates the relationship between poverty and environmental degradation, and identifies six major environmental problems for urgent attention: (i) land degradation; (ii) lack of accessible, good quality water for both rural and urban inhabitants; (iii) environmental pollution; (iv)loss of wildlife habitats and biodiversity; (v) deterioration of aquatic systems; and (vi) deforestation. It seeks to strengthen the mainstreaming of environmental management into other sectors, including: agriculture; livestock; water and sanitation; health; transport; energy; mining; human settlement; industry; tourism; wildlife; forestry; and fisheries.

77. ***The Environmental Management Act (EMA),Act 20 of 2004***: The Environmental Management Act provides the legal and institutional framework for the sustainable management of the environment and natural resources in the country – this includes water resources. It clarifies the environmental management mandates of the national, regional and local level institutions, civil society, private sector and other stakeholders. It also defines key environmental planning and management tools and provides for environmental quality standards, economic instruments, and meeting of international obligations. It prohibits human activities within 60 metres of a riverbank (or the boundary of other aquatic features), where such activities may have a negative effect on the water resource.

78. ***The National Land Use Planning Act (NLUPA), Act no.6 of 2007***: The National Land Use Planning Act recognises the critical role of a harmonised strategy for effective planning and management of land and other natural resources (which include water). It sets out the principles that govern rural land useplanning, administration and management in Tanzania, and provides for the full participation of stakeholders in the planning process (NLUPC & MLHHSD, 2013). Under this Act, a National Land Use Master Plan (NLUMP) was prepared in 2009, for the period 2009 – 2029. This Master Plan describes the broad-scale land use patterns in the country, identifies future land management challenges and alternative scenarios for land use and development, describes principles for sustainable land management and provides guidance for sectoral land use planning and administration. Under the National Master Plan, District Authorities, working in consultation with National Ministries and Regional governments, are responsible for preparing District Land Use Plans. These are legally enforceable plans that indicate what activities are permissible in different parts of the District, and provide a framework for public and private sector investment in different types of developments. At local level, Village Councils, supported by Participatory Land Use Management teams (PLUMs), are directly involved in developing and implementing Village Land Use Management Plans (VLUMPS).

79. The legal basis for Village Land Use Management Plans is found in Tanzania's local government legislation (mainly the ***Local Government Act of 1982***), which enables village governments to pass local by-laws. Village by-laws are a central component of the participatory landuse planning process because they give the land use plans a legal basis for enforcement. Once the village by-laws that have been developed by the Village Council have been approved by the Village Assembly, they must then be approved by the District Council to come into force.Once the District Council has approved the village by-laws, they have legal force equivalent to any other law in Tanzania, and anyone violating the provisions of a village land use plan can be prosecuted.

80. ***The Land Policy*** (1995): The overall aim of the *Land Policy* is to promote and ensure a secure land tenure system, encourage the optimal use of land resources, and facilitate broad-based socio-economic development without endangering the ecological balance of the environment. The relevant objectives and goals of the National Land Policy are: (i) Village Councils (elected leaders) shall administer Village Lands in consultation with Village Assemblies (all adults living in a village); (ii) the government will assist villages in demarcating their boundaries and implementing their management authority over these lands; (iii) Village Land Use Planning will be simplified for speedy execution; and (iv) Government will ensure that permits and licenses for natural resource exploitation will comply with land use polices and environmental and conservation policies.

81. ***The Land Act and the Village Land Act, Act 5 of 1999***: These Actsempower village governments with devolution of management rights over land. They enable villages to draft and enforce bylaws and establish management institutions for Community Based Natural Resource Management (CBNRM) and Community-Based Forestry (CBF), including the Village Assembly, Village Council, Village Environment Committee, Village Natural Resource Management Committee and Village Scouts or Guards. The Land Act makes legal provision for common property to be registered as statutory entitlements in Customary Lands. The Village Land Act requires villages to allocate lands between individual and communal categories, as well as designating some lands as areas set aside (*akiba*) to be allocated to the individual or communal areas at a later time. It thus provides a relatively secure tenure framework for communal land uses such as grazing pastures and forests, as well as specific requirements for basic land use planning and zoning.

82. ***National Agriculture and Livestock Policy:*** This policy recognises that pressure for agricultural land is increasing and, in response to this, recommends that land tenure laws are reformed and that soil conservation measures are put in place. Key elements of this policy relate to the use of natural resources (including water), land tenure and land use planning. The policy states that villages should be allocated enough land for their economic use and to achieve food security, and that people should be afforded assistance with sustainable land practice and modern animal husbandry methods in order to minimise overgrazing and increase livestock productivity. The agricultural policyalso promotes the access of women and youth to land, credit, information and education.

83. ***Forest Policies***: Several major policies to support Forest Management in Tanzania have been developed over the past decade. Foremost are the *Forest Policy* (1998)[10] - which was operationalised through the *Forest Act* (Act 14 of 2002) -and the *National Forest Programme* (NFP, 2001)[11]. These policy and legal documents have been accompanied by regulations and guidelines, including a major effort to involve communities in forest management through the promotion of Participatory Forest Management across both Forest Reserves and forest on village lands.In line with the Forest Policy, the Forest Act and the Village Land Act, the Ministry of Natural Resources and Tourism has issued draft *Guidelines for Community-Based Forest Management* (2001)[12] to provide practical guidance to its staff and to district and village authorities for implementation. The guidelines make clear that the

[10] The Forest Policy is currently under review.
[11] The NFP is currently also under review.A revised Forest Programme is expected to be adopted in 2014.
[12]These guidelines are currently in the process of being revised and updated. A revised set of guidelines are expected to be adopted and gazetted in 2014.

target population for community-based forest management are residents living within and adjacent to the forest domain. The establishment of joint management committees (village and sub-village level) and joint management agreements are also promoted.

84. ***The National Action Plan for combatting desertification, land degradation and drought (NAP 2, 2014)***: The NAP is Tanzania's national action programme to reduce and, where possible, reverse the impacts of desertification, land degradation and drought (DLDD) in order to contribute to poverty alleviation, improve livelihoods, conserve natural resources and achieve sustainable development goals. The NAP has been prepared in alignment with the operational objectives of the United Nations Convention to Combat Desertification (UNCCD) 10-year strategy (2008 – 2018), and under the guiding framework of the Tanzania Development Vision 2025.

85. ***The Integrated Investment Framework And Integrated Funding Strategy for SLM in Tanzania (2014):*** The Integrated Investment Framework (IIF) and Integrated Financing Strategy (IFS) for Sustainable Land Management provides a comprehensive and realistic roadmap of prioritised investment needs and a systematic framework for mobilising resources for the implementation of the NAP and United Nations Convention to Combat Desertification (UNCCDD) and the promotion of SLM in Tanzania.

86. **The *National Strategy for Reduced Emissions from Deforestation and Forest Degradation (REDD) (2013):*** This strategyhas been developed to guide the coordination and implementation of mechanisms required for Tanzania to benefit from a post-2012, internationally-approved system for forest-carbon trading, based on demonstrated emission reductions from deforestation and forest degradation and other aspects of REDD+. The strategy addresses monitoring, reporting and verification systems, financial and other incentives mechanisms, stakeholder engagement, awareness-raising and communication, as well as mechanisms for dealing with the drivers of deforestation and degradation (D&D).

87. ***The National Adaptation Programme of Action - NAPA (2007***): NAPA comprehensively identified vulnerable sectors to climate change, including, but not limited to,water and wetlands, agriculture, forestry, coastal and marine resources and tourism. The NAPA puts forward a range of adaptation strategies and priorities. It indicates the existing and potential adaptation activities required for each sector, and addresses issues such as: identifying and developing immediate and urgent activities to adapt to climate change and climate variability; protecting life and livelihoods of people, infrastructure, biodiversity and environment; and mainstreaming adaptation activities into national and sectoral development policies and strategies, development goals, visions and objectives.

THREATS, ROOT CAUSES and IMPACTS

88. The threats prevailing in these catchments can be loosely divided into: direct threats to land quality (land quality being used here as an indicator of land degradation), and direct threats to watershed services (catchment values,water quality and water flows). Each of these is discussed in further detail below.

89. Direct threats to land quality include: deforestation; uncontrolled use of fire in ecologically sensitive habitats; inadequate soil and water conservation measures and other inappropriate farming techniques; over-stocking and overgrazing; population pressure and encroachment in riparian zones; unsustainable harvesting for firewood, charcoal production and building. Direct threats to watershed services include: increased erosion and sedimentation; pollution and eutrophication; decreased water flows (and increased water demand); unregulated and illegal water abstractions (and lack of compliance with water basin regulations); illegal gold mining; and encroachment into riparian zones (linked to increased population pressure). These threats are presented in Table 1 below, indicating their extent, severity and the urgency with which they should be addressed. (Note: the rankings are

based on a survey and analysis that was undertaken during the project formulation process, and on other documented findings).

Table 1: Threats to land quality and watershed services, ranked by extent, severity and urgency

Threat	*Extent*		*Severity*		*Urgency*	
	Ruvu	*Zigi*	*Ruvu*	*Zigi*	*Ruvu*	*Zigi*
Direct threats to land quality						
Deforestation (clearing for cultivation)						
Uncontrolled use of fire						
Inappropriate farming techniques						
Encroachment in riparian zones						
Unsustainable harvesting						
Overstocking/overgrazing						
Population pressure						
Direct threats to watershed services						
Decreased water flows						
Erosion and sedimentation						
Pollution of water bodies						
Encroachment in riparian zones						
Illegal abstraction and user conflicts						
Illegal gold mining						
Invasive alien vegetation						

Note: Red indicates the greatest extent, severity or urgency, orange indicates a medium level and green the lowest. It should be noted that ALL of these threats require attention, and the ranking is used simply to indicate the priority with which Water Basin authorities need to address the issue.

Direct threats to land quality

90. ***Deforestation*:**It is well established that deforestation is one of the major drivers of land degradation in the Eastern Arc Mountains (Hall *et al*, 2009). It is estimated that as much as 80% of the original extent of forest in the Eastern Arc Mountains as a whole has been lost (Green *et al*, in press), although not all of the mountain blocks are equally affected. The main cause of deforestation is clearing of land to make way for cultivation, primarily shifting, subsistence farming, but also for commercial farming estates (Burgess *et a*l., 2007; Yanda and Munishi, 2007). Rates of forest loss have slowed in recent years, probably due to the fact that most remaining forest iseither at high altitude on extremely steep and rugged slopes where it is inaccessible, or is within the confines of protected areas, so there is little forest outside of reserves left to remove (Green *et al.*, inpress). Declining extent andincreasing fragmentation of closed-canopy forests reduces significantly both the biological and catchment value of the forests, and increases the risk of soil erosion, with serious consequences for the continued flow of watershed services (Burgess *et al.*, 2002; Hall, *et al*., 2014; Runsten *et al*, 2013).

91. In the Uluguru and East Usambara mountains, the severity of deforestation at different elevations is uneven, and driven by different pressures. In the Uluguru mountains at least 79% of the estimated paleoecological extent of forest cover was lost up to the year 2000, and in the East Usambaras forest cover was reduced by some 68% in the equivalent period (Hall *et al*., 2009). These figures correspond with an increase in the extent of land under cultivation. The table below (Table 2)shows the change in extent of land under closed-canopy forest in the Uluguru and East Usambaras, up to the year 2000.

Table 2: Percentage loss of forest cover (data extracted from Hall *et al*, 2009).

Mountain block	Forest area (km2)				%change
	Paleo (est)	1955	1975	2000	
East Usambaras	714	425	299	263	68.3
Ulugurus	1,620	338	321	279	79.1

92. In the catchment of the Ruvu River,deforestation has been concentrated in, but is not limited to, the sub-montane forest belt between 600 and 1,600 m (Schaafsma, *et al*., 2012). Almost 93% of submontane forest has been lost and much of what remains is within the boundaries of the Uluguru Nature Reserve, from an elevation of c.1,700m – it is only in the Uluguru North Reserve that significant areas of submontane forest still exist at altitudes down to about1,000m (Burgess *et al*, 2002; Hall *et al*, 2009). Although some deforestation has been caused by the establishment of softwood and eucalyptus plantations (in the highlands), the bulk of forest loss in the Ruvu catchment has been caused by shifting subsistence agriculture using inappropriate methods, with cultivation taking place right up to the boundaries of the Uluguru Nature Reserve (Burgess, 2009).The demand for land is greatest at higher altitudes, where soil fertility is better and rainfall is higher, which places increasing pressure on the protected forests.

93. In the East Usambaras, deforestation was initially driven by commercial logging operations followed by large-scale clearing of sub-montane forest for the establishment of commercial tea plantations. Some lower-elevation natural forest has been converted to commercial teak and rubber plantations, but most of the forest loss in the sub-montane forest belt has been caused by expansion of shifting, subsistence cultivation (Hall *et al*, 2009), with the greatest pressure being in the Kihuhwi sub-catchment (Yanda and Munishi, 2007). In the lowlands of the Zigi catchment, extensive areas of woodland have been lost through the establishment of sisal plantations. Some of these have since been abandoned, leaving the land prone to degradation. A growing interest in organic spice-growing in improved agroforestry systems is going some way towards restoring canopy cover in some areas, even if this does not represent natural forest cover (Pfleiger, 2010)and numerous forest restoration projects, particularly in the Derema corridor are contributing to recovery of forest cover.

94.***Inappropriate farming techniques***: Subsistence agriculture in these catchments is characterised by its shifting, slash-and-burn nature. Except at higher altitudes and in alluvial areas, soil fertility is generally low and crop producivity can only be maintained in the short term. Because of the prevailing poverty, people generally have limited agricultural skills and capital to invest, and poor land husbandry further reduces the fertility and productivity of the land. The combined effect of these factors is that after only a couple of seasons farmers abandon fields and search for new land to clear and cultivate (Yanda and Munishi, 2007). The demand for land is made more severe by the rapid rate at which the population is growing in these mountains (average increase of 3% per annum), especially in higher altitude areas around the boundaries of the Forest Reserves.

95. In general, farming practicein the Ruvu and Zigi catchments has been characterised by flat cultivation anda lack of crop rotation,with the main measure for addressing soil fertility being use of a short fallow period. Availability of manure and compost is limited and supplies of chemical fertilisers are beyond the financial reach of most farmers. Land is cleared on steep slopes, which increases the risk of erosion, especially when fields are abandoned and left fallow andbare.The acidic soils are not well-suited to the favoured annual crops, which further decreases productivity and profitability. Hydrologically, thecombined effect of these practices is to reduce the capacity of the catchment to trap and store water, resulting in increased run-off and erosion, loss of topsoil, increased sediment loading of rivers, and decreased dry-season river flows. The adoption of sustainable farming practices(bench terracing, green manuring, improved agroforestry, use of improved seeds and climate-smart crops) and conservation agriculture (mulching, zonal tillage, cover and mixed cropping) is increasing in some parts of the Ruvu and Zigi catchments, through the intervention of key projects such as the Uluguru Mountains Agricultural Development Project (UMADEP) andMitigation of Climate Change Through Agriculture project (MICCA), as well as other initiatives implemented by NGOs such as Sustainable Agriculture Tanzania (SAT), World Wide Fund for Nature (WWF), Wildlife Conservation Society of Tanzania (WCST), CARE and Tanzania Forest Conservation Group (TFCG). However, the adoption of SLM is still limited and highly localised, and needs to be scaled up to make a significant impactto the delivery of watershed services at a landscape scale (Chamshama, Iddi and Mvena, 2008).

96. ***Uncontrolled burning***: Uncontrolled use of fire is one of the most serious threats to forest integrity in the Eastern Arc Mountains (MNRT, 2006). Fire is commonly used to clear land for farming (the traditional practice of 'slash and burn'). It is also used to trigger new growth for livestock grazing, to drive animals for hunting, to manufacture charcoal, to collect honey (smoke is used to drive bees from their hives) and to reduce populations of tsetse flies and ticks so that livestock can be safely kept. Burning to clear land for cultivation removes all vegetative cover, exposing the soil and increasing the risk of runoff and erosion. Unmanaged fires spread into forests, woodlands and plantations and this is a significant driver of land degradation, especially in drier seasons. The risk of outbreak of destructive forest wildfires is particularly intense during the period prior to cultivation, when fires are set to burn trash and clear agricultural fields.

97.***Unsustainable harvesting***: Degradation of remaining forests and woodlands is caused by unsustainable and often illegal harvesting of trees for firewood, the manufacture of charcoal and for building materials and timber. Harvesting takes place both outside of and within protected forests - Hall *et al* (2009) have shown that between 1975 and 2000 over 100 km^2 of forest *within* protected areas was lost. Many foresters tolerate harvesting of timber from within protected forests because the surrounding communities need building materials and have few other alternatives (MNRT, 2006). About 94% of the population of the Ruvu and Zigi catchments reliesentirely on firewood for their fuel needsand about 73% of people use wooden poles in the construction of their houses (Schaafsma, 2012).In general energy sources such as kerosene and electricity are much too expensive and/or unavailable, although in some villages the use of fuel-efficient rocket stoves made from bricks has been promoted, but their use is not yet extensive enough to reduce wood harvesting by significant amounts (on a catchment-wide basis).

98. ***Charcoal production***: Burning of woody plants for charcoal production is a major driver of land degradation in the forests and woodlands in lower-lying areas of both catchments. The demand for charcoal for fuel in urban areas is extremely high - Dar es Salaam uses c.8.7 million 60 kg bags of charcoal per year, about 30% of which comes from the Morogoro District, including the foothills of the Ulugurus (Schaafsma *et al*, 2013). Morgoro town uses about 2.3 million bags of charcoal per year and the town of Tanga uses about 1 million bags. Because the miombo woodlands around Dar es Salaam and Morogoro have largely been depleted, producers are increasingly moving up into the mountains in search of trees in both the Ruvu and Zigi catchments. Traditionally, charcoal producers have practiced selective felling but, due to the decreasing density of trees per unit area and the increasing demand for charcoal in urban areas, producers have reportedly resorted to practicing clear felling of some remaining forest patches.

99. ***Overstocking and overgrazing***: Pastoralism is widespread in the lower-lying parts of the Ruvu sub-basin, ranging from the lowlands in the Mvuha area, to Ngerengere in the east, Kidunda in the south and extending down into the Chalinze, Kiserawe and Bagamoyo Districts in the Lower Ruvu catchment. There is currently no provision for watering points so livestock are watered directly at streams and rivers, contributing to the destruction of river-banks, and leading to conflicts between farmers and pastoralists as they compete for the same land and water resources. Although there are no accurate, up-to-date records of livestock numbers in the area, it is evident that unsustainable pressure on available pastures is leading to over grazing, loss of cover, compaction of soil, poor water infiltration, increased runoff and erosion. In the Ruvu catchment in particular, the situation has been worsened by the significant migration into the area of livestock-keepers from further north, who have either been displaced due to loss of their land to external interests or who are simply insearch for pasture and water for their livestock, as these resources have become progressively depleted elsewhere. This is leading to a furtherpressure on already-constrained land and water resources.

Direct threats to watershed services

100. ***Decreasing water flows, increasing water demand****:* Both annual and dry season flow rates and discharge volumesshow a significant decreasing trend in the catchments, despite there being no noticeable reduction in the amount of rainfall (WRBWO, 2010; PBWB, 2010). The decrease in annual

flow rates has been less for the Zigi River than it is for both the Main Ruvu and the Mgeta catchments (Yanda and Munishi, 2007). Dry season flow rates and volumes have decreased dramatically in the Ngerengere River below the Mindu Dam, but this is partly an artefact created by poor consideration of impacts during construction of the dam. Decreasing flow rates in dry seasons are generally an indication of lowered water storage capacity in the catchments. Although the reasons for the reduction in flow rates are not entirely clear, extensive loss of forest cover is likely to have played a major role (Burgess, *et al*, 2007; Hall *et a*l, 2009). Research conducted in the Ruvu catchment (James, 2012) has shown that lowest flow rates are associated with areas having the greatest extent of cultivated land, whilst highest flow rates are associated with well-forested areas.

101. Growing populations are creating increased water demand, with increased offtakes for domestic, industrial and agricultural use contributing to declining water levels (Blomley, 2013).Increased water abstractions (many of them illegal) in upper catchments are considered to contribute to decreased downstream flows (a situation that is worse in some sub-catchments than others, such as the Mlali, which is a tributary of the upper Ngerengere).Traditional irrigation as practiced in the Uluguru highlands (particularly in the Mgeta sub-catchment) is inefficient, with water losses along irrigation furrows being as high as 85% of offtake (IUCN-ESARO, 2010). Plans to increase the amount of large-scale cultivation under irrigation in the Lower Ruvu may place further strain on an already-stressed water supply.

102. The main demand for water, however, is from urban and industrial centres fed by the Zigi and Ruvu Rivers (PBWO & WRBWO hydrological reports, 2010).The Zigi River currently has to meet all of the water needs of the town of Tanga. Water demand is expected to increase with ongoing urban expansion and industrial development (especially around Pongwe), and as the Muheza District Council looks to water from the Zigi River to relieve the dire water shortage experienced by Muheza Town. In the Ruvu catchment, the greatest demand for water comes from the growing urban centre of Dar es Salaam. This is the commercial and industrial hub of the country, with a population expected to rise from its current size of 4.5 million people to 6 million by 2020. In 2010, the daily abstraction rate at the Morogoro Bridge offtake for Dar es Salaam could meetlittle over half the estimated water demand, and about 53% of the water offtake at that time was being lost through leakage, irrigation and other unplanned uses (IUCN-ESARO, 2010). Although the city makes use of groundwater to supplement the inadequate supply from the Ruvu (with over 50% of the city relying on groundwater), the overall scenario is one of water demand outstripping supply - a situation that is expected to worsen as the city continues to grow. This underlines the importance of restoring adequate base flows, improving water quality and strengthening the resilience of the Ruvu River to the adverse impacts of floods and droughts.

103. ***Erosion and sedimentation****:* Erosion and sediment deposition into streams and rivers poses a serious threat to sustained delivery of watershed services in both the Ruvu and Zigi catchments, although the problem is worse in the Ruvu catchment than it is in the Zigi. Sediment loads and flow volumes are also closely related. Clearing of forest and woodland, especially on steep slopes, causes not only the loss of trees (the roots of which help hold soil in place) but also the loss of the tree canopy, undergrowth,litter layer and woody debris that helps protect soil from the erosive power of water. In the Ruvu catchment sediment-fingerprinting has shown that70% of sediments entering the main Ruvu River arise from the steep, cultivated slopes in the upper parts of the catchment (James, 2012). At these higher elevations, cultivated lands contribute 81% of soil loss and 86% of sediment yield. Within the Upper Ruvu catchment, those sub-catchments that are the most intensively cultivated (the Mvuha and Mfizigo) have the highest rates of soil loss and sediment deposition and, conversely, those that are still reasonably well-forested or well-vegetated (i.e. the Kibungo and Mtumbizi) have much lower levels of soil loss and sediment yields. The Mgeta sub-catchment (which is most intensively cultivated) contributes more than 35% of the total sediment load in the Ruvu River. Turbidity values measured at the Morogoro Road Bridge over the Ruvu have increased steadily over time, and at times reach high enough levels to force the shutdown of the pumps at the Dar es Salaam intake (Makere, *pers. comm.).*

104. In the Zigi catchment, increasing sediment loads caused by erosion and landslides in the upper reaches of the river are resulting in decreasing depth and storage capacity of the Mabayani Dam. The depth of the dam has decreased by 38% and the storage capacity by 25% over the last 30 years (WWF, 2013).This holds serious implications for the sustainability of the water supply to Tanga.

105. ***Pollution****:*Declining water quality in both the Ruvu and Zigi River systems poses direct and indirect risks to human health and increases the costs of water treatment.In the Zigi catchment, the sources of contamination include agro-chemicals and fertilisers (mainly from commercial tea estates), organic pollutants (agro-processing effluents resulting from sisal decortication), heavy-metals (used by gold miners), poisons (leptones used in fishing),and contamination from raw or partially-treated sewerage, and other domestic wasteand detergents (from activities such as the washing of clothes). In some parts of the catchment human and domestic waste is disposed of directly into waterways. Mostly, communities are reliant on pit latrines for disposing of human waste, and where settlements are located directly alongsiderivers, the potential for contamination by leaching from the latrines is high. This poses risks to the health of the communities in the catchment, as most of them depend directly on untreated water from the river for all of their water-related needs. Eutrophication of the Zigi River is resulting in the river channel becoming choked by overgrowth of reeds, which slows flow rates. It alsoleads to overgrowth of open water by floating water weeds (water hyacinth, Nile cabbage and water ivy), which affects water quality and provides favourable conditions for reproduction of the vectors of diseases such as malaria and bilharzia. Eutrophication also impacts negatively on water quality in the Mabayani Dam, from which Tanga derives its water.

106. In the Ruvu catchment, increased turbidity as a result of sedimentation, especially at lower altitudes, is a greater problem than other forms of pollution (Yanda and Munishi, 2007).Turbidity (measured as Nephelometric Turbidity Units), Total Dissolved Solids (measured in mg/l), as well as levels of phosphates, nitrates and nitrites, are generally lower in the upper catchment (such as at the Kinole intake), when compared to sampling stations lower down in the catchment (WRWBO, 2010). However, high levels of faecal coliform bacteria (measured as CFU/100ml) are present in most waterways (IUCN-ESARO, 2010), which poses obvious health risks for communities relying on untreated water.In the Lower Ruvu (lowlands and coastal floodplain), contamination by agro-chemicals and organic pollutants (e.g.from commercial farming estates) and industrial effluents causes raised levels of phosphates and heavy metals, low dissolved oxygen content and high chemical oxygen demand values (IUCN-ESARO, 2010). This has increased the cost and complexity of water treatment required to render the water fit for consumption.

107. ***Population pressure and encroachment into riparian zones****:* In both catchments, land for settlement and cultivation is in high demand and increasingly short supply. In the Upper Ruvu catchment, population growth is rapid and increased numbers of people come into the area in the hope of finding land and making a living from the cultivation of fruits, vegetables and other crops. In sub-catchments such as the Mgeta, cultivation takes place along the banks of watercourses and in drainage lines as the soil is more fertile there and because of the proximity to water. In the Zigi catchment, large areas of land are taken up by tea and sisal estates, which forces communities into the narrow strips of land along rivers (e.g. in the Sakale district, villages occur at approximately 100 m intervals all along the river). People also favour settling along river-courses as most of the catchment has no water service infrastructure and people need ready access to water to survive. Although legislation precludes settlement or cultivation (or any other development) within 60 m of river-banks, this is not often observed, resulting in encroachment into riparian forest with negative environmental and hydrological consequences, and brings villagers into conflict with the water basin authorities.

108. ***Illegal gold mining:***In their efforts to establish livelihoods, a growing number of people have resorted to panning for alluvial goldin the upper catchments of both the Ruvu and Zigi Rivers. These mining practices are mostly illegal and have negative impacts on rivers, wetlands and the catchment forests. Uncontrolled mining is of particular concern in the Rugurefu, Sangalawe and Sakale areas in the upper reaches of the Zigi catchment, and within the Amani Forest Reserve. Artisanal gold mining causes water pollution (chemicals such as mercury are used to extract gold from ores), degradation of forest(trees are cut down to make way for mining), and disruption of riverbanks and riverbeds leading

to increased erosion and sedimentation and altered water flows – in places such as Rugurefu, miners are digging deep pits in the river beds and have diverted the natural river course through the construction of a canal to facilitate mining. Apart from the direct impacts of mining on the quality and quantity of water flowing into the Zigi River, the prospect of finding alluvial gold has caused a flood of people into the area (up to 40,000 people in Sakale village) which further compromises the ecological integrity of watercourses and wetlands in the East Usambara catchment forests, and adds to the socio-political and economic challenges faced by the village leaders.

109. ***Invasive alien plants:***Invasive alien plants appear to be an under-recognised problem in the Ruvu and Zigi river catchments. Their potential impact has however been noted in various reports (MNRT, 2006; MNRT, 2010) which highlight bramble (*Rubus)* and the umbrella tree (*Maesopsis)*as being of particular concern in the Uluguru and East Usambara Mountains, respectively.The potential negative impact of exotic and invasive alien species on catchment hydrology includes significantly decreased base flows and reduction in stream bank stability.

110. Underlying the directthreats to land quality and watershed servicesare deeper social, political, institutional and economic issues that drive land degradation and, indirectly, degradation of water resources.

LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION

111. The long-term solution to addressing the interlinked issues of land degradation, water security and poverty in the Ruvu and Zigi catchments lies in adopting Sustainable Land Management (SLM) as a key component of integrated natural resource management at the watershed level. Sustainable Land Management (SLM) offers a comprehensive approach to management of land and water resources and holds the potential to make significant differences in both the short and long term. The main objective of SLM is to integrate people's co-existence with natural ecosystems over the long term, in ways that improve livelihoods and food security, mitigate land degradation, relieve water scarcity, maintain ecosystem services and strengthen resilience to climate variation and change (Liniger *et al*., 2011).

112. Watershed management focuses on the integrated use of land, vegetation and water in a geographically discrete drainage area for the benefit of its residents, whilst conserving the hydrological services that the watershed provides and protecting downstream water facilities(World Bank, 2007). Focussing on implementing SLM at the watershed level will provide solutions that preserve and protect the natural resource base, increase soil quality, and secure water supply for human consumption, agricultural needs and improved socio-economic opportunities (Lenton *et a*l., 2009).

113. Achieving the vision of securing watershed services through the adoption of SLM will require:(i) setting up an institutional framework that creates an enabling environment in which all stakeholders can participate meaningfully in sustainable land stewardship ata catchment-wide scale; (ii) developing and implementing integrated land use plans that ensure optimal allocation of land for simultaneously generating environmental and development benefits, with explicit consideration given to implications for water use; (iii) strengthening institutional capacities as well as mechanisms for collaboration and networkingacross all levels of the water resource management structure; (iv) establishing knowledge-based decision-support systems for authorities, planners, advisers and land-users and building up a common and standardised pool of knowledgerelated to SLM technologies that can be fine-tuned and adapted to differing ecological, economic, social and cultural conditions;(v) understanding the cost-benefit ratio of SLM practices and using these to select and implement options that are cost-efficient, that yield the greatest environmental benefits and provide rapid and sustained pay-back to communities in terms of food or income; (vi) establishing stable and sustainable sources of funds for supporting the scaling up of SLM in the two watersheds; and (vii) creating incentives or motivational mechanisms to promote adoptionof SLM and offset its opportunity costs.

114. At the national scale, the Government of Tanzania is committed to addressing the problem of land degradation, as evidenced by the range of policies and programmes that are intended

topromotelandscape-level uptake of SLM.The water resources management sector has also introduced a range of new policies, strategies and institutional reforms that emphasise the links between land and water use and provide for decentralized management of water resources using integrated water resource management approaches.

115. At the local scale, there have been – and still are – numerous projects implemented by a range of Government agencies, NGOs, CSOs and development partners to address issues such as: forest protection and management; forest rehabilitation and restoration; sustainable agriculture and livestock management; the development of alternative sustainable livelihoods; rural financing schemes; community based natural resource management; alternative energy solutions (fuel-efficient cookstoves and solar lights); institutional strengthening and awareness raising; and, incentives for the protection of watershed services (PES).

116. Despite these efforts, and some notable individual project successes, deforestation still proceeds apace (with increased encroachment into the Amani and Uluguru Nature reserves), unsustainable agricultural production systems still predominate and land degradation remains severe, placing increasing pressure on critical water resources and compromising the livelihoods of thousands of subsistence farmers in the catchments of the Ruvu and Zigi Rivers (and elsewhere). The two main barriers to achieving the long term solution to these problems are:

i) *The absence of an enabling collaborative institutional framework for effective participation of stakeholders in controlling land degradation and upscaling Sustainable Land Management (SLM) in the two watersheds*; and

ii) *Inadequate demonstrated experiences in Integrated Water Resource Management (IWRM) approaches at the landscape level*.

117. The root causes underlying these barriers were investigated during the project formulation process and they are described below:

Barrier 1: ***The absence of an enabling collaborative institutional framework for effective participation of stakeholders in controlling land degradation and upscaling Sustainable Land Management in the two watersheds***

118. The main impediment to the integration of SLM into watershed management in the target catchments is not the overall policy framework, but, rather,an implementation gapin which the institutional, human and financial resources and technical capacity needed to deliver on the progressive policy framework are severely constrained, especially at district, catchment and community levels. Sectoral initiatives tend to be narrowly focussed with relevant ministries using different planning procedures with little cross-linkage, resulting in uncoordinated action, weak stakeholder linkages and participation and ineffective allocation of the limited resources that are available. Although the institutional framework for decentralised management of catchment resources is progressive, its effectiveness is compromised by uneven geographic coverage, weak and variablecapacity, conflicts of authority and limited managerial success. Many stakeholders are unaware of the importance of using sustainable land management practices that contribute to conservation of water resources, and they are either unable or unwilling to comply with water basin regulations. These factors, compounded by weak enforcement, are leading to conflicts that impede the uptake of SLM at the catchment scale. These issues are described in more detail below.

Lack of effective land-use plans

119. Land use planning is a powerful tool for ensuring optimal use of land and natural resources and for addressing conflicts over use of these resources. In Tanzania, land use planning is an intensive, participatory process in which the primary users of the waterare fully involved in the planning process. Institutions across the water management spectrum have limited capacity to generate, implement and enforce integrated land and water management plans that restore ecosystem functionality, maintain watershed services and enhance livelihoods. Currently only four of the seven

Districts and a small proportion of the villages in the two catchments have land use plans, and these are not being effectively implemented. Most of the villages and three of the districts have no land use plans. In the absence of effectively implemented land use plans that take adequate consideration of water use into account, unplanned settlement and inappropriate land use continues unchecked, causingongoing degradation of the catchments, unsustainable water demands and conflicts over land and water use.

120. One of the key challenges associated with land use planning at the village level is ensuring that villagers are fully involved in facilitating their own planning processes. While local communities mostly recognise the importantce of zoning different types of land use and developing by-laws governing these land uses, they often lack knowledge about the formal, legal and administrative procedures that need to be followed to guide the process. They also largely lack the resources and capacity to secure the technical support that they need, such as for production of maps and typing of bylaws. Their ability to follow-up at higher levels of district and national government is also often extremely limited. The National Land Use Planning Commission and District Facilitation Teams do provide support to villages in the development of their land use plans, but they do not have adequate staff and resources to provide support to more than a small number of villages in any given period.

Conflicts between water users

121. In both catchments there are numerous conflicts over water use, including: conflicts of scale (large-scale/commercial water users vs small-scale/subsistence users); conflicts of tenure (who is mandated to manage the water resource), conflicts of location (upstream-downstream users) and conflicts between users of different types (such as agriculture and forestry or agriculture and conservation/wildlife, as well as conflicts between and within villages, different socio-economic groupings, families and individuals claiming user rights on the same land and water resources). The most common conflict in the Ruvu and Zigi catchments (as it is elsewhere in Tanzania) is between crop producers and pastoralists (NLUPC, 2013). The expansion of agricultural land into rangelands results in overgrazing of remaining rangelands, or the movement of pastoralists with their cattle into other areas that previously had no cattle (or, at least, lower livestock densities). In the Ruvu catchment in particular, the situation is made more complex by the migration into the area of livestock keepers who practice transhumant pastoralism in which cattle are moved regularly, though flexibly, between dry and wet-season pastures. This introduces additional complexity to the issue of resolving conflicts over land and water use rights as these traditional practices are based on common property management across larger areas than individual villages. The migrants into the area do not usually share the many community links, family relationships and other reciprocal ties that enable this type of practice without conflicts arising (Ujamaa Community Resource Team, 2010). Resolving membership of Water User Associations is also more complicated in the case of transhumant pastoralism.

122. Consultations during the project formulation process indicated that conflicts in the target catchments also arise over who has the right, responsibility and community recognition to manage water resources. Newly-formed local resource management institutions come into conflict with pre-existing community institutions. In the case of the Zigi catchment, the Zigi-Mkulumuzi Water User Association, which is provided for in terms of national policy and law, was in existence before the UWAMAKIZI Farmers' Association (which was set up under the East Usambaras Payment for Ecosystem Services project). Whilst both organisations have an important role to play, there is confusion in the community as to the mandates and spheres of influence of the two organisations (in relation to water use), and the relationship of both of these organisations to other established village governance structures (Village Councils and Environmental Committees) adds a further layer of complexity. In the Ruvu catchment, a similar situation applies in the case of the Mfizigo Water User's Association (which is not really functional) and the WAKUAKUVYAMAfamer's association, which was set up under the Uluguru PES project.

Low compliance and weak enforcement of water basin regulations:

123.Conflict arises over the enforcement of water basin regulations. Water users are legally obliged to hold, and pay for, water use permits – the cost of a water permit depends on the purpose for which the water is being used (IUCN-ESARO, 2008). The process of applying for and processing water use permits is not well-understood, well communicated or accessible, especially to the poor, and there is no transparent tracking system for water permit applications or accessible register of approved water user rights.Small-scale farmers are often reluctant to pay for water rights, arguing that water is a common good, and many are unable to afford payments for water rights, living as they do at or below the poverty line. This is often compounded by a lack of awareness of the need to protect water resources within these communities. This results in low payment rates for water permits.Conflicts arise when village leaders and Water User Associations have to enforce payment for water rights, as it is difficult for them to 'police' other members of their own community to whom they may be related. Low compliance with water basin regulations, and weak enforcement capacity, results in numerous illegal abstractions taking place. This brings the Water Basin Offices into conflict with water users, and also makes it difficult for Water Basin Offices to monitor and manage water demand and patterns of water use.Water usage without water rights impacts directly on the functionality of theWater Basin Offices as they rely on the fees to fund their operations and management of water resources.

Lack of management integration

*124.*At the national level, the financial and human resources earmarked for baseline programs related to agriculture, livestock, forestry and water are deployed and managed by sectoral departments. Despite the progressive policy environment, sectoral programmes remain narrowly focused, with different sectors still working in 'silos.' For example,forestry activities focus on increasing tree cover or forest management, without addressing the rangeland management issues within their area of jurisdiction, as would be needed under a landscape-wide SLM or Integrated Water Resource Management strategy. This results in duplications and redundancies, and many opportunities for joint implementation are lost. The strongly sectoral approach also limits opportunities for sharing knowledge and experiences between departments and also between ministerial departments and agencies and other role-players (such as NGOs and research institutions).

Lack of co-ordination and weak stakeholder linkages

125.Formal administration within the river basins is complex, with divisions between national and regional management and between these and catchment and village-level management structures. In neither catchment is there an integrated, cross-sectoral plan that would facilitate a strategic, streamlined and cost-effective approach that would make it possible to address land degradation at a catchment scale, and bring stakeholders together around a common vision.Although Water Basin Offices are in place and are activein the landscape, they experience staffing, resource and technical capacity deficits that limit their ability to deliver on their mandates. They are also still not fully recognized as the focal points for basin-wide coordination. This results in weak stakeholder linkages and limited stakeholder involvement in the design, implementation and enforcement of natural resource management systems in the catchments. Mechanisms are needed to facilitate dialogue betweenresource managers and users with a view towards strengthening collaboration and ensuring effective mainstreaming of SLM into water resource management. Co-ordination mechansims are also needed to facilitate better linkage and complementarity between initiatives, and to ensure that new projects take cognisance of the outputs of earlier intiatives.

Problems with community-level administration

126. At the local level, there are numerous community structures that have been created to deal with different aspects of land and water resource management, which results in a confusing and administratevely inefficent situation. Some of the community institutions are the longer-standing, village governance structures such as Village Councils and Natural Resource (or Environmental) Committees, and others are more newly-introduced, such as Water User Associations (provided for in national policy and law), and various Farmers'Associations and other community groups that have

been set up by externally-funded projects and programmes. These institutions exhibit variable adminstrative capacity, some have overlapping mandates and all suffer from a lack of the resources and capacity they require to work effectively. There are also some parts of the catchment in which there are no effective community-level structures of any kind in place, or where the leadership is weak, which leads to a breakdown at this level of adminstration.

127. Capacity deficits in the Water Basin Offices have slowed down the formation and operationalization of Water User Asociations. Currently there is one WUA in the Zigi-Mkulumuzi Catchment, and only four in the Ruvu (Upper Ngerengere A&B,Lower Ngerengere and Mfizigo). The effectiveness of the Zigi-Mkulumuzi WUA is greatly compromised by the large geographic area in which it has to operate (some 1080 km^2), and the large number of villages (84) with which it needs to engage. Additional challenges include that the WUA has no means of transport for moving around the catchment; they have no proper office facilities, limited technical skills, no equipment or working tools; it has no funding and faces complex political issues relating to its institutional mandate and local recognition and support. The four WUAs in the Ruvu catchment are not operational and in most of the main Ruvu catchment no WUAs have yet been formed. Existing and new WUAs need to be trained in water resources management, the provisions of all relevant legislation, the principles of SLM and in the principles and practice of accountable financial planning and management. Co-ordination between WUAs and local government also needs to be strengthened.

Inadequate funding

*128.*In a survey conducted as part of the project formulation process, all of the institutions identified a lack of funding as one of the primary factors limiting their ability to design and upscale SLM efforts as part of integrated watershed management. None of the institutions has any dedicated allocations for SLM and many do not even have enough funding to meet the costs of their core operations. Most of the institutions rely solely on government funding, or on collected revenues, with occasional funds received via donors or, occasionally, private sector institutions. Existing sectoral allocations from the government basket are inadequateand the effectiveness of the investments is limited by high levels of duplication and redundancy arising from narrowly focussed sectoral approaches. The Water Basin Offices rely heavily on funding obtained through the collection of water user fees, and, although collection rates have increased over the past year, they are still wellbelow what is required to make the Basin Water Offices financially autonomous. Access to finance from non-government streams is hindered by a lack of technical capacity to design bankable SLM programmes, and by the high transaction costs and complex approval processes associated with these funds. There is a need to enhance the capacity of staff in all relevant institutions to design SLM interventions and develop proposals that will enable them to diversify their funding base for SLM. Existing sectoral allocations need to be re-aligned and increased and new financing mechasnisms such as public-private partnerships need to be explored.

Barrier 2: Inadequate demonstrated experiences in Integrated Water Resource Management approaches at the landscape level

129. Over the past ten or so years, there have been numerous environmental projects implemented (mostly byNGOs and development partners) in both the Uluguru and East Usambara Mountains. These have mostly dealt with different aspects of forest management, community based natural resource management, sustainable farming, rural financing and payments for ecosystem services. Whilst some of these projects have achieved notable successes, they have tended to be geographically scattered and localised, of relatively short duration, and implemented at a pilot scale, without subsequent follow-through or scaling up (for example, in 2008 a Strategic Landscape Management Framework was developed for the Uluguru Mountains as part of the Conservation and Management of Eastern Arc Mountain Forests Project, but this framework has not been implemented). Furthermore, individual

projects have not been sufficiently co-ordinated and there has been limited transfer of the lessons learntbetween different projects (Chimamba *et al*, 2008). The involvement of public institutions in these projects has also been limited (though there are some notable exceptions) and often these institutions have lacked the technical knowledge and skills, staff or resources to scale the projects up or sustain their gains into the future. Consequently, although the baseline is impressive, there is still a shortage of adequate demonstrated experiences in SLM contributing to integrated watershed management at the landscape level (as opposed to more piece-meal management of specific problems such as soil erosion or pollution in rivers). The particular issues that need to be addressed to overcome this barrier are described below.

Institutional capacity deficiencies

130. A preliminary institutional capacity assessment was conducted during the formulation of this Project. It indicated that there are institutional capacity deficits (staff, resources and technical knowledge and skills) right across the water resources management spectrum, with the greatest deficits being at the Basin, District and community/Village levels. Almost all institutions indicated that they had insufficient staff to promote, implement and upscale SLM, although the specific staffing needs varied between institutions. Across the board, however, institutions identified the need for more staff trained in land use planning, data analysis and gathering, GIS and mapping, monitoring and evaluation, community development and extension. In terms of strengthening the knowledge base for implementation of SLM, critical technical knowledge gaps were identified as: the principles and techniques of SLM and Integrated Water Resource Management; data gathering, analysis, modelling and management; GIS,mapping and remote sensing; monitoring and evaluation, and budgetting, financial management and proposal writing. All institutions reported a dire lack of funding for effective promotion, implementation and scaling up of SLM.

131. Water Basin Offices lack the equipment they need to gather information on the status of water resources, quantify water demand and usage patterns and develop water use plans. They also need GIS-based decision-support systems to monitor land use and to assess the social, environmental and economic impactsof changed land use practice over time. Items such as portable water quality testing kits, hand-held GPS devices, hydrometeorogical stations, instruments for measuring water use in trees, vehicles and computer hardware and software are either lacking or in limited supply. Although about 50% of their staff have been trained in the provisions of key legislation, and some have training in Integrated Water Resource Management, most have had little exposure or training in the principles and practice of SLM. Similar resource needs were identified by DAWASA, DAWASCO and Tanga-UWASA and the various community associations that were consulted.

132. A precondition for diffusion and adoption of sustainable land improvement and management practices is the presence of a functioning extension service, capable of providing training, outreach and input supplies. At the District level, inadequacies in the extension service were identified as a critical area for intervention. Community members and extension officers alike identified that there are not enough extension officers to provide a regular enough service across the catchments and that extension officers require training in the principles and techniques of SLM and IWRM in order to update their extension message and assist communities with the adoption of improved production systems. Linkages between research and the extension service are weak and research findings on issues such as the costs and benefits of SLM and the impacts of SLM on land degradation remain largely unavailable or undisseminated, with the result that farmers are not aware of the impacts of land degradation or the benefits they could reap from SLM. There is also a need for closer linkage between extension support provided for different production sectors, such as agrciulture, livestock and forestry.

Endemic poverty

133. Many of the communities living in these catchments are amongst the poorest in Tanzania, with 31% of households living below the poverty line. This means that they are heavily reliant on subsistence

agriculture to survive and are dependent on natural resources to meet daily food, fuel and shelter requirements. Most communities have no access to water services, and have no choice but to use water directly from rivers. Declining soil fertility limits the profitability of many farms and this is compounded by structural market weaknesses, poor road infrastructure and a lack of transport that makes it difficult for farmers to access markets and realise better returns from their produce. 134. Farmers in the Ruvu and Zigi catchments need viable alternative livelihoods that provide higher net returns and greater long-term benefits, whilst reducing pressures on natural resources caused by activities such as illegal logging and mining, and indiscriminate use of fire. The project will address this by working with communities to identify viable alternative income generating activities based on SLM production systems, with special emphasis given to female-headed households and other vulnerable social groups. Selection of appropriate measures will be informed by an accurate assessment of costs and benefits of different SLM measures in monetary and non-monetary terms. Assistance for the establishment of certain SLM measures may initially be needed, but maintenance costs will need to be met by farmers to ensure self-initiative.

135. The Government of Tanzania is requesting GEF support through this project to remove, in an incremental manner, the barriers described above.

136. The project is organised under two main components that address these barriers: The first will be addressed through Component 1 of the project, which will be to establish a collaborative institutional framework for water basin authorities to effectively plan, monitor and adapt land management and leverage national and regional investments for integrating SLM into watershed management. The second barrier will be addressed through Component 2 of the project, which will focus on reducing the effects of land degradation on watershed services and improving livelihoods through increased uptake of SLM measures in the Ruvu and Zigi catchments.

STAKEHOLDER ANALYSIS

137. During the project formulation process, a stakeholder analysis was undertaken to identify key stakeholders and assess their prospective roles and responsibilities in the context of the proposed Project. The Table below (Table 3) lists the key stakeholder organisations, provides a brief summary of their mandates (especially in relation to watershed management) and describes the anticipated role(s) of each of the stakeholder organisations in supporting or facilitating implementation of project activities.

138. A feature of the process that was followed during the development of this Project, was the involvement of a Project Reference Group. This Group was made up of representatives from key agencies involved in watershed management, including: the Ministry of Water (MOW), National Land Use Planning Commission (NLUPC); the Wami-Ruvu and Pangani Water Basin Offices (WRBWO, PBWO), Tanga UWASA; DAWASA; DAWASCO; Division of the Environment in the Vice President's Office (DoE-VPO), Ministry of Natural Resources and Tourism (MNRT), the Prime Minister's office – Regional and Local Government (PMO-RALG) and Ardhi University. The Reference Group participated directly in site visits during the missions undertaken by the Project Development Consultant, assisted with data collection and contributed to the development of the project documentation. They provided a direct channel through which progress with project development could be reported to key stakeholder institutions and through which the institutions could make input to the project formulation process.

139. The full stakeholder engagement plan that was implemented during the project preparation process is described in Section IV, Part III of this Project Document, which also outlines the approach to stakeholder engagement to be followed during project implementation.

Stakeholder	Mandate of the Institution	Anticipated roles and responsibilities in the project	Level of engagement
Ministries, Departments and Agencies (MDAs)			
Vice President's Office(VPO) Division of Environment (DoE) and the National Environmental Management Council (NEMC)	The DoE is responsible for the co-ordination of all national and international matters related to environmental protection and management. It is also responsible for national reporting to the relevant international conventions (e.g. UNCCD) and serves as the Focal Point for all matters relating to the GEF.	The DoE will ensure the alignment and integration of the project activities with national environmental strategies and plans and ensure policy-implementation; it will also assist with securing co-finance commitments and will communicate the results of the project to the broader community.	Key enabler and project partner, with representation on the ProjectSteering Committee and the Technical Team.
Ministry of Water (MOW)	The Ministry of Water (MOW) has overall responsibility for national water policies and strategies; management of surface and sub-surface water; and conservation and protection of water resources. It is responsible for sectoral co-ordination, monitoring and evaluation; reviewing policy and legislation; formulating technical standards and IWRM guidelines; co-ordination of trans-boundary water issues; oversight of water quality monitoring; co-ordination of data collection and assessment of water resources; development of water resources of national interest (including dams); supervision, monitoring and evaluation of Basin Water Boards and supervision of the Water Resources Institute Agency and the Drilling and Dam Construction Agency.	MOW is the lead executing agency for this project with overall responsibility for implementation. In the project formulation phase it co-ordinated the Project Reference Group and was responsible for ensuring that all the lead agencies provided the baseline data required for the formulation of the Project Results Framework (including data for the institutional development, biophysical, socio-economic, legal and M&E components); it also led the negotiations required to secure commitments of co-finance. MOW will be responsible for co-ordinating the implementation of all project activities and may be responsible for direct implementation of some of these. It will take the lead role in ensuring ongoing communication with all Ministries, Departments, Agencies and other projectstakeholders.	Lead implementer, principal co-funder and custodian of the project. The Permanent Secretary in the Ministry will serve as the Chairperson of the Project Steering Committee and the MOW will have representation on the Technical Team. The MOW will also host the Project Co-ordination Unit (PCU).

The Ministry of Land, Human Settlements and Development (MLHSD)	The MLHSD is mandated with facilitating effective management of land and human settlements in Tanzania.	The Ministry of Lands and Human Settlements is concerned with water resources, particularly the availability of potable water for urban settlements, and inundation. For this reason it can play an important role in ensuring wise and informed allocation of land for settlement and other uses, in alignment with the objectives of the project.	Key enabler, with representation on the Project Steering Committee.
National Land Use Planning Commission (NLUPC)	The NLUPC is responsible for preparing physical land use plans; formulation and co-ordination of land-use policies and legislation; specification of norms, standards and criteria for land-use planning and the protection and beneficial use of land, and the maintenance of land quality in support of improved socio-economic development and optimal production. It has key decision-making powers in respect of land use planning in Tanzania.	The NLUPC will play a central role in providing planning expertise required for the project and co-ordinating and guiding activities related to land-use planning. It will be directly responsible for implementation of some project activities and will play an important role in the provision of training to PLUMs teams.	Project partner and participant in project activities, with representation on the project's Steering Committee and the Technical Team.
The Ministry of Natural Resources andTourism (MNRT)	This Ministry is responsible for overseeing the land-based management of all natural, cultural and tourism resources in the country. The mandate of the MNRT includes the development of appropriate policies, strategies and guidelines for managing natural resources and the formulation and enforcement of environmental laws and regulations, including the issuing and monitoring of forest harvesting permits.	The MNRT will develop enabling policy and regulations in support of the project and will work to improve policy-practice interactions. Because land-based management impacts significantly on water quality and quantity, MNRT has an important role to play in securing watershed services andtheir support is vital for the success of the project.	Enabler, with representation on the Project Steering Committee.
Forest and Beekeeping Division (FBD)	Under the MNRT, the FBD is directly responsible for the development of forest policy, laws and regulations and for supervising their implementation in the forestry sectors.	The FBD will develop enabling policy and regulations in support of the project objectives and will work to improve policy-practice interactions. It will also provide technical inputs, as needed.	Enabler, provider of technical support.

Tanzania Forest Service (TFS)	The TFS is an executive agency mandated with managing national forest reserves (natural and plantations) and forest resources on general lands.	The TFS has a key role to play in identification of forests to be placed under greater protection, identifying degraded forests for rehabilitation and strengthening enforcement of laws regarding harvesting of forest resources. It also plays an important role in building relationships with communities around prioritised forests and will play an important role in overseeing ongoing implementation of project-initiated activities and providing technical support.	Project partner, provider of technical support and participant in selected project activities.
The Ministry of Agriculture, Food Security and Co-operatives (MAFC)	The MAFC is mandated with providing policy guidance and services to support a modernised, commercialised and effective agriculture and co-operatives system. It works to provide a conducive environment for stakeholders, build capacity of LGAs and facilitate involvement of the private sector in contributing effectively to sustainable agricultural production, productivity and co-operative development.	Because agricultural productivity is reliant on a sustained supply of water, and agricultural practices impact on water quantity and quality, the MAFC can play an important supporting role, in ensuring the uptake of SLM and the adoption of appropriate agricultural technologies that conserve natural resources and sustain livelihoods. It will play an important role in capacity building for SLM in LGAs, in providing improved extension services and in brokering public-private partnerships.	Enabler and project partner, with representation on the Project Steering Committee and Technical Team; will participate directly in some project activities.
Ministry of Energy and Minerals (MEM)	The MEM is responsible for facilitating the development of the energy and mineral sectors in Tanzania, through policies, strategies and plans for sustainable use.	The Ministry of Energy and Minerals (MEM) has a significant role in water resources management since it has overall responsibility for the management of mining industry which is a major water user, potential source of pollution and producer of sediments which flow into water courses in the targeted river catchments. The MEM will play an important supporting role by assisting with the regulation and monitoring of illegal wood-fuel harvesting from forests, unregulated mining activities in the targeted sub-catchments and in monitoring and preventing pollution of water bodies. Because of the importance of the Ruvu-Wami Basin from a hydro-electric power perspective, the MEM has a direct interest in securing water flows in	Enabler, with representation on the Project Steering Committee

		the region.	
Ministry of Livestock and Fisheries Development (MLFD)	The MLFD has the mandate for overall management and development of livestock and fisheries resources for sustainable achievement of MDGs, the National Strategy for Growth and Reduction of Poverty. Improved livelihoods of livestock- and fisheries-dependent communities, food safety and security, without compromising animal welfare and environmental conservation. It is responsible for building and supporting the technical and professional capacity of local government and the private sector to develop, manage and regulate livestock and fisheries resources sustainably.	The MLFD will play an important role in the project through the provision of baseline data on stocking rates and other aspects related to keeping livestock, and in assisting with the development and facilitation of capacity building and the provision of extension services to promote the uptake of SLM in rangelands. They will have a lead role toplay in the development of a Sustainable Rangeland Management Plan and will participate on the Sustainable Rangeland Management Forum.	Project partner, with representation on the Project Steering Committee; will participate directly in some project activities.
Decision-making Bodies involved directly in Water Resources Management: Water Basin Boards; Water Basin Offices; Catchment Water Committees, Water User Associations and Water User Groups			
Pangani and Wami-Ruvu Basin Water Boards (BWBs) and their sub-catchments (Water Basin Offices)	The PBWB and the WRBWB are responsible for: collection, processing and analysis of data for WRM monitoring and resource assessment; co-ordination of technical aspects of trans-boundary issues in the basin; co-ordinating and approving basin WRM planning / budgets; approving, issuing and revoking water use and discharge permits; and enforcing water use permits and pollution control measures. The Boards resolve conflicts between water users, co-ordinate stakeholders and integrate district plans into basin WRM plans.	Provide baseline data, promote co-ordination and be direct implementers of project activities relating to planning, co-ordination and law enforcement.	Lead implementing agencies (under the MOW), with representation on the project Technical Team.
Catchment Water Committees (CWCs)	Catchment Water Committees (CWCs) have responsibility of coordination and harmonize catchment IWRM plans and resolve water resources conflicts in the catchment.	These institutions will play a key role in providing baselines for the project and in the institutional set up for co-ordination.	Project partners and participants in project activities.

Water User Associations (WUAs)	Water User Associations (WUAs) are responsible for local level management of allocated water resources, conflict management, collection of various data and information; participation in the preparation of plans; conservation and protection of water sources.	These institutions will play a key role in providing baselines for the project and in the institutional set up for co-ordination; they are key beneficiaries of the project and will be directly involved in implementing some project activities.	Project partners, participants and beneficiaries.
Other stakeholders participating in Water Resources Management			
Urban Water and Sanitation Authorities: (UWASAs) DAWASA and Tanga-UWASA, MORUWASA and DAWASCO	Water Supply and Sanitation Authorities (WSSAs) own, manage and develop water supply and sewerage infrastructure. They are responsible for preparing business plans to provide water supply and sewerage services including capital investment plans. The functions of the WSSAs also include financing of capital investments.	These agencies will contribute co-finance (and baselines) and will benefit from the increased flow of water and reduced siltation and pollution. They will play an important role in providing baselines and in the institutional set up for co-ordination.	Project partners and co-funders, with representation on the Project Steering Committee and Technical Team; participants in some project activities.
The Prime Minister's Office – Regional Administration and Local Government (PMO-RALG) Regional Administrative Secretariat and District Executive Directors	PMO-RALG is responsible for improving the coordination between MDAs, Regional Administrations and Local Government Authorities. They are also responsible for monitoring and improving the institutional capacity and management systems of local government to deliver better quality services.	The PMO-RALG will facilitate improved linkages between, and alignment with, the project activities and relevant local government initiatives and programmes. PMO-RALG may also fund, through the Regional Authorities, complementary community development projects linked to SLM/Integrated Water Resource Management. They will play a key role in facilitation of the development of land use plans	Enabler and partner, with representation on the Project Steering Committee (Regional Administrative Secretaries) and the Technical Team.
District and Local Government Authorities of Catchment Districts	Local Government Authorities (LGAs) including Municipal and District Councils, and Ward Development Councils (WDCs) are responsible for coordinating the physical planning with UWASAs and coordinating UWASA budgets within Council Budgets. Different central and local government departments and organisations have mandates to be involved in the provision of these services. Within the policy framework for	These authorities will contribute technical input into the project and will upscale lessons generated by the pilot projects. They will play a lead role in the outputs of the project relating to land use planning, capacity development and extension.	Technical support for implementation.Morogoro DC will have representation on the Technical Team.

	decentralisation, the mandate to provide basic services, including water supply and sanitation has been devolved to the lowest administrative level. The roles and responsibilities of the decision-making authority and control of resources for the delivery of basic services have been transferred to the District Councils.		
Village Councils/Assemblies	Village Councils are responsible for planning and co-ordinating development activities and rendering assistance and advice to villagers in respect of agriculture, forestry and other such activities.	Village Councils can provide a democratic, institutional vehicle for the project to secure the support, involvement and beneficiation of local communities in project-related activities.	Participants and beneficiaries
Village Natural Resource Committees	Village Natural Resource Committees (VNRCs) are responsible for overseeing the protection, conservation and lawful utilisation of natural resources.	VNRCs can actively support the on-site implementation of project activities, particularly with respect to monitoring and enforcement of permits and laws, awareness-raising and direct implementation of SLM practices. Specific roles will be determined during consultations in the inception phase of the project.	Participants and beneficiaries
Non-Government Organisations (NGOs) and Civil Society Organisations (CSOs): *NGOs and CBOs will support project activities through the ongoing implementation of training, awareness-raising and capacity-building programmes in the targeted villages.NGOs and CBOs may also be contracted, on a competitive bid basis, to implement specific community-development, SLM/IWRM project activities. The project may also enter into partnership agreements with existing NGO- or CBO-funded initiatives in, or linked to SLM or rehabilitation in targeted rangelands and forests. NGOs and CBOs will serve as important project partners, implementers and funders.*			
World Wildlife Fund (WWF)	Environmental NGO with experience in implementing community conservation and development projects in the Eastern Arc Mountains, with a focus on Payment for Watershed Services PWS, forest restoration, and alternative livelihoods.		
International Union for the Conservation of Nature (IUCN)	An NGO with experience in managing water resources management projects in Tanzania (such as the Water and Nature Initiative and the Pangani River Basin Management Project) and in supporting the development of Water User Associations (WUAs).		
Tanzania Forest Conservation Group (TFCG)	TFCG is an NGO that brings together professional foresters, biologists and communicators who work to conserve and restore the biodiversity of globally important forests in Tanzania for the benefit of current and future generations. They focus on capacity building, advocacy, research, community development, protected area management, forest restoration and other sustainable IGA-related projects.		

Sustainable Agriculture Tanzania (SAT)	SAT is an NGO that conducts training and awareness programmes in the use of organic farming methods and other SLM technologies.
CARE International - Tanzania	An NGO that focusses on innovative education, health, microfinance and environmental programmes, with a particular focus on youth and women's empowerment. They have implemented Payment for Ecosystem Services (PES), alternative energy and other Income Generating Activity(IGA)-related projects in the Eastern Arc Mountains.
Ujamaa Community Resource Team(UCRT)	The Ujamaa Community resource team is an NGO that was established with the core mission of working with pastoralist, agro-pastoralist and hunter-gatherer communities in northern Tanzania, to improve their livelihoods. The UCRT was formed to help these communities use existing legal tools and combine formal mechanisms with local knowledge and traditional practices to take a proactive approach to securing and planning the management and planning of lands and natural resources. A central tool at the foundation of the UCRT's work is the development of participatory land use plans and village by-laws that serve to formalise and strengthen local land rights and traditional manage practices and resolve conflicts amongst competing resource users. They have experience of doing this successfully in over 35 villages in 7 Districts in northern Tanzania.
MVIWATA	A CSO that focusses on strengthening farmer groups, promoting sustainable agriculture through training in use of SLM best practices
MJUMITA	MJUMITA, a CSO, is the Tanzanian Community Forest Conservation Network. They work to promote protection and restoration of forests, joint forest management and sustainable use of forest resources.
Tanzania Traditional Energy Development Organisation (TaTEDO)	A rural renewable energy development NGO in Tanzania. It works in the areas of energy policy formulation, energy project planning, renewable energy field studies and implementation.
Integrated Water, Sanitation and Hygiene Programme (iWASH)	iWASH operates out of Morogoro and is involved in capacity building (with regard to water, sanitation and hygiene), water resources management, awareness raising and capacity building of WUAs and communities.
The Eastern Arc Mountains Conservation Endowment Fund (EAMCEF)	EAMCEF has been supporting forest conservation, community development and research projects in the Eastern Arc Mountains for the past 10 years. It is a trust fund that was established as a long term and reliable funding mechanism to support community development, biodiversity conservation and research projects in the Eastern Arc Mountains. EAMCEF can provide valuable technical guidance to the project and can assist with establishing linkages with related projects and other possible funding sources.
The WildLife Conservation Society of Tanzania (WCST)	WCST is a national NGO that works towards the conservation of the flora, fauna and environment of Tanzania, for the benefit of its peoples. It works in areas such as environmental education, forest conservation and advocacy. It is the designated national BirdLife International partner.
Others (e.g. Development partners/conservation funds	Conservation International, the Critical Ecosystem Partnership Fund, and others to be identified as project implementationproceeds (e.g. DFID, DANIDA, African Development Forum). These organisations could serve as enablers, co-funders and project associates.

Local communities			
Land users and Farmer's Associations (UWAMAKIZI; WAKUAKUVYAMA; JUWAKIHUMA)	These are the most important stakeholders in the project. They will undertake improved land management practices in order to rehabilitate watershed services and diversify and improve their livelihoods. They will be involved in capacity-building and awareness-raising activities. They will therefore be the beneficiaries as well as the custodians of the project's sustainability.		
Academic institutions and professional associations			
Ardhi University	Ardhi University (former UCLAS) provides graduate, postgraduate, MSc, PhD and Certificate level education in Architecture and Design, Construction Economics and Management, Environmental Sciences and Technology, Geospatial Science and Technology, Urban and Regional Planning, Real Estates Studies, Housing and Information Systems Management	This is an important stakeholder providing technical inputs into theland use planning process, water and sanitation as well as capacity building involving both technical staff and communities in various aspects especially on land use and catchment conservation and management.	Project Partner
Dar es Salaam University (Institute for Resource Assessment and TANRIC); Sokoine University of Agriculture; Tanzania Forest Research Institute (TAFORI)	Research institutions and institutions of higher learning	Will provide technical inputs, and baseline data and conduct research in support of project activities.	Project Partners
Private sector (producers)			
Tea estates, sisal estates, Tanga-Fresh	Commercial farming concerns operating within the project footprint	Roles to be identified during consultations after project start.	Project partners, with specific roles to be determined at project inception

(Table3: Stakeholders)

BASELINE ANALYSIS

140.The proposed project will build on an extensive baseline, composed of government, NGO, community and donor-driven programmes and projects related to water resources management, land degradation and sustainable land management, both nationally and in the Uluguru and East Usambara Mountains. The baseline programme is described below.

141. At the national level, Tanzania has several programmes aimed at reversing the negative impacts of land degradation, and these provide the national context for implementation of regional and local-scale initiatives (such as this Project). Key amongst these is the National Action Plan 2 for Combatting Desertification, Land Degradation and Drought (NAP 2, 2014). The NAP identifies a number of priorities which include: strengthening community awareness campaigns; creating an enabling environment to strengthen enforcement of relevant legislation; engaging with research and development institutions to generate scientific and technical knowledge that is needed to tailor appropriate adaptive land management strategies; taking stock of best practices from local-scale interventions and scaling these up; and developing more innovative and incentive-based financing mechanisms for implementation of programmes to combat land degradation. The Government of Tanzania has developed an action plan for addressing these priorities which will involve spending some US$ 12,000,000 over the next four years (2014–2018), the source of which will combine government allocations as well as donor support. The National Action Plan has direct relevance to the Ruvu-Zigi project, given its focus on mainstreaming SLM and land degradation issues into national and local budgeting frameworks, developing best-practices and upscaling these, and developing innovative financing mechanisms for combatting land degradation.

142. The adoption of SLM as a key means of addressing land degradation, food security and poverty is firmly entrenched in numerous government policies relating to natural resource management and agriculture. Between 2011 and 2017, it is estimated that combined funding towards SLM projects in Tanzania (by Government Agencies, Donors and NGOs) will total some US$ 534 million, about 34% of which is earmarked for integrating SLM into the agriculture and livestock sectors, 20% for water and wetlands conservation initiatives and 11% for forestry (IIF & IFS, 2014). Contributions towards SLM programmes by the Government of Tanzania currently stand at 3% of total development expenditures, but the government is committed to sourcing new and non-traditional sources of financing for SLM activities through the implementation of its Integrated Investment Framework (IIF) and Integrated Funding Strategy (IFS) for Sustainable Land Management in Tanzania. The IIF and IFS have been developed to provide long term financing for SLM programmes through a variety of means including the establishment of a specific SLM Fund. Under the IIF, priority areas of intervention at the national scale that align with the Ruvu-Zigi project include: supporting land use planning, enabling stakeholders to access technical and financial assistance to upscale SLM; promoting alternative sources of energy and adaptation of clean energy technologies; enhancing incomes of farmers by addressing structural market inefficiencies; enhancing extension services in rangeland management and agriculture, and increasing internal and external financial resources by mainstreaming SLM in the national budgeting framework and exploring new and non-traditional sources of financing. The IIF has developed an action plan spanning the next 10 years, implementation of which will amount to some US$ 700 million derived from government and donor sources. Within this budget, however, there is an anticipated shortfall of some US$ 150 million, much of which falls under the priority area for upscaling SLM adaptation activities, including interventions to enhance incomes of farmers by addressing structural market inefficiencies and strengthening extension services in rangeland management and agriculture.

143. The National Water Sector Development Programme (NWSDP) gives effect to the National Water Policy. It provides the strategic background for the implementation of interventions such as the proposed Project. During its first phase (2007-2014), the NWSDP invested US$ 110 million in water resources management, rural and urban water supply and sanitation and institutional strengthening and capacity building. During this phase, Basin Water Boards were established and the formation of Water User Associations and Catchment Committees was initiated. Now in its second phase (2014 –

2019), the NWSDP will invest some US$ 327 million in a number of focal areas including water resources management, urban and rural water supply, and sanitation and hygiene. Areas of programme support that are of direct relevance to this project, and which will contribute to co-financing commitments through the Ministry of Water, include, amongst other things, the development of Integrated Water Resource Management Plans in river basins, the establishment of Water User Associations and Catchment Committees, protection of water resources and the provision of water points to serve communities that do not have any water services. Allocations have been made to both the Pangani and Wami-Ruvu Basin Water Offices for these purposes, mainly in the form of staff emoluments and also through support to selected operations. Similarly, the draft Operational Programme for Effective and Sustainable Protection and Conservation of Water Sources (2014–2019), includes a budget of some US$ 100 million, a proportion of which will be allocated to help address the formation and strengthening of WUAs and the formation of catchment committees and sub-committees, the identification of alternative income generating activities, promotion of SLM, measures to address the problem of illegal mining and the provision of watering points for livestock. When the Operational Strategy comes on line, resources allocated under these areas will provide valuable co-finance to the Project under its corresponding outputs.

144. The programmes of work carried out by the Pangani and Wami-Ruvu Basin Water Boards are directly aligned with the key output areas of the Project and will provide much of the baseline from which the project will work. The activities of the Basin Water Boards are financed largely through internally-generated funds derived from water user fees and other levies, and Government allocations (through the Ministry of Water and the Water Sector Development Programme).Government allocations are mostly in the form of staff salaries amounting to some TZS 1,186,612 (equivalent to US$685,862) for the 2014/15 year for the two Basin Offices, whilst internally generated funds and other small amounts from other sources have to cover operational and capacity building costs. In the past, widespread non-payment of water user fees has presented a serious constraintto the operations of the Water Basin Offices. In 2014/2015, the Pangani Basin Water Board (PBWB) expects to collect about TZS 370,000,000 (equivalent to US$ 210,227) from water user fees, with the corresponding figure for the Wami-Ruvu Basin Water Board (WRBWB) being TZS 320,000,000 (equivalent to US$ 181,181),the bulk of this coming from one large commercial water user.

145. The Ministry of Water has allocated some US$30 million for water resources management in over the lifespan of the project, US$13million of which will serve as Project co-finance. This will support staffing, the provision of technical skills and operational capacities in the Basin Water Offices, implementation of the Water Sector Development Programme, a contribution towards the formation and capacitation of WUAs and developing Integrated Water Resource Management and Development Plans. Co-finance from the MOW will also be provided through their participation on the Steering Committee and Technical Panel of the Project. The MoW will also host the Project Co-ordination Unit.

146. **Agriculture:** The MAFC will allocate approximately US$2.5 million over the life span of the project to support improvements in soil and water conservation measures, the adoption of land management practices that alleviate degradation in agricultural lands and to improve market linkages for small farmers. The support will be provided mainly through the provision of technical support (extension) services provided to farmers. The GEF allocation to the project will supplement these investments through the provision of training in the principles and practice of SLM, focussing on agricultural and livestock extension officers, officials in district and local government, members of Water Basin Offices, WUAs, farmer's associations and individual farmers. It will also be used to address some physical resource needs the lack of which currently limits the capacity of the extension services to deliver an effective service to the communities in the Ruvu and Zigi catchments.

147. Forestry: Over the past five years the UNDP, through financing from the GEF and with co-finance from the GoT,the Eastern Arc Mountains Conservation Fund (EAMCEF), the Tanzania Forest Conservation Group (TFCG) and the WWF, supported a project that focussed on the expansion of the Forest Nature Reserve Network in Tanzania (through gazetting of 5 new Forest Nature Reserves), and

on enhancing the financial sustainability of the entire Forest Nature Reserve Network, including the Amani and Uluguru Nature Reserves. Amongst other things, this project worked on building up the relationship between the forest reserves and surrounding communities with a view to improving their awareness of the importance of conserving catchment forests, thus establishing a solid foundation on which the current project can build to reduce human-induced pressures on protected forests. The Forest and Beekeeping Division (FBD) of the Ministry of Natural Resources and Tourism (MNRT) will provide ongoing support, in the order of US$ 3million per year, to supporting improved joint forest management working with the local communities in villages surrounding the Amani and Uluguru Nature Reserves and in support of reforestation initiatives. The baseline programme will provide technical skills and support to the project executants and the involvement of FBD staff in project activities related to forest restoration and the identification and development of alternative income generating activities. In particular, it is envisaged that the Bee Reserves and Apiaries Division of the Tanzania Forest Service (TFS) will provide technical support to the establishment and management of apiaries in local communities, under Outcome 4 of the Project.

148. Land Use Planning: National Treasury is expected to allocateUS$2.5million over the lifespan of the projectto support the development of land use plans at district and village levels. Of this, US$ 0.5 million will be allocated to support land use planning processes in the two watersheds, with this allocation covering the time and operational costs of the National Land Use Planning Commission (NLUPC) staff who will support these processes, assist with capacity building and participate on the Project's Technical Panel and Steering Committee.

149. Implementation of the Business Plans of the Dar es Salaam Water and Sanitation Authority (DAWASA) and the Tanga Urban Water and Sanitation Authority (Tanga-UWASA) will amount collectively to some US$ 50 million over the lifespan of the project, US$6.5million of which serves as co-finance. In the Ruvu catchment, DAWASA will provide inputs to planning, regulation and enforcement, supporting communities to adopt alternative production systems that will alleviate land degradation, and they will provide support to the Project on the Technical Panel. In the Zigi catchment, Tanga-UWASA has already invested significant resources in the WWF/CARE Payment for Ecosystem Services project, in which it has played a critical role by supporting the formation of the UWAMAKIZIFarmer's Association,which is spearheading the adoption of SLM practices in the Kihuhwi sub-catchment, in return for payments form Tanga-UWASA. A Memorandum of Understanding is in place between Tanga-Uwasa and UWAMAKIZI, under which Tanga-UWASA has committed TZS 100million over three years (this figure representing under half of the total budget required to maintain the activities of the association).Tanga-UWASA have assigned one officer to be a coordinator and the Authority's focal person for environmental issues in the Zigi catchment; this officermonitors UWAMAKIZI activities and participates in all UWAMAKIZI meetings and events. Tanga-UWASA also supports the Zigi-Mkulumuzi WUA and the joint Mabayani Dam environmental committee, but the resources for maintaining this support are inadequate. Additional, baseline support from Tanga-UWASA will come in the form of technical expertise, interventions to provide rural communities with reliable water, and service on the Technical Panel of the project.

150. In addition to the government programmes discussed above, there have been numerous NGO, community and donor-driven projects (including other UNDP/GEF interventions) implemented in the Uluguru and East Usambara Mountains (and other mountain blocks within the Eastern Arc), to tackle the problems of land degradation, unsustainable land management practices, loss of forest biodiversity, degradation of forest and water resources, and socio-economic development of resident communities. Collectively these investments have amounted to more than US$100 million over the last 5 years. Substantial investments were made by the GEF/UNDP through *inter alia*, the Conservation and Management of the Eastern Arc Mountain Forests (CMEAMF) Project and the Forest Nature Reserves project, and both the Governments of Germany and Norway have invested in numerous Reduced Emissions from Deforestation and Forest Degradation (REDD)-related projects. The Eastern Arc Mountains Conservation Endowment Fund (EAMCEF) currently provides ongoing support to more than 50 community-driven conservation initiatives (with funds channelled through District Councils and NGOs) that support the conservation of core protected forests. These and other

projects (the more recent of which are listed in Table 4 below) form the baseline of interventions that have effectively piloted the methodologies and approaches that will be taken up, refined and up-scaled in the current Project.

Table 4: Recent and current projects forming the baseline of SLM- and IWRM-related activities

Project	Location	Implementer	Areas of activity
Equitable Payments for Watershed Services	Uluguru North	Wildlife Conservation Society of Tanzania(WCST)/Royal Society for the Protection of Birds (RSPB)	The project sought to address the four interlinked problems of environmental decline in the upper catchment areas of the Uluguru mountains, widespread poverty in area, unsustainable agricultural practices and reductions in the quality and quantity of water supplies being used by urban water users in the town of Morogoro. The project worked through a number of different approaches, including Payments for Watershed Services (PWS), Joint Forest Management and alternative livelihood activities (income generating activities).
Equitable Payments for Watershed Services	Kibungo Juu Sub-catchment of the Ruvu River	CARE/WWF, in partnership with DAWASCO	Project developed to test the viability of establishing payment mechanisms for rewarding farmers in the upper catchment of the Ruvu River for adopting measures that conserve water and reduce surface run-off.
Equitable Payments for Watershed Services	Zigi Catchment (Kihuhwi Sub-catchment)	CARE/WWF, in partnership with Tanga-UWASA	Project developed to test the viability of establishing payment mechanisms for rewarding farmers in the Kihuhwi sub-catchment of the Zigi River for adopting measures that conserve water and reduce surface run-off. The Uwamakizi Farmer's Association was established through this project.
Securing Long Term Benefits for the Communities and Forests of the East Usambara Mountains	East Usambaras – Muheza and Mkinga districts	WWF/TFCG	This project focused on forest conservation and restoration and the improvement of livelihoods in forest-adjacent communities. Key areas of activity included the development of village land use plans, enhancing forest connectivity, promoting conservation farming, the introduction of alternative income generating activities and village savings and loan schemes.
MICCA – Mitigating Climate Change in Agriculture	Uluguru Mountains (North)	CARE/FAO	Introduced sustainable farming practices such as bench terracing, mulching, green-manuring, water harvesting
The Hillside Conservation Agriculture project	Kolero and Kasanga Wards, Morogoro Rural DC	CARE	The project worked to sustain and enhance the livelihoods of smallholder farmers in the South Ulugurus, through improved family food security, better resource conservation and development of essential, gender-sensitive support services.
The IUCN Eastern and Southern Africa (ESARO)	Pangani and Wami-Ruvu River Basins	IUCN (Water and Nature Initiative - WANI), Coast Development Authority,	Under this project, detailed situation analyses were developed for the Pangani (2009) and Wami-Ruvu (2010)

programme – Situation Analyses		the Global Water Initiative	Basins, providing a wealth of baseline information which has been used to shape the design of this project. The Ngerengere Water User Associations were formed through the IUCN ESARO project in the Ruvu catchment.
Consolidating Biodiversity Data in the Eastern Arc Mountains and Coastal Forests	Eastern Arc and Coastal Forests of Tanzania and Kenya	BirdLife International Tanzania, TFCG, CI	The project aimed at availing biodiversity and forest change data to leverage REDD+ and REDD Readiness for the Eastern Arc Mountains
The Uluguru Mountains Agricultural Development Project - UMADEP	Various locations in the Uluguru Mountains	Sokoine University of Agriculture, and other partners	The UMADEP project has implemented various interventions to promote uptake of sustainable farming technologies and establish farmer-centred extension services.
Current			
The Pangani River Basin Management Project	Pangani River Basin (main Pangani River)	IUCN (Water and Nature Initiative), the Netherlands Development Initiative (SNV) and PAMOJA	The PRBMP generates technical information and assist with developing participatory forums in the Pangani Basin. Its activities include mainstreaming climate change, supporting equitable provision and wise governance of freshwater for livelihoods and environmental needs.
wPower	Various sites in Tanzania and Kenya, including theEast Usambara Mountains	CARE International	Care International have been active in promoting alternative energy solutions in the East Usambara Mountains, including some of the villages that will be included in the current project. wPower engages women to be sellers and distributors of clean-energy cook stoves and solar lanterns.
Various forest restoration, forest management, conservation farming; charcoal production and livelihoods projects	Uluguru and East Usambara Mountains, in forest-adjacent communities (Amani and Uluguru Nature Reserves)	The Tanzania Forest Conservation Group (TFCG), with other organisations such as MJUMITA, WWF, EAMCEF	TFCG spearheads numerous projects related to tree planting and forest restoration, reducing forest degradation, conservation agriculture, soil and water conservation, sustainable use of forest resources, sustainable charcoal production, spice growing, alternative energy solutions (rocket stoves) and beekeeping in the Uluguru and East Usambara Mountains (and other ranges in the Eastern Arc)
ByT - *Bustani ya Tushikimane* (Sustainable agriculture project)	Uluguru Mountains (west) and Morogoro	SAT – Sustainable Agriculture Tanzania (Morogoro)	The ByT project focusses on dissemination of information about sustainable agriculture, participatory research and demonstration of SLM technologies, support and training to farmers (in the field and at the SAT Farmer's Training centre in Morogoro) and knowledge-exchange and information sharing about SLM.

PART II: Strategy

PROJECT RATIONALE AND POLICY CONFORMITY

Fit with the GEF Focal Area Strategy and Strategic Programme

151. The project is consistent with Objective 1 under the GEF Land Degradation Focal Area (under the GEF-5 funding modality), which is to '*Reduce pressures on natural resources from competing land uses in the wider landscape'* (LD3). Under this Objective, the project will contribute to all three LD3 Outcomes:

> Outcome 3.1 – Enhanced cross-sector enabling environment for integrated landscape management
> *Indicator 3.1 – Policies support integration of agriculture, rangeland, forest, and other land uses*
> *Output 3.1: Integrated land management plans developed and implemented*
>
> Outcomes 3.2 – Integrated landscape management practices adopted by local communities
> *Indicator 3.2 Application of integrated natural resources management (INRM) practices in wider landscapes*
> *Output 3.2: INRM tools and methodologies developed and tested.*
>
> Outcome 3.3 – Increased investments in integrated landscape management
> *Indicator 3.3 –Increased resources flowing to INRM and other land uses from diverse sources*
> *Output 3.4: Appropriate actions to diversify the financial resource base.*

152. The project will contribute to the achievement of these GEF outcomes and core outputs as described in the table below:

Table 5: Focal area objectives, outcomes, expected focal area outputs and project contributions

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Project contribution to outputs
LD-3: Reduce pressures on natural resources from competing land uses in the wider landscape	Outcome 3.1: Cross- sectoral enabling environment for integrated landscape management (in support of SLM)	Output 1: Integrated land management plans developed and implemented	• Three existing District Land Use Plans are operationalised, one new District Plan is developed and implemented and integrated land use plans are developed and operationalised in at least 20 villages.
	Outcome 3.2: Integrated landscape management practice adopted by local communities	Output 2: INRM tools and methodologies developed and tested	• SLM practices in agriculture and livestock management developed and taken up and contributing to improved production and decreased land degradation in the Ruvu and Zigi catchments; data management systems developed and used to track the impact of land use practice on land degradation
	Outcome 3.3: Increased investments in integrated landscape management	Output 4: Appropriate actions to diversify the financial resource base	• Funds available for SLM in the two catchments increased and allocated according to an integrated SLM investment plan in which existing sectoral allocations are re-aligned, new streams of finance are established, guidelines and criteria are used to guide resource allocation and the capacity of stakeholders to access funds is strengthened.

153. In addition to supporting the GEF Focal Area Strategy (under GEF 5 modality), the project advances the strategic objectives of the 10-year strategic plan of the United Nations Convention to Combat Desertification (UNCCD), which are to: i) improve the living conditions of affected populations; (ii) improve the condition of affected ecosystems; (iii) Generate global benefits through effective implementation of the UNCCD. In particular, it addresses the following operational objectives of the 10-year UNCCD Strategic Plan: (1) Advocacy, awareness raising and education; (2) Science technology and knowledge; (3) Capacity-building; and (4) Financing and technology transfer.

Rationale and summary of GEF Alternative

154. Without the GEF investment: There has been a long history of efforts in the Uluguru and East Usambara Mountains to address the interlinked problems of deforestation, biodiversity loss, land

degradation, declining water resources and poverty. Despite significant investments through an impressive baseline of projects (some of which have been implemented with success in pilot villages), the overall problem persists and these critically important watersheds remain under intense pressure. A growing population and increasing expansion of unsustainable agricultural and pastoralist activities into forest and woodland habitats is causing increasing land degradation, which triggers multiple destructive processes that have cascading environmental and socio-economic effects. If the GEF were not to invest in the proposed project, the 'business-as-usual' approach to land-use and watershed management in the Ruvu and Zigi catchments would be one in which: (i) the lack of land use plans results in continued unplanned and inappropriate land-use and development, driving further habitat loss and land degradation, compromising the delivery of watershed services, reducing land productivity and increasing conflicts between land and water users; (ii) the lack of management integration and inter-sectoral co-ordination, weak stakeholder linkages and lack of collaboration in the two river basins will perpetuate unstrategic and poorly planned interventions, and ineffective allocation of SLM investments, with high levels of duplication and redundancy and low levels of impact; (iii) an absence of effective Water User Associations (or weak capacity of those that do exist), and confused mandates amongst WUAs and other community-level governance structures, will mean that local level management and monitoring of water use will remain ineffective; (iv) the staff and resource deficits and limited technical capacity in Water Basin Offices, District Authorities and community governance structures will limit the potential for integrating SLM meaningfully into watershed management; (v) inappropriate agricultural and livestock management practices and the generally unsustainable use of water, forest and woodland resources will lead to further loss of cover, increased erosion and sedimentation, and a decline in the quantity and quality of water available for meeting environmental and human needs; (vi) poor selection of crops, poor soil conservation measures and inefficient irrigation systems (where these exist) will further limit the productivity of land, impacting negatively on human well-being, increasing the vulnerability of farmers to climate change-related risks and further compromising food and water security; (vii) high levels of poverty, a lack of access to water supply services, limited livelihood opportunities and structural market inefficiencies for even sustainably produced goods, will mean that communities will be likely to continue resorting to activities such as illegal harvesting and mining, unwise use of fire and illegal abstraction of water in their efforts to sustain themselves.

155. Alternative scenario enabled by the GEF investment: By investing in this project, the GEF will be supporting an integrated watershed management approach to dealing with the problems of land degradation, watershed management and human well-being in the Ruvu and Zigi catchments. The project will facilitate the co-ordinated development and management of water, land and related resources whilst improving livelihoods and reducing poverty in a sustainable and equitable way. It will capacitate water basin authorities and water users to overcome the barriers that currently prevent them from addressing the causes of land degradation, and generate solutions that effectively integrate SLM into watershed management. Building incrementally on the existing baseline of interventions and the institutional capacities that exist in the two river basins, the project will: (i) Establish a collaborative framework and enabling institutional arrangements for integrated and cohesive planning and funding of SLM, and effective mainstreaming of SLM into broader watershed management in the Ruvu and Zigi catchments; (ii) Increase the amount of funding available for SLM investments in the two catchments and improve the effectiveness of these investments; (iii) Build institutional capacity for planning, monitoring and adapting land management in the two catchments and for promoting uptake of sustainable forest and land management practices; and (iv) Reduce the effects of land degradation on watershed services and improve livelihoods through increased uptake of SLM and alternative sustainable livelihoods. The scenario enabled by the GEF increment will be one in which: (i) Integrated Land Use Plans that incorporate SLM principles and take into account how users will access and manage water resources, are in place and are guiding land use in all key districts; (ii) strong stakeholder linkages and active multi-stakeholder forums will enable the implementation of effective strategies for: facilitating dialogue between resource users and managers, co-ordinating action and promoting awareness of SLM; (iii) well-capacitated Water User Associations and River Committees with clear mandates are operating effectively in all key sub-catchments; (iv) Catchment managers and users understand water rights and water-and land-use legislation and laws, water basin

authorities are better able to enforce these laws and users are more willing and able to comply with water basin regulations; (v) New streams of public finance are identified and accessed through the development of a strong business case for leveraging new funds, and the technical capacity amongst water basin authorities to develop SLM projects and proposals is improved; (vi) Existing sectoral allocations to SLM are re-aligned to reduce redundancy and duplication, and the overall effectiveness of SLM investments in the two catchments is increased through development of an integrated SLM investment plan (with involvement of stakeholders in the budgeting process) and criteria for allocation and monitoring of funds; (vii) Selected water basin management agencies and institutions (from regional to local level) are adequately staffed and equipped, and trained in the skills and knowledge needed to integrate SLM meaningfully into watershed management; (viii) human-induced pressures on forests and woodlands are reduced and degraded areas are restored through the uptake of sustainable forest and land management at the landscape-level; (ix) Sustainable livestock management technologies are developed and tested and appropriate livestock management infrastructure is established to operationalise SLM in rangelands; and (vi) Household incomes and food production are increased through the adoption of SLM production systems and alternative sustainable livelihoods and improvement in structural market inefficiencies; and, (x) Land degradation is reduced; food and water security is improved and the resilience of communities to climate change-induced risks is strengthened.

156. The total cost of the investment in the project is estimated at US$27,648,858; of which US$3,648,858 represents the GEF investment, US$ 2million represents co-finacne from the UNDP and US$ 22 millionrepresents co-financing from the Government of Tanzania.

157. Global environmental benefits: This project will contribute to the overall goal of the GEF LD Focal Area, which is to arrest and reverse global trends in desertification and deforestation. It will do this by putting in place watershed management approaches that are conducive to the uptake of SLM in over 20,000 ha of land in two globally significant mountain catchments. The project will contribute specifically to delivering the following global environmental benefits:

- ***Improved land cover***: the project aims to decrease harvesting pressure in protected forests and to restore tree cover over some 10,000 ha of land where forest has been degraded, both within and outside of forest nature reserves. It also sets out to achieve at least a 25% improvement in land cover over2,000 ha of rangelands, through the adoption of sustainable agro-pastoral systems in which stocking pressures are reduced, bare areas are re-vegetated, soil erosion measures are introduced and viable traditional practices are enhanced to improve their sustainability. Through the promotion of improved agro-forestry systems that restore at least partial tree cover, and other practices that improve the productivity of the land, cover will be improved and the pressure for more land to be cleared for cultivation will be reduced.
- ***Improved productivity***: Through the introduction of sustainable land management practices such as terracing, crop rotation, crop diversification (with a focus on climate-smart species), green manuring, conservation agriculture, water harvesting and conservation, the productivity of agro-ecosystems will be improved. In rangelands, re-vegetation of denuded areas will enhance both primary production and livestock production. Those components of the project focused on forest restoration will increase tree biomass per hectare, thus increasing primary productivity and enhancing the carbon-storage capacity of the area, making an important contribution to mitigation of global carbon emissions.
- ***Improved human well-being***: Through direct uptake of SLM measures, diversification of the income base and addressing structural market inefficiencies, the project sets out to improve household incomes by 25% and to increase agricultural production by 15% in the participating villages. This will introduce greater economic stability in these communities, making them more food secure and better able to meet other aspects of well-being, thus elevating their overall quality of life (i.e. communities will be better able to improve their nutrition and general state of health, buy clothes, pay school fees, repair their dwellings).
- ***Water availability*:** The overall impact of the project will be to improve water security in the two catchments, ensuring improved water availability for meeting both environmental and human

needs. In addition to integrating SLM into watershed management, the project will put in place practical measures that improve the access of communities to reliable sources of clean water (e.g. through wells and the provision of simple, reverse-osmosis water purification systems) in ways that do not cause habitat loss and soil erosion or undermine the sustainability of watershed services.

PROJECT OBJECTIVE, OUTCOMES and OUTPUTS/ACTIVITIES

158. The project objective is: Sustainable land management alleviates land degradation, maintains ecosystem services and improves livelihoods in the Ruvu and Zigi Catchments of the Eastern Arc Mountains in Tanzania. The specific ecosystems services to be targeted include regulation of hydrological flows (reducing or buffering runoff, improving soil infiltration and maintaining base flows), securing fresh water supply (quantity and quality of water); soil protection and control of erosion and sedimentation; natural hazard mitigation (flood prevention, peak flow regulation and reduction of landslides) and crop and livestock production. The Project activities have been designed to implement an optimal mix of land and water management measures that should secure the targeted watershed services, thus strengthening water security and facilitating more sustainable planning and allocation of water use.

159. In order to achieve the project objective, and address the barriers identified in Section 1:Part 1 of this document, the project's intervention has been organised under two components (consistent with those presented at the PIF stage):

160. **Component 1**: *Establishing a collaborative framework for water basin authorities to effectively plan, monitor and adapt land management and leverage national and regional investments for integrating SLM into watershed management.* Work under this component is focussed on building enabling institutional capacity and leveraging funding for integrating SLM into watershed management, as well as strengthening co-ordination and collaborative planning, monitoring and enforcement amongst basin management authorities.

161. **Component 2:***Reducing the effects of land degradation on watershed services and improving livelihoods through landscape-level uptake of SLM measures.*Work under this component of the project is focussed on implementing practical Sustainable Land Management (SLM) interventions that address land degradation and degradation of watershed services in forests, rangelands and on arable land, whilst improving livelihoods through the uptake of sustainable land use management practices and alternative sustainable livelihoods.

162. The proposed suite of project activities and broad implementation arrangements for each of the four outcomes, and their outputs, are detailed below:

Component 1: ***Establishing a collaborative framework for water basin authorities to effectively plan, monitor and adapt land management and leverage national and regional investments for integrating SLM into watershed management.***

163. Under this component there are two key outcomes, the first: Enabling institutional arrangements are in place to support mainstreaming of SLM into Integrated Water Resources Management in the Ruvu and Zigi catchments, and the second: Finances available for SLM investment are increased by accessing new streams of public finance and more effective alignment of existing sectoral contributions.

Outcome 1: Enabling institutional arrangements are in place to support mainstreaming of SLM into Integrated Water Resource Management in the Ruvu and Zigi catchments

Outcome Indicator:SLM integrated into land use and water management plans at catchment management and district levels (see Project Results Framework for specific indicators, baselines and targets)

This Outcome 1 will be pursued through four Outputs:

Output 1.1: Integrated Land Use Management Plans and Village Land Use Management Plans are developed and implemented in 7 districts (Morogoro Urban, Morogoro Rural and Mvomero (in Morogoro Region) and Muheza, Mkinga, Korogwe and Tanga City (in Tanga Region), ensuring optimal allocation of land to generate critical environmental and development benefits.

164. Specific project activities under this output will be to:

- Develop Integrated Land Use Management Plans (ILUMPS) for four districts and Village Land Use Management Plans in at least 10 villages in each river catchment (Ruvu and Zigi), using participatory rural appraisal and land-use planning.
- Review and update existing land use plans in targeted districts and villages, identify and catalyse appropriate measures to activate implementation of existing district/regional plans (Morogoro and Muheza) and village plans that have been developed but whose implementation is not effective.
- Assess the support needed to build capacity at District and Village levels for planning, monitoring and ongoing implementation of District Plans and Village Land Use Management Plans.
- Identify appropriate measures for adoption and ongoing monitoring of Village Land Use Plans that mitigate land degradation, protect catchment forests and optimise production and living conditions.
- Negotiate land-use re-adjustments in accordance with the ILUMPS, with a focus on reducing conflicts and promoting viable alternatives.
- Develop a GIS-based Land Degradation (LD)/SLM database and land-use decision support-tool/system to make key spatial information available to aid landscape modelling, planning and monitoring of impacts of land-use.
- Train land use planning officers, front line extension workers and community associations in the use of decision-support tools to strengthen land use planning and develop land use maps.
- Set up protocols and systems for monitoring and evaluation of SLM practices and the current and potential effects of degradation on ecosystem services and for tracking land-use change relative to the ILUMPS.

165. As a first step, a survey will be conducted to map all the villages and prioritise them according to the following criteria: severity of land degradation, number of households and their income levels (disaggregated by gender),land-uses and importance from a water catchment and production perspective. The results of the village survey will inform the selection of villages in which to develop land use plans.

166. Currently, the main reasons why so many villages do not have land use plans, or why existing plans are not being implemented, are a lack of resources and poor co-ordination between the various parties responsible for implementation. To address this, the project will adopt the approach that has been piloted successfully by the Ujamaa Community Resource Team in northern Tanzania (See UCRT, 2010) – this approach is in line with national policies, laws and administrative procedures and works to provide the knowledge, expertise and resources to facilitate land use planning in ways that maximise participation, as well as allowing for follow-up at higher levels of district and national government. It will enter into a partnership agreement with a suitably experienced NGO (or other entity) to provide support to the National Land Use Planning Commission and District Authorities in co-ordinating the land use planning processes in the Ruvu and Zigi catchments. The Project will also assist with meeting the costs of the participatory planning workshops and producingplans and maps.The NGO/entity will be responsible for working alongside the National Land Use Planning Commission Facilitators and District staff to establish District Participatory Land Use Management (PLUM) Teams and for convening the Participatory Land Use Management (PLUM) workshops at which the teams will be trained. They will help bring together key role-players, under the guidance of the National Land Use Planning Commission and District Participatory Land Use Management (PLUM) Teams to update and catalyse implementation of existing Land use Plans, and to develop District Plans for the remaining 4 districts and atleast 10 villages within each catchment. (The final

selection and prioritisation of villages will be carried out during consultations with communities at project inception).The NGO/entity will also be responsible for ensuring the transfer of lessons learnt between different planning processes.Once PLUM teams have completed their practical training, they will be able to work in at least 2 villages simultaneously (an approach that is recommended by the National Land Use Planning Commission as it is much more cost-effective). The National Land Use Planning Commission and Regional Secretariat facilitators will then function in a supportive role by reviewing progress and assisting with problem areas, but not necessarily being part of the day to day procedures. The planning process will follow the Guidelines for Participatory Village Land Use Planning, Administration and Management in Tanzania (NLUPC, 2013), and will also involve capacity building to ensure that District Authorities and Village committees are able to monitor and implement the resultant plans into the future.

167. Development of the GIS-based database and decision-support system will form part of the broader scope of work of an information systems management expert, whose services will be procured at the start of the project. The Terms of Reference for the professional service provider shall include identifying the data needs and suitable data collection methodologies for setting up the database and decision-support tool; designing and establishing a suitable electronic information management system; identifying hardware and software needs and networking requirements; developing data access and maintenance protocols; and providing training to staff from key water basin authorities, front line extension workers and relevant community associations and other implementing partners in the principles and techniques of data management and analysis, GIS, geospatial database administration and use of the GIS-based land-use decision-support system (See Section IV, Part 1 for details). This database should also include systematic archiving of supportive documentation which should be accessible to users together with the GIS data (with links to other data-sharing systems such as the website managed by the Eastern Arc Mountains Conservation Endowment Fund).

168. Setting up protocols and systems for monitoring the development and implementation of Land Use Plans (includinguptake ofSLM practices, the current and potential effects of degradation on ecosystem services, and tracking land-use change relative to the ILUMPS),shall fall within the scope of work undertaken by the Project's Monitoring and Evaluation (M&E) Expert (full Terms of Reference included in Section IV, Part 1). The M&E Expert will also work with the implementers of the land use plans to build their capacity for monitoring impacts.

Output 1.2:Multi-stakeholder committees are established (or strengthened) andactive inpromoting co-ordination and dialogue in support of mainstreaming of SLM into other sectors, programmes and policies.

169. There has been a long history of work of this kind in the Uluguru and East Usambra Mountains, but there has been a lack of co-ordinated and cohesive planning or action. Most institutions operating in the basins report that they have no systems in place for knowledge-exchange or lesson-sharing, stakeholder linkages are weak and stakeholder participation is poor, despite efforts that have been made to raise awareness. Although there is a vast and valuable body of literature and project reports documenting the outcomes of numerous SLM or water resource-related projects in these areas (and particularly in the Uluguru Mountains), linkages between projects are weak and the results of projects are not always well communicated to stakeholders. There is little dialogue, collective planning or problem solving and no collective vision for each of the two basins. At local level there is a plethora of community associations and committees, but their administrative and managerial ability is highly variable and their mandates are often confused and communities are confused as to who they should follow. The project activities under this Output are designed to reverse this situation.

170. Specific project activities under this output will be to:

- Facilitate the establishment of appropriate Multi-stakeholder Committee(s) (e.g. Catchment or Sub-catchment Forums or Landscape Co-ordination Committees) in each catchment (Ruvu and Zigi) and develop an action plan (including any training required, a schedule of meetings/events, a programme of work and operational plan) to review plans, activities and achievements of all

actors in respect of SLM; promote integration, co-ordination and complementarity and identify opportunities for co-operation and collective problem-solving; facilitate knowledge-exchange and lesson-sharing; develop capacity (with emphasis on women), resolve conflicts and improve efficiency and effectiveness of interventions.The Terms of Reference for the multi-stakeholder committees established under this output should be aligned with those that are described in the Uluguru Landscape Management Framework that was developed as part of the GEF-funded Conservation and Management of Eastern Arc Mountain Forests project (MNRT, 2009).

- Establish and maintain a comprehensive stakeholder database for each Water Basin Office, recording all NGOs/CSOs, businesses, government agencies, their core business and interests in the basin (related to SLM or IWRM), their activities/projects, how they are linked to the Project, key contact information, their information needs and appropriate information dissemination avenues. The database should also make provision for uploading project reports and other relevant documents.
- Develop and implement a catchment-wide communications and awareness-raising strategy that will identify information/awareness needs suited to various stakeholder groups, develop and disseminate communications/awareness-raising materials using culturally-appropriate and gender-sensitive messaging, and disseminate them using multiple means; monitor information dissemination, uptake and impacts of communication and use the feedback for adaptive management of the communications strategy used by the Multi-Stakeholder Committees and the project.
- Work with Water Basin Offices and District Councils to develop a joint vision and strategy for promotion of SLM and protocols for monitoring the uptake of SLM and its impacts of SLM on land degradation and watershed services in the two catchments. Wherever possible, the joint vision and strategy should draw on strategies and intervention options that were identified in the Landscape Management Framework (MNRT, 2009).

171. At project inception, the services of a suitably qualified communications specialist will be procured to identify information and awareness-raising needs, suited to various stakeholder groups, develop appropriate communications/awareness raising materials and tools (using multiple means such as printed materials, radio, internet and websites, mobile phones, cultural gatherings and other special events, school programmes, workshops, demonstrations, study tours, symposia). The service provider's brief (described in Section IV, Part I)should include: working closely at all stages of the development process with staff of the Water Basin Offices and members of community to ensure that the material takes account of local knowledge and cultural norms, is appropriately contextualised and gender-sensitive; assisting the Water Basin staff and community members with planning a dissemination and awareness-raising strategy and monitoring system and training them in its use. The strength of the awareness raising and communication strategy will lie in empowering community members to lead the process of mainstreaming.

172. The development of the Stakeholder and Projects database for the two Water Basin Offices will fall under the broader remit of the data management systems expert procured under Output 1 of the project. A critical component under this output will be providing the necessary computer hardware and software for operating the database, and providing training to relevant staff in the use and maintenance of the system.

173. Establishment of the multi-stakeholder committees in each catchment will be achieved by engaging asuitably qualified local facilitator with an established track record in managing this kind of facilitation process. This entity may be the same as or different from the one engaged under Output 2.

Output 1.3:Water User Associations (WUAs) and River Committees are established and capacitated to perform their roles effectively in all key sub-catchments within the Wami-Ruvuand Pangani river basins

174. Specific activities under this output shall be to:

- Conduct a Strengths, Weaknesses, Opportunities and Challenges (SWOC) analysis of the existing WUAs (Zigi-Mkulumuzi in the Zigi Basin, and Mfizigo and Ngerengere Upper and Lower WUAs in the Ruvu Basin).
- In the Zigi River Basin, engage with all relevant stakeholders to clarify roles and responsibilities for the Zigi-Mkulumuzi WUA relative to UWAMAKIZI and develop and implement a communication strategy for raising awareness of these roles amongst communities within the Basin.
- Using participatory means, develop Sub-catchment Committees in the 3 sub-catchments of the Zigi River (using the UWAMAKIZI model), establish a learning exchange through which the lessons learnt in the establishment of UWAMAKIZI can be transferred to the new Associations.
- Develop an operational model through which the sub-catchment committees work co-operatively with WUAs to manage water use and monitor the impact of land management practices on water resources.
- In the Ruvu Basin, establish 4 new WUAs (Mvuha, Kibungo, Mtumbizi and Mgeta) and 2 new sub-catchment committees.
- Strengthen the existing WUAs in the Mfizigo, Negerengere Upper (A&B) and Lower sub-catchments.
- Conduct annual training for all Water User Associations and Sub-catchment Committees in the principles of SLM and the role of SLM in protection of water resources, provisions of all relevant land and water-use legislation; financial management and the development of funding proposals; entrepreneurship skills; the costs and benefits of alternative sustainable livelihoods.
- Provide office equipment, means of transport and tools to equip each WUA to do its job (based on the resource needs assessment conducted at the start of the project), starting with existing WUAs and then extending to the new ones to be established during the project.
- Provide technical support and advice to all Water User Associations in the catchments.

175. The Strengths-Weaknesses-Opportunities-Challenges(SWOC) analysis should be undertaken by the staff of the Water Basin Offices, working with the support of the Project's M&E Expert, and the Technical Advisor/Co-ordinator. The purpose of the SWOC analysis shall be to identify specific strengths, weaknesses, opportunities and challenges (which should inform the development of new WUAs and Sub-catchment Committees); identify training, capacity-building and resource needs and develop a capacity and resource-development programme that addresses these needs. Training will include, but may not be limited to, the provisions of all relevant land and water-use legislation; principles of SLM and its role in protection of water resources; practical financial management skills and the development of funding proposals; entrepreneurship skills; costs and benefits of alternative sustainable livelihoods; data gathering and management; and monitoring. The resource developmentplan should put in place measures to ensure that each WUA is provided with the equipment, means of transport and tools to do its job effectively, with the project contributing to some of these costs and to the provision of technical assistance.

176. Water Basin Offices are currently constrained in their ability to establish and strengthen WUAs and Sub-catchment Committees by staff and resource shortages. The WRBWO has established a Community Development Unit to perform these functions, but this has only 3 Community Development Officers to cover the full Wami-Ruvu Basin, which spans some 66, 820 km^2. In the Pangani Basin (which covers 58,800 km^2), the PBWO, which has similar staff constraints, has to date been supported in the formation of WUAs by IUCN and PAMOJA through the Pangani River Basin Management Project. In the Zigi catchment, Tanga-UWASA has appointed an environmental officer and a public relations officer to provide support to the Zigi-Mkulumuzi WUA, theUWAMAKIZI Farmer's Association and the Mabayani Dam Environmental Committees, though they do not have adequate resources to meet the annual budgets of these organisations.

177. To address this, the Project will appoint a Technical Advisor and Co-ordinator to provide technical advice and co-ordination support to the Water Basin Offices to facilitate the establishment and strengthening of Water User Associations and to co-ordinate and monitor all activities under this project output. In addition, the project will negotiate an agreement with the Ministry of Water, under

which additional Community Development Officers will be seconded to the two water basin offices, to expand their capacity to form new WUAs and sub-catchment committees in the Ruvu and Zigi catchments. Two additional community development officers will be assigned to the WRBWO and one to the PBWO.The salaries of the seconded staff will be met by the Ministry of Water, as part of itsco-finance, but the project will provide operating costs to facilitate the formation, trainingand capacitation of the Water User Associations and Sub-Catchment Committees. It shall be the role of these staff, under the guidance of the Technical Advisor and Co-ordinator, the Water Basin Offices and Tanga-UWASAto carry out the activities under this Output. The Community Development Officers may require the services ofexpert facilitators to assist them with the establishment of WUAs; such services will be provided by setting up partnerships with programmes such as iWASH (in the Ruvu), and the Pangani River Management Project (in the Zigi), which have a well-established track record of achievement in this area of activity. They can also provide technical and advisory support to the newly-formed WUAs as they become operational.

Output 1.4:Wami-Ruvu and Pangani River<u>Water Basin Authorities and water users understand water basin regulations and are capacitated to identify and prosecute water and land-use infringements and harness greater compliance</u>

178. Project activities under this output will be to:

- Conduct a water use audit in each Basin, including a survey of water users, use and needs; water permit allocations; and payment compliance (including spatial depiction).
- Facilitate the development of an institutional mechanism for enhancing co-operation between District Councils, Basin Water Offices, WUAs and Village Councils to prepare joint allocation plans and regulations and establish a joint allocation monitoring system.
- Work with stakeholders and technical (legal) expert(s) to identify conflicting laws, develop an agreed harmonised set of laws and supportive regulations and conduct stakeholder workshop(s) to explain and discuss harmonised laws.
- Provide the staff of Water Basin Offices, District Facilitation Teams, WUAs and other community governance structures (such as Village Natural Resource or Environmental Committees) with training in the provisions of all relevant Acts and legislation.
- Establish multi-stakeholder Enforcement Teams to work alongside WBOs, WUAs and Village leaders to enforce legislation and bylaws; identify, monitor and prosecute infringements and track changes in use over time.
- Develop and disseminate information in popular and appropriate formats (e.g. printed media, meetings, focal visits, mobile technology) about water rights and responsibilities, water- and land-use regulations.
- Develop and implement a monitoring and data management system for payment compliance, and the fair and transparent allocation of funds received.

179. Much of the work under this Output will be led by the Project Coordinator (PC), working in close association with the Project's M & E Expert, members of the Technical Team, the Basin Water Officers, and legal experts within the relevant line ministries and other implementing partners. The Water Basin Offices should conduct the Water Use Audit, under the guidance of the M & E Expert. If in-house legal expertise is not available, it may be necessary to hire a local expert or to partner with a local research institution or NGO to use participatory methods to identify conflicting laws, develop an agreed harmonised set of laws, conduct stakeholder workshop(s) to explain and discuss the harmonised laws and provide the staff of Water Basin Offices, District Facilitation Teams, WUAs and other community governance structures (VNRCs or VECs) with training in the provisions of all relevant Acts and legislation.

180. The services of a suitably qualified institutional expert, or an NGO with institutional development and facilitation expertise (such as PAMOJA), working in close association with the Project Coordinator and the project stakeholders, will be required to facilitate the development of the institutional mechanism for enhancing co-operation between District Councils, Basin Water Offices,

WUAs and Village Councils, and to work with them to prepare joint allocation plans and regulations and establish a joint allocation monitoring system, and to conceptualise and establish multi-stakeholder enforcement teams.

181. The development of a monitoring and data management system for payment compliance will fall within the terms of reference of the Project's Monitoring and Evaluation Expert, who may require inputs from the data management expert contracted under Output 1 of the project. The M&E Expert shall be responsible for training all relevant Basin staff in the use of the monitoring system.

Outcome 2:Finances available for SLM investments are increased by accessing new streams of public finance and more effective alignment of existing sectoral contributions

Outcome indicator:Increase in public funds allocated to SLM interventions in the Ruvu and Zigi catchments(see Project Results Framework for specific indicators, baselines and targets)

This Outcome will be pursued through three Outputs:

Output 2.1: New streams of public finance are identified and accessed

182. Project activities under this output will be to:

- Undertake an economic evaluation of the costs/benefits of different SLM practices and production systems and use the results to develop a business case for leveraging new streams of public finance.
- Identify likely sources of additional public finance and other financing mechanisms that can be tapped for the implementation of SLM in the Ruvu and Zigi Catchments and develop a strategy and action plan for accessing these.
- Lobby for the inclusion of SLM as a component of Integrated Water Resource Management in national development and environmental policies, programmes and strategies.
- Enhance research capacity in the key water resource management institutions to determine degradation trends and the impacts of adaptation strategies in order to access financing for mitigation strategies identified in the National Action Plan (NAP).
- Provide technical support and training to enable water basin authorities to develop bankable SLM project proposals.

183. The Project will require the services of a local (or international consultant), firm or NGO with expertise in resource economics, economic analysis and financial planning to undertake the cost/benefit analysis of different SLM systems within the Ruvu and Zigi catchments and use the results to develop a business case for leveraging new streams of public finance. They will also be required to identify likely sources of additional public finance and other financing mechanisms that can be tapped for the implementation of SLM in the Ruvu and Zigi Catchments, including new and non-traditional options such as Small to Medium Enterprise (SME) Banking, Clean Development Mechanisms, Public-Private Partnerships; Incentives and Market-Based Mechanisms, and to use participatory methods to develop a strategy and action plan for accessing these.

184. The Project Coordination Unit (PCU) will be responsible for lobbying for the inclusion of SLM as a component of Integrated Water Resource Management in national development and environmental policies, programmes and strategies, and for working closely with the Vice President's Office-Division of Environment (VPO-DoE) and the United Nations Convention to Combat Desertification (UNCCD) Focal Point to explore opportunities for accessing funding via mitigation strategies identified in the National Action Plan (NAP).

185. At project inception, the Project Coordinator, working closely with the other implementing partners, willenter into a partnership agreement with a suitable local research institution (such as Ardhi University or the Tanzanian Natural Resources Information Centre at the University of Dar es

Salaam), in order to commission a study to determine degradation trends and the impacts of adaptation strategies.

186. The Project Co-ordination Unit (PCU) will convene a series of Project Development Workshops at which members of the Project's Technical Panel and other staff of key stakeholder institutions will receive training in the development of bankable projects using a Logical Framework Approach (LFA) (and other project development methodologies), to enable them to access funds from a wider variety of sources including climate change financing from multilateral and bilateral partners. The training should be provided by the Project's M& EExpert, working with an internationally-experienced Project Development Expert familiar with SLM, land degradation and climate change.

Output 2.2: Sectoral (forestry, agriculture and water) allocations to SLM are re-aligned

187. Project activities under this output will be to:

- Conduct a Public Expenditure Review of the agricultural, forestry, livestock development and water sectors to quantify the sources and amounts of funding currently available for SLM in the Ruvu and Zigi catchments, identify duplications, redundancy and negative trends in expenditure and recommend measures for overcoming these and aligning finance streams.
- Facilitate the co-ordinated engagement of water basin authorities and other stakeholders in budgeting for SLM in the two river basins.

Output 2.3: The effectiveness of SLM investments is improved

188. Project activities under this output will be to:

- Investigate the feasibility of establishing an SLM Fund for the Ruvu and Zigi catchments and identify measures for its establishment during the tenure of the project.
- Facilitate linkages and opportunities for joint financial planning by sectoral departments, as well as donors, NGOs, business and private enterprises that provide funding for SLM in the Ruvu and Zigi catchments.
- Develop a comprehensive integrated investment framework/plan for the two catchments, a set of resource allocation guidelines and criteria, and an M&E system for monitoring implementation of the investment framework.

189. The Consultant, firm or NGO contracted under Output 2.1 will also be responsible for conducting the Public Expenditure Review (Output 2.2) and the feasibility study for the establishment of an SLM Fund (to be consistent with the Green Fund identified in the Integrated Investment Framework for SLM). The service provider will also work with the stakeholders to facilitate the development of the integrated investment framework for the two catchments, the resource allocation guidelines and the monitoring and implementation framework for implementation of the investment strategy. The development of the integrated investment framework will require one-on-one consultations, focused work-sessions with particular stakeholder groupings, and at least one multi-stakeholder workshop in each catchment.

190. The Project Co-ordination Unit (PCU) and the Technical Panel shall be responsible for facilitating linkages and opportunities for joint financial planning by sectoral departments, as well as donors, NGOs, business and private enterprises that provide funding for SLM in the Ruvu and Zigi catchments.

Component 2:*Reducing the effects of land degradation on watershed services and improving livelihoods through increased landscape level adoptionof SLM measuresin theRuvu and Zigi catchments*

191. Under this component there are two Outcomes, one to do with developing institutional capacity for promoting sustainable forest and land management in support of IWRM (Outcome 3), and the other

focusing on increasing the uptake of sustainable land management practices to secure watershed services and improve livelihoods (Outcome 4).

Outcome 3: Institutional capacity is built for promoting sustainable land and forest management in support of IWRM in the Ruvu and Zigi Catchments

Outcome Indicator: Increase in awareness and capacity of local communities and institutions (e.g. extensions services, district authorities, Basin Water Offices) for integration of SLM into resource use and management practices (see Project Results Framework for specific indicators, baselines and targets)

192. During the Project Preparation Grant (PPG) phase, a provisional institutional capacity assessment was conducted, including 16 institutions across the water resources management spectrum in the Ruvu and Zigi catchments, and spanning national, regional, district, basin, catchment and local level institutions (for details of the terms of Reference, see Section IV, Part VI of this document). It also included a superficial assessment of the adequacy of the extension services available to farmers in the catchments. This provided the context for the development of the project activities under this Outcome, as described below. The services of a national or international institutional capacity development expert will be procured at project inception to, *inter alia*, undertake an expanded staff and resources assessment and develop a multi-pronged, reflexive capacity- and resources-development plan (including financing and sustainability components) to deliver all of the capacity-development requirements under Outputs 3.1, 3.2 and 3.3. The resulting capacity-development programme should take into consideration capacity at the enabling level (the broader system in which institutions and individuals function), the organisational level (internal policies, arrangements, procedures, frameworks and resources that an institution needs to deliver on its mandate), and the individual level (skills, experience and knowledge vested in people). In delivering these Outputs, the international consultant will work closely with a local institutional capacity development consultant to ensure that in-country capacity is developed for monitoring, sustaining and scaling up the capacity development programme into the future.

193. Working with the results of the preliminary institutional capacity assessment as a basis, the consultant will work closely with the local capacity development practitioner(s), the Project Coordinator, M&E Expert, Technical Team and stakeholders to determine the exact parameters for the expanded capacity assessment. The assessment should at least: fill information gaps and expand the reach of the assessment undertaken during the project preparation phase, by including additional institutions, as necessary; provide an analysis of the causes underlying the current institutional capacity status quo; identify practical solutions to address the barriers; set capacity-development targets and identify staffing and resource requirements needed to develop institutional capacity to the desired level over a five-year trajectory. The PCU will then be responsible for implementation of the plan, over the life-span of the project and for monitoring its impact. Wherever possible, delivery of the plan should be achieved through setting up partnerships with local training institutions, either in the tertiary education or NGO sectors, although some components of the capacity development plan may require the services of hired professionals.

194. The specific outputs and activities included under Outcome 3 are described below:

Output 3.1:The institutional capacity (staff and resource requirements for promoting SLM) is strengthened in the Wami-Ruvu and Pangani Water Basin Offices, regional offices of line ministries and local government institutions

195. Project activities included under this output will be to:

- Undertake an expanded staff and resources needs assessment.
- Work closely with stakeholders to design and implement a multi-pronged, staffing and resource development plan that addresses the current staff and resource deficits and better enables the target institutions to integrate SLM into watershed management.

- In accordance with the resources-development plan, equip each Water Basin Office and other implementing partners with the necessary GIS software and hardware, water monitoring kits, other basic tools and equipment required to deliver the project outputs.

Output 3.2: The technical knowledge and skills for integrating SLM into IWRM are increased amongst relevant staff of Water Basin Offices, relevant line ministries, and local government institutions

196. Activities under this project output are to:

- Based on the institutional capacity assessment (described under Outcome 3, above), confirm the technical knowledge and skills development needs of the target institutions (for integrating SLM into watershed management), and use this to develop and implement a multi-pronged and reflexive targeted training and skills development programme.
- Mobilise a fund, with criteria for allocations, to enable staff members of water management institutions, the PCU members and Technical Team to attend short courses to improve their qualifications, according to the capacity building plan.
- Develop a skills and knowledge development monitoring and sustainability plan.

197. The Terms of Reference (ToR) of the consultant hired under Outcome 3, shall include an assessment of the technical knowledge and skills development needs of the targeted institutions. The capacity development programme, which will specify clear targets relating to gender equity, should include, inter alia: the provision of short-courses and focussed workshops; staff-exchanges/mentorship partnerships with counterpart agencies and tertiary education/research institutions; and part-time studies. The knowledge/skills areas covered in the training must include (though may not be limited to): principles of SLM and IWRM (basic and advanced); land-use planning; Strategic Environmental Assessment (SEA), data gathering, collation, management, modelling and analysis; use of GIS; remote-sensing; mapping; monitoring and evaluation techniques; project design (for SLM) and reporting techniques; budgeting , financial planning and management; community engagement and conflict resolution; advanced enforcement techniques.

198. As a general approach to facilitating knowledge improvement, fostering a culture of ongoing learning and strengthening the links between research and implementation, the project will encourage an ‘open door’ policy towards researchers and students who are active in relevant fields, to work alongside the project (at their own cost, or through the provision of small research bursaries) generating research results that can feed into adaptive management of the project, or improve its impact through refinement of best practices. In addition to direct benefits to the project, this approach will serve the broader purpose of growing the pool of skilled professionals who will become available to work in the fields of integrated watershed management and SLM in the future.

Output 3.3: Extension services are capacitated to promote uptake of SLM and promote sustainable livelihoods

199. Project activities under this output will be to:

- Conduct a full assessment of extension capacity (staff, resources, levels of technical skill) in 7 districts (within the project footprint) and use this as the basis to develop a capacity-building programme for extension services.
- In collaboration with NGOs, CSOs and other relevant institutions, develop a locally-contextualised best practice guideline on modern SLM technologies, principles of integrated water resource management and alternative sustainable Income Generating Activities(IGAs), and use the guidelines as part of a training programme.
- Train extension officers in SLM concepts and technologies, principles of integrated water resource management and alternative sustainable livelihoods and equip them with suitable awareness raising materials to support their extension services.

- Expand extension services by providing incentives for non-extension staff to participate in extension delivery (e.g. farmer's associations; other CSOs and NGOs, model farmers).
- Promote farmer to farmer extension by showcasing and rewarding farmer innovations and strengthening the activity of farmer field schools, with particular attention given to women farmers.

200. The assessment of extension capacity will form part of the full institutional capacity assessment outlined in Output s 3.1 and 3.2, above, and will fall within the scope of work to be carried out by the institutional capacity development consultant. It will be informed by the information gathered during the project formulation process.

201. Development of the best-practice guideline will be a collaborative effort co-ordinated by a suitably experienced co-ordinating editor, supported by the Project Coordinating Unit (PCU). The Co-ordinating Editor may be drawn from one of the participating institutions or may be an external service provider. The PCU will convene a planning workshop with key NGOs and CSOs and other projects and programmes with proven capacity and experience in implementing SLM, integrated water resource management and the development of alternative Income Generating Activities (IGAs). The purpose of the workshop shall be to: develop a broad outline for the contents of the guideline, develop a design concept, identify key contributors, assign roles and responsibilities and develop a schedule and production plan. The workshop will also be used to distil out at least a set of preliminary key lessons learnt that should be captured in the guidelines (more might emerge during the development of the content of the guidelines) and identify suitable case studies, with careful attention being paid to showcasing the work of men and women farmers and livestock keepers. Participants at the workshop should include, but may not be limited to: SAT, TFCG, WWF, WCST, CARE, UNDP, MVIWATA, MJUMITA, Sokoine University of Agriculture (to capture lessons learnt from the UMADEP project), the Infonet-BioVision project, Ardhi University, farmer's associations (such as UWAMAKIZI, Juwakihuma and Wakuakuvyama), members of Project Co-ordination Unit and Technical Team, and extension officers (agriculture, livestock and forestry) from the 7 districts in which the project will be implemented. The guidelines, which will follow the model of the TerrAfrica SLM Best Practice Guidelines (see Liniger *et al*., 2011), will be locally-contextualised and include case studies from the Uluguru and East Usambara Mountains. They will be written in an accessible style (with KiSwahili and English versions), with extensive use of visual aids and emphasis on practical guidelines. The co-ordinating editor of the guidelines will also be responsible for developing awareness-raising materials based on the content included in the Guidelines.

202. Training of extension officers will, wherever possible, be facilitated through existing training programmes (such as those implemented by SAT at their Farmer Training Centre in Morogoro), and through customised training based on the best practice guidelines. This training will also be provided to farmer's associations and individual farmers (to be identified through relevant channels, with careful attention given to gender equity) who can be trained as 'para-professionals', to augment the advisory service provided through formal extension programmes .

203. The Project will work through relevant NGOS and CSOs (such as UWAMAKIZI, Juwakihuma and Wakuakuvyama) to identify model farmers whose work can be showcased as demonstrations of best practice(again with careful attention paid to gender equity). It will also promote farmer-to-farmer exchanges and other opportunities for promoting uptake of SLM, building on the farmer-centred extension model developed by the Uluguru Mountain Agricultural Development Project, UMADEP.

Outcome 4:Landscape-level adoption of SLM measures in the Ruvu and Zigi catchments promoted to reduce the effects of land degradation on watershed services and to improve livelihoods

Outcome Indicator:Reduction in extent of degradation in the Ruvu and Zigi catchments and improvement in the livelihoods of basin communities due to increased benefits from adoption of SLM practices (Specific indicators, baselines and targets to be established in Year 1)

204. Delivery of the outputs under this outcome will require that a number of studies are undertaken, or that existing knowledge (that has been generated through related projects) is consolidated and made available,at project inception to fill current data gaps and inform the selection of implementation sites and the methodologies to be used. There are numerous organisations - such as Tanzania Forest Conservation Group (TFCG), CARE, MJUMITA, WWF, Eastern Arc Mountains Conservation Endowment Fund (EAMCEF), Sustainable Agriculture Tanzania (SAT), the Tanzania Forest Service (TFS) and others - that have a long track record of carrying out this kind of work (restoration, reducing pressures on forests by implementing alternative energy and building solutions, planting of woodlots, and so on) in the East Usambara and Uluguru Mountains. Wherever possible, the required information will be gathered through creating opportunities for knowledge-sharing with these organisations. Where the required information cannot be gathered in this way, specific studies can be commissioned, preferably through partnership arrangements with local (or international) research institutions with relevant expertise, or through the appointment of an external professional (consultant).

205. Outputs included under this Outcome are described below:

Output 4.1: Sustainable land management practices promoted and natural rehabilitation facilitated in 10,000 ha of forest

206. Activities under this output will promote natural resource use approaches that reduce pressures on the forests and facilitate natural regeneration through better control of fire and burning, promotion of sustainable harvesting of firewood and promotion of alternative energy sources. The approaches to be promotedcan be loosely categorised into five types: (i) information-gathering to inform decision-making; (ii) practical forest restoration and rehabilitation (both within and outside of protected forests); (iii) measures to reduce dependency on timber for fuelwood and construction materials; (iv)strengthening co-operation between the Tanzania Forest Service and forest-adjacent communities to achieve sustainable forest management; and (v) awareness-raising and training to raise the profile of the importance of forest conservationamongst communities and to involve communities in monitoring and enforcing sustainable forest-use and forest management practices.

207.The specific project activities under this output will be to:

- Convene an information-gathering workshop with all relevant institutions to pool knowledge and capture lessons learnt in order to: compile an up-to-date inventory of forests in the Ruvu and Zigi catchments, using available data and knowledge (with NAFORMA 2013 as a primary departure point); identify, map (at fine scale) and prioritise degraded forest areas within and surrounding the Amani and Uluguru Nature Reserves, and community-managed forest reserves; select sites for the development of natural and assisted natural regeneration projects; identify tried-and-tested models for setting up tree nurseries and managing the rehabilitation process; identify key threats and pressures (including any risks posed by invasive alien species).
- Work with the Tanzania Forest Service (TFS) and forest-adjacent communities to develop forest management plans and to develop strategies to manage fire, illegal logging, illegal alluvial gold mining, firewood collection and riverbank conservation.
- Work with communities and the Tanzania Forest Service (TFS) to develop assisted natural generation and enrichment planting projects to re-vegetate 5,000 ha of riverine forest within the Uluguru and Amani Nature Reserves (and other protected forests), and 5,000 ha of degraded sub-montane forest outside of protected forests, and put in place a tracking system to monitor impact over time. This will include identifying sites for restoration, establishing assisted natural regeneration and enrichment planting projects and putting in place training programmes to provide skills and resources for restoration (including support to communities to establish tree nurseries for *Albizia, Newtonia, Ficus* and other suitable species that can be used in the assisted natural regeneration projects).
- Work with communities, the Tanzania Forest Service, Water Basin authorities and relevant NGOs and CSOs to set-up co-operation agreements and develop an innovative, non-financial incentive

scheme for reducing harvesting pressures within protected forests in return for benefits associated with activities that provide viable alternatives to meet daily resource and livelihood needs (such as the provision of simple, reverse-osmosis water purification kits in return for protection of forest resources).

- Undertake an assessment of affordable, viable alternative energy technologies for cooking, heating and lighting; select cost-effective and appropriate technologies for sale and distribution, particularly by women and youth (building on themodel tested by CARE in their wPOWER project), and train community members, with a focus on women and youth, and equip them with suitable materials to raise awareness of the environmental and health benefits of using alternative energy technologies and reducing reliance on wood fuel and charcoal.
- Create awareness by training teachers in environmental education and the role of forests in protecting water resources, and by working with cultural groups and performers to incorporate forest conservation messages in their work.
- Work with TFCG, TaTEDO and other partners to identify suitable sites in the Ruvu and Zigi catchments for rolling out the Sustainable Charcoal project which has been piloted in the Kilosa District.
- Train and employ community members as enforcement officers to patrol and monitor harvesting and forest re-generation.

208. Selection of sites for rehabilitation and protection (both within and outside of protected areas) will require at least the following: updating the land cover data for the two catchments (using the 2010 land cover data in NAFORMA, 2013 as the baseline); surveying and mapping (at fine scale) badly degraded forest areas both within and beyond the boundaries of protected areas (with special attention paid to those that might require special rehabilitation measures); identifying the causes of degradation; and identification of suitable tree species and rehabilitation methods. This information will be needed to assess site potential and select pilot sites for rehabilitation. Other information to factor into site selection will be indigenous knowledge of rehabilitation, community values and cultural considerations, and cost-benefit trade-offs. Replication of the Sustainable Charcoal Project would be inappropriate in protected forests, or in upper catchment areas that contain catchment forests. There would be scope, however, for adopting this approach at lower altitudes in woodlands that are more heavily targeted for charcoal production.

209. Site selection, therefore, needs to carefully balance the hydrological, ecological and social benefits to be attained. The most cost-effective areas to restore may be lightly degraded areas as these do not need active restoration – by controlling the expansion of further negative impacts, these areas will regenerate on their own. These areas are also well-suited to simple and inexpensive farmer-assisted restoration. Moderately degraded areas (the restoration of which will likely yield greater benefits in terms of alleviating land degradation), will respond best to active restoration, which may be more costly. Restoration of more intensely degraded areas might require complex and expensive interventions to prevent erosion and the creation of structures to protect important water sources as well as restoration of tree cover. However, heavily degraded areas may have shifted to an alternative stable ecological state from which all original functions cannot be cost- effectively restored.

210. The activities under this output should be implemented through partnerships between the relevant government agencies and experienced NGOs (or other institutions) with a proven track record of success in this field, with the PCU playing a facilitation role.

Output 4.2: Household food production and incomes increased by 30% (for actively participating villages) through promotionof sustainable income generating activities in participating villages

211. Implementation of the activities under this output will be informed by a detailed socio-economic analysis, which ideally should be carried out through a partnership agreement with a suitably experienced local or international research institution. The researcher (or research team) will, *inter alia*: review the existing socio-economic data available for the Ruvu and Zigi catchments and use this as the basis for identifying data gaps that need to be addressed; assess the costs/benefits of different

SLM practices and production systems and their benefits to ecosystem functioning and livelihood improvement; building on previous studies, conduct an assessment of current income generating activities and quantify their contribution to local economies and household incomes in the selected villages (with the data disaggregated by gender); assess the economic potential of alternativeincome generating activities(IGAs) and develop projections of their economic-returns and environmental benefits; develop a set of gender-disaggregated livelihood and welfare indicators that can be used to monitor the impact of the uptake of alternative, sustainable IGAs; develop a programme of action for increasing SLM-related activities in selected villages, outlining the costs, benefits and trade-offs and providing guidelines that ensure that the programme does not accelerate land and watershed degradation; and, identify a set of micro-financing and savings options that are suited to the needs of farmers in these catchments, with special emphasis on those from vulnerable groups (women, youth, the elderly). The study (the Terms of Reference for which is included in Section IV, part 1) will identify structural market inefficiencies that currently limit the productivity of farmers, and will develop recommendations on how these can be overcome.

212. The project activities under this output will be to:

- Undertake a market assessment (building on the data gathered by Sustainable Agriculture Tanzania, TFCG, Care and WWF in other projects) to establish the costs/benefits of different sustainable land management and production systems, quantify current household incomes and production rates and identify, with the community, viable alternatives for economic development (e.g. bee-keeping, zero-grazing dairy farming; organic spice growing; mushroom farming) to be implemented in targeted villages.
- Work with farmer's associations such as UWAMAKIZI, Juwakihuma and Wakuakuvyama and equip them to play a mentorship role in promoting awareness and uptake of sustainable land management practices including terracing (*fanya juu* and *fanya chini)*, green manuring, soil conservation measures, using the Best Practice Guide developed under Output 3 as a key awareness-raising and training tool.
- Work with selected villages to implement bee-keeping, zero-grazing dairy farming, organic spice growing, mushroom farming and so on, and establish markets and competitive pricing strategies for produce.
- Enhance ability of communities, particularly women and other vulnerable groups, to engage with micro-finance providers through existing market associations/co-operatives, or through the formation of new associations where none exist, and provide training on best production practices, processing, product development, packing and branding, marketing, financial/business management, contract negotiation and other relevant business skills.
- Develop a monitoring and evaluation framework for monitoring the impacts of changed land use practice and livelihoods on incomes, household production and the environment
- Work with the WRBO and PBWB and the relevant water and sanitation authorities (Tanga-UWASA, DAWASA and DAWASCO) to provide improved access to reliable, clean water sources to provide water for dry season cultivation, away from riverbanks.

213. As with Outputs 4.1 and 4.2, many of the approaches outlined in these project activities have been piloted elsewhere in the Eastern Arc Mountains (and in other parts of Tanzania). The most effective way of developing a detailed implementation plan under this output will be for the PCU to convene a workshop with relevant institutions, such as Sokoine University of Agriculture (SUA), the Tanzania Forest Conservation Group (TFCG), CARE, Sustainable Agriculture Tanzania (SAT) and so on, to pool their knowledge and experience on how to scale up alternative approaches that are known to have worked elsewhere in these catchments. These components of the project should be implemented by experienced NGOs (or other institutions) with a proven track record of success in this field, working in partnership with the relevant government agencies, and with the PCU playing a facilitation role.

214. In addition to working closely with relevant NGOs and CSOs who have experience in implementing SLM-related projects, and providing the necessary training to communities, strong partnerships with

the Ministries of Agriculture and Natural Resources and Tourism will be essential. It is expected that Forest Nature Reserve Conservators, supported by the Bee Reserves and Apiaries Division of Tanzania Forest Service (TFS) will provide technical support in the establishment and management of apiaries in local communities. In addition, the Extension Services and Publicity Unit of the Directorate of Resource Management within the TFS will work closely with the project in awareness-raising and information-sharing activities and in building a positive platform for the involvement of forest-adjacent communities in alternative livelihoods. Implementation of the identified interventions should be led by one, or a number, of the local institutions that have experience in working in the field of alternative sustainable livelihoods.

215. To facilitate the establishment of water points in villages (selection of which will be finalised at project inception), the project will provide support to Tanga-UWASA, DAWASA and the Zonal Irrigation Offices to conduct the necessary awareness-raising campaigns and participatory planning, identify sites for wells (with inputs from field technicians), establish and train well-committees (under the relevant WUAs), develop user protocols and rules, and a monitoring and maintenance plan for each water point. The project can provide materials to contribute to the construction of the water points by the local communities.

Output 4.3. Sustainable livestock management technologies developed and tested and infrastructure developed to operationalise SLM in rangelands

216. The terms of reference for the socio-economic study to be commissioned under Output 4.2 above will also include:

- Undertaking a survey to establish the extent of land degradation in each basin under livestock, current stocking rates, seasonal movements and fluctuations in livestock numbers; numbers of livestock-keeping households (disaggregated by gender); predominant livestock management strategies in the two study areas; current production costs and incomes and an assessment of well-being in livestock-keeping households (disaggregated by gender).
- Identifying (by type, location and scale), a suite of prospective sustainable livestock management technologies.
- Developing indicators that can be used to monitor the impacts of changed livestock management technologies on land cover, soil erosion and the condition of riverbanks, as well as socio-economic impacts (changes in income and other well-being indicators).

217. This information will be used to shape activities that will:

- Assist community structures with resolving farmer-pastoralist conflicts through establishment of a Sustainable Rangeland Management Forum/Task Team that will facilitate lesson-sharing and policy dialogue at local and catchment levels, represent the interests of livestock keepers in participatory land use planning and provide a forum for dealing with inter-village conflicts.
- Facilitate training of livestock extension officers and livestock-keepers in alternative sustainable livestock management technologies; raise awareness of alternative livestock management practices with livestock keepers, and help them select particular interventions for further development and implementation at selected sites.
- Develop a sustainable rangeland management plan for the relevant parts of the catchment, including the provision and management of watering points for cattle, and monitoring the environmental and socio-economic impacts of rangeland management practices.

218. The PCU will work in close association with the Ministry of Livestock Development and Fisheries, particularly their extension service, in implementing this component of the project. Other important role players will be the National Land Use Planning commission, the Regional Secretariat (Morogoro and Tanga), District Councils, Water User Associations, and relevant NGOs or CSOs, as well as land users.

219. A key area of intervention will be to establish, under the facilitation of an NGO with experience in co-ordinating Sustainable Rangeland Management projects, a multi-stakeholder Sustainable Rangeland Management Forum for the Ruvu Catchment. This Forum will bring together key role players at the Regional, District and local levels to facilitate lesson-sharing and dialogue and to ensure linkage between village land use planning and sustainable rangeland management as a basis for reducing land user conflicts. It will also guide the development of a Sustainable Rangeland Management Plan for the relevant parts of the catchment.

220. The appointed agency will co-ordinate awareness-raising about Sustainable Rangeland Management. They will also facilitate training of extension officers and livestock-keepers, through a combination of practical, field-based training and through the establishment of learning exchanges (field trips and farmer-farmer exchanges) with sustainable livestock management projects being conducted elsewhere in the region (e.g. those in Dodoma and Manyara Regions).

221. A key deliverable under this output will be a Sustainable Rangeland Management Plan for the relevant part of the Ruvu Catchment. Development of the Plan will be facilitated by the appointed NGOworking through the Sustainable Rangeland Management Forum. This Plan shall include, *inter alia*, indicators for monitoring the environmental and socio-economic impacts of changed livestock management practices and will address the issue of gender empowerment. It will include the identification of sites for the establishment of water points for cattle, and guidelines for establishing and training Well Committees and the development of Well Maintenance Plans. Efficient distribution of watering points for cattle is a key element of sustainable rangeland management and modern pastoralism. It assures a balanced distribution of stock through the landscape, thus avoiding over-grazing and the consequent land degradation and degradation of water resources. Support from the project will contribute to information and awareness raising campaigns and participatory planning, the establishment and training of Well Committees, the development of user protocols and rules and Well Monitoring and Maintenance Plans, and the provision of well-building materials. Construction of the wells will be carried out by local communities working under the guidance of trained extension officers and field technicians.

Gender Empowerment, Equity and Trade offs

222. The project will strive in all of its activities to address gender empowerment and to ensure that the benefits of the project are equitably distributed within participating communities, in particular among poorer and other more vulnerable households. In doing so, it will build on the lessons learnt from the Equitable Payments for Watershed Services (and other) projects that have been recently implemented in the Uluguru and East Usambara Mountains (Blomley, 2012 & 2013). It will also work to balance the trade-offs between human aspirations for economic growth and poverty alleviation, social and cultural integrity and environmental sustainability that are inherent in integrated watershed management (Grey and Sadoff, 2007). Deliberate pro-poor measures will be used to ensure that the adoption of SLM measures does not only favour middle income and richer households, with consideration of general indicators of well-being, as well as gendertargets, being used to determine participation of households and individuals in project activities. Promoting the participation of the poorest households will require a twin-track approach with specific interventions targeted at the very poor such as starting micro-scale income generating projects such as the keeping of chickens, goats or home gardening. Once people have been helped to move off the “bottom rung”, they may be in a better position to engage in other project activities. Investing in equity may involve some trade-offs in terms of efficiency and effectiveness, as the immediate environmental gains of working with the poorest farmers may be lower (as their land-holdings tend to be very small). However, being more socially inclusive is one of the ‘costs’ of a long term investment on which there will be eventual returns.

223. In Tanzania, current legislation guarantees equal rights to acquire, hold, use and deal with land for men and women, and Village Councils may not, by law, adopt discriminatory practices towards women who have applied for customary rights of occupancy (Carpano, 2010). However, customary norms in rural areas still tend to limit women in their ownership and control over land. Measures will

be introduced in this Project to support the inclusion and participation of women both in project activities and leadership positions. The PES projects have demonstrated, however, that a gender approach does not simply imply the participation or empowerment of women (Blomley, 2013). In matrilineal societies such as the Waluguru, unmarried or divorced men may also be highly vulnerable and completely unable to access land, and one of the most vulnerable social groups is young, unmarried men. What this means is that this project must adopt a more holistic approach that views gender as a part of a wider discussion on vulnerability. The approach taken to gender empowerment must also be sensitive to prevailing cultural norms.

Project implementation sites

224. The Project will be implemented in a total of seven Districts spanning the Morogoro and Tanga Regions. These include Morogoro Urban, Morogoro Rural and Mvomero (in Morogoro Region) and Muheza, Mkinga, Korogwe and Tanga City (in Tanga Region). (Map 3, Section IV, Part II)

225. Within these Districts, the project will be implemented in the catchments of two rivers – the Ruvu (which arises in the Uluguru Mountains and is part of the broader Wami-Ruvu Basin) and the Zigi (which arises in the East Usambara Mountains and is part of the broader Pangani River Basin). The geographic span of these catchments is large (especially for the Ruvu River) and it is not practical to attempt interventions on a catchment-wide basis. Instead, priority sub-catchments have been selected as sites for project implementation based on a combination of scientific criteria (informed by the hydrological and land-use/cover change analysis undertaken for CARE and WWF, and the sediment fingerprinting projects undertaken by Juliana James and USAID); socio-economic factors (informed by the socio-economic assessments that were undertaken as part of the feasibility study to establish EPWS projects in the Uluguru and East Usambara Mountains, as well as other data emerging from projects run by Tanzania Forest ConservationGroup and Sustainable Agriculture Tanzania); and site visits and consultations that were conducted during the project formulation process.

226. Priority sub-catchments are considered to be those that will deliver more positive impacts to the hydrology of the rivers and the most direct improvements in the socio-economic conditions of communities, based on the following factors: trends in land use/cover change; the drainage area contributing to flow, proportional contributions to flow volumes and sedimentation in the basin, flow trends and rainfall; existing land management and conservation measures; population pressure; the socio-economic profile of communities, and the intensity of activities influencing watershed services. In selecting priority sub-catchments in which to work, consideration was also given to factors such as the need to build on the successes and social capital built by related projects that have run, or are still active, in the area (e.g. the EPWS projects run by CARE/WWF and WCST/RSPB, the forest rehabilitation projects run by TFCG, farmer training run by SAT, and other earlier GEF/UNDP-funded initiatives).

227. The sub-catchments proposed for the Zigi basin are: the main Zigi sub-catchment (Amani Division), the Kihuhwi River Sub-catchment and the Muzi River Sub-catchment. Given the rate of change in land use/cover, the intensity of use of the riparian zone and the high proportional contribution to flow into the basin, it is proposed that the main Zigi sub-catchment be given first priority, followed by the Kihuhwi and then the Muzi. Most activity will be focused in the upper parts of the sub-catchments as it is here that slopes are steepest and erosion potentialis highest. Some project activities will, however, take place in the lower-lying Mjesani area, principally in the Pande Darajani Ward, and in the vicinity of the Mabayani Dam.

228. In the Ruvu River catchment, the project will focus in the Upper Ruvu sub-catchment (above Kibungo Chini) and the Mgeta sub-catchment. The Upper Ruvu sub-catchment will be subdivided into four watersheds including Kibungo (main Ruvu), Mvuha, Mtumbizi (including the Mbezi) and Mfizigo (these are named for the main streams at the outlet of the sub-catchments). These sub-catchments drain a bigger proportion of the basin, are relatively more degraded, have higher rainfall, a higher potential for erosion and a prevalence of agricultural practices that cause land degradation (with greater impacts on downstream flows). They are also more densely populated than other areas

and correspond directly with the catchment that will feed the yet-to-be constructed Kidunda Dam. The upper parts of the catchments will be given greatest priority due to the high contribution these areas make to water flows, the severity of land degradation and the rapid rate of agricultural expansion. However, mid-reaches of the catchment, including villages such as Magogoni and Mvuha (Selembela and Mvuha Wards), and parts of Ngerengere Lower Sub-catchment will also be included as it is here that livestock-farmer conflicts are currently most intense, and where interventions are needed to achieve more sustainable livestock management. The Mgeta sub-catchment has also been selected as a priority for intervention as it includes very steep slopes that are under intensive cultivation with high rates of utilisation of river banks. This sub-catchment is also known to contribute at least one third of the sediment that enters the Ruvu system (USAID 2012).

229. Not all project outputs will be implemented at all sites – specific activities will be targeted in certain areas based on the key issues, opportunities and constraints that they present. A final selection process will be carried out at project inception.

INDICATORS AND RISKS

230. A summary of the Objective- and Outcome-level indicators and targets is provided in Table5 below. Further details on the indicators are included in the Strategic Results Framework that is included under SECTION III of this document.

Table 5: Project Indicators and targets

Project element	**Indicators and targets**
Objective	• Reduction in land degradation in the Ruvu and Zigi catchments as measured by at least a 25% increase in land cover (proportions for forest and rangelands to be determined at project inception), a 10% reduction in soil erosion, improved soil organic matter and other indicators to be determined during the formulation of the M&E action plan at project inception, and as reflected in the GEF LD Tracking Tool • A 10% improvement in water quality and quantity in rivers at intervention sites as measured by water flows, annual rainfall,sediment load, using methods to be established at project inception • At least 10,000 ha of degraded forest restored (5,000 in protected forest and 5,000 ha outside of protected areas) • At least 25% improvement in household welfare and 10% increase in annual food production for at least 30% of the households in pilot villages, measured as a percentage increase in household incomes, percentage reduction in the number of food insecure days, and other indicators to be determined at project inception • At least 30% of livestock keepers adopt sustainable rangeland management practices, with a 25% improvement in land cover over 2,000 ha of rangeland
Outcome 1	• District Land Use Plans developed and operationalised in at 7 Districts (the number of villages to be determined at project inception) • At least 75% of District Officers (Participatory Land Use Management teams) and Village land use committees trained in participatory land-use planning, monitoring and implementation of land use plans • At least one multi-stakeholder committee established and operating effectively in each basin as a result of the project • Up-to-date database of stakeholders and projects established for each Basin Water Office • Gender-sensitive communications strategy developed and operationalised • At least5 new Water User Associations and 2 new sub-catchment committees established, registered and operational and with a plan for upscaling inplace • All Water User Associations and Sub-catchment Committees trained in the principles of SLM and the role of SLM in protection of water resources, provisions of all relevant land and water-use legislation; financial management

	and the development of funding proposals; entrepreneurship skills; the costs and benefits of alternative sustainable livelihoods • GIS-based LD/SLM database and land-use decision support-tool/system is in place and at least 50% of land use planning officers, front line extension workers and community associations are trained in the use of the decision-support tool to strengthen land use planning and develop land use maps • 50 - 75% of all staff in target institutions, all WUAs and VNRCs trained in provisions of water and land-use legislation • At least 50% of water users issued with water use permits and 60% of industries and commercial farming operators complying with water discharge permits
Outcome 2	• Amount of funding available for SLM from sectoral allocations is increased by at least 15% over 5 years • At least 2 new streams of funding for SLM accessed via sources such as Incentive and Market Based Mechanisms (IMBMs), Public Private Partnerships (PPP)s • Improved technical capacity for project development and proposal writing • Establishment of an SLM/Green Fund with 20% of funds raised from levies by the end of 2020 • Increase of 10% in SLM funds applied for/received from climate change and National Action Plan (NAP) • Integrated SLM investment strategy, resource allocation criteria and M & E system in place for each Basin and guiding allocation of resources to SLM
Outcome 3	• At least 50% of technical officers in Water Basin ManagementAgencies, extension services and other targeted institutions have received training to enhance their knowledge and skills for integrating SLM into watershed management • Staff and resource deficits for integrating SLM into watershed management decreased by at least 75% in water basin management agencies and other targeted institutions • At least 50 % of land users in the target areas report an improvement in the extension services provided and number of trained extension personnel increased by 50% • Increase of 25% in number of community members trained to serve as 'para professional' extension officers, with equal focus on men and women • At least 75% of land-users in targeted areas aware of the benefits of SLM as a result of improved extensions services
Outcome 4	• Forest cover restored over at least 5,000 ha of riverine habitat in protected forests and5 000 ha outside of protected areas • At least a 25% decline in the rate of illegal harvesting from protected forests • Over 15,000 - 20,000 ha under direct SLM as a result of this project in the target areas in the Ruvu and Zigi catchments • At least 50% of farmers trained in the use of sustainable land management techniques • At least 20% increase in number of farmers in target villages consistently applying 2 to 5 SLM techniques introduced by the project • At least 2 new alternative sustainable livelihood practices taken up in each of the target areas and contributing 10% to production and overall incomes • At least a 15 % increase in annual agricultural produce for key crops as a result of SLM practices introduced by the project in the target villages • Household incomes increased by at least 25% in at least 40% of the households in participating villages, as a result of uptake of SLM practices introduced through the project, with special focus on most vulnerable households • At least 25% of households in target villages using clean energy cooking technology and 75% of households aware of alternative energy solutions

	through capacity building of men, women and youth • Land Cover improved by 25% over 2,000 ha of rangeland • At least 25% of farmers in the target villages benefitting from accessing micro-finance and the development of new markets for agricultural products • At least 30% of livestock keepers adopt alternative livestock management technologies

231. The indicators selected for use in this project have been designed to be consistent with the overall national framework for monitoring implementation of the United Nations Convention to Combat Desertification (UNCCD) (i.e. the NAP2), and other national policy instruments focussed on SLM, including the Integrated Investment Framework for SLM in Tanzania (2014), and the Draft Operational Programme for Effective and Sustainable Protection and Conservation of Water Sources (MoW, 2014). They are also coherent with the overall UNDP/GEF Guideline on Using Indicators to Measure Impact and Performance for Capacity Development and Mainstreaming in Sustainable Land Management Projects, and the GEF Land Degradation Results Framework.

PROJECT RISKS AND MITIGATION MEASURES

232. A number of risks that might impede successful delivery of the project outputs were identified during the project design phase. These can be loosely categorised into: institutional, socio-economic and environmental risks. For each of these potential risks, the project has designed a mitigation strategy, as described in the table below.

Table 6: Risks and mitigation measures

Risk	Rating	Mitigation Strategy
Institutional		
The current high levels of Government commitment to IWRM and SLM diminishes	Low risk	This is considered unlikely, given the large number of policies, programmes and strategies introduced by government to promote integrated approaches to water resource management and the adoption of SLM as a key means for combating land degradation. The project has been designed to give catalytic effect to prioritised interventions under these policies, which should contribute to maintaining Government support for them. The project will establish a Project Steering Committee, membership of which will be drawn from high-ranking officials (Permanent Secretary and Director level) from key Ministries and other government agencies responsible for watershed management. Through the Project SteeringCommittee (PSC), a strong sense of Government ownership of the project will be nurtured thus enhancing the opportunities for ensuring ongoing support.
Government institutions lack the resources and/or capacity to implement the project or to sustain gains once external project support has been withdrawn	Low risk	The project will have a strong focus on building the staff, resource and technical capacity of water basin authorities, across the water resource management spectrum, to ensure that they are adequately capacitated to design and manage SLM interventions and raise funds from a variety of sources. This will strengthen both the financial and institutional sustainability of the project and effectively mitigate against this risk. The project will focus specifically on growing and diversifying the funding base for SLM interventions and on equipping staff of relevant institutions to develop bankable funding proposals.It will create opportunities for joint financial planning and will develop an integrated investment framework for each catchment, which should lead to more effective deployment of resources. In addition, Memoranda of Understanding

Risk	Rating	Mitigation Strategy
		(MoUs) will be put in place between the project and the various implementing partners to secure ongoing commitment.
Conflicts and misunderstanding among public institutions, private sector partners, NGOs and resource users undermine partnership approaches and implementation of cooperative governance arrangements	Low	A major focus of this project will be on building social capital and facilitating opportunities for linkage and collaboration between different stakeholder groups. Where appropriate, formal agreements/MOUs will be used to define roles and responsibilities of implementing partners to avoid misunderstandings. The project will strengthen stakeholder linkages and create opportunities for dialogue, collective planning and problem solving at numerous levels including: The Project Steering Committee will bring high-level representatives of key implementing institutions together, ensuring that they remain in regular communication and haveopportunities for dealing with any potential conflicts; The Technical Team (which will include representatives from numerous institutions), will provide another opportunity for maintaining positive institutional linkages; at the catchment level, the project will set up multi-stakeholder forums/committees/ associations for bringing stakeholders together around a common vision for each catchment and providing regular opportunities for co-operation, collective problem-solving, reviewing plans, activities and achievements and resolving conflict; the project will develop and implement a basin-wide communication strategy that will ensure that all stakeholders remain well-informed about the project.
Conflict or lack of commitment within the Project Co-ordination Unit or Project Steering Committee hampers implementation.		The Project Board will play a facilitatory role and establish an independent facilitationfunction to ensure the effective functioning of the Project, holding a six monthly review of operational dynamics and intervening more intensely if necessary in the case of crisis.
Socio-economic		
Poor households and other vulnerable members of the communities (women – especially widows, youth, the elderly and tenant farmers)may not be able to share in benefits of the project and may have no other alternative but to drive further land and forest degradation through unsustainable practices	Low risk	SLM is labour intensive and may involve higher input costs than is usual in traditional farming practices. This may mean that only more 'well-off' farmers with more resources to invest will be able to adopt SLM and that the poorest of the poor, and other vulnerable farmers (such as women and the elderly), will be 'missed'. This can be mitigated by developing a specific strategy for targeting the very poor and other vulnerable groups. Elements of this strategy will include: building group cohesion to enable collective savings schemes and labour pooling; focussing at sub-village level to make it easier for poorer farmers to attend gatherings (shorter travelling distances); convening focal group discussions (women, youth, tenant farmers) to identify and address their barriers to participation.
Land owners/users may continue to flout planning regulations leading to further encroachment of river beds, mining in the river beds, burning of forests and expansion of agricultural areas into forest reserves	Moderate risk	People-centred, participatory methods that foster collaboration will be followed during the development of land use plans under Outcome 1 of the project. This means that local communities will be integrally involved throughout the land-use planning process; they will participate fully in identifying the parameters within which plans should be developed and the community needs to which they should respond, and will have ample opportunity to raise concerns that they may have. They will also be involved in enforcement of the plans. This should ensure that the resulting plans strike the right balance between meeting stakeholder interests and safeguarding ecosystems. In parallel to the planning process,

Risk	Rating	Mitigation Strategy
		the project will make a strong ecological and economic case for sustainable land management as the basis for socio-economic development, and will communicate this through the various multi-stakeholder forums that it will establish. The project will develop and implement a comprehensive communication strategy and stakeholder involvement plan to improve co-operation with, and secure the buy-in of, local communities, and it will empower community members to lead the process of mainstreaming SLM. The project will simultaneously work with communities to identify alternative income generating activities, which should create an incentive for supporting forest restoration activities and limiting pressure in riparian zones.
Local level economic growth fails to provide adequate returns on investment in SLM, or the economic gains of SLM are eroded by external factors such as rampant inflation	Low risk	At the macro-economic scale, the economic outlook for Tanzania over the lifespan of the project is expected to be good, so this has been categorised as a 'low' risk. The project can mitigate against this risk by addressing structural inefficiencies in markets to ensure that farmers realise the best possible prices and attain maximum access to markets. By providing training in financial management and budgeting, improving access to micro-credit and savings schemes, and diversifying the income base using SLM production systems, the project can empower farmers to buffer themselves against periodic downturns in the local economy.
Environmental		
Predicted or unexpected effects of climate change further compromise the delivery of watershed services and limitagricultural production, despite adoption of SLM	Low	As best as can be predicted at this stage, it is likely that in the Uluguru and East Usambara Mountains there will be more marked seasonality of rainfall, with wetter wet seasons and drier dry seasons, and a raised risk of floods and droughts. The project will mitigate against these possible impacts by increasing the resilience of production systems, communities and rivers to impacts, in the following ways: improving land cover and soil quality to enhance the water-storage functions in the catchments; introducing soil and water conservation measures, and practices that improve water-use efficiency; introducing climate smart crops and agricultural practices including improved agro-forestry systems. Throughout the project, the Project Co-ordination Unit will maintain close links with relevant academic and research institutions that are studying climate change, in order to identify any additional adaptation or mitigation measures thatshould be adopted to safeguard agricultural or livestock production systems, forests or river systems against the undesired effects of climate change.
Invasive alien plants and animals negatively impact the biological diversity and watershed functions of the targeted catchments	Low	The project will ensure that none of its own interventions result in the spread of invasive alien species, it will include control of invasive alien plants as an integral part of integrated catchment management and will include material on the potential negative impacts of invasive alien species in educational material that it is producing for local stakeholders.

233. In addition to responding to these risks, the project has been designed to include specific measures that respond to a number of potential challenges that have emerged in other SLM-related projects in the Uluguru and East Usambara Mountains. The challenges relate specifically toscaling SLM up to the catchment scale and include:

234.*Land ownership and distribution*: Land tenure is customary and few farmers have formal land titles. Farmers who rent land from land owners may be unwilling to invest significant inputs of time and labourfor land improvements which may take years to realise. This problem is compounded by landlord farmers who may restrict tenant farmers from introducing soil and water conservation measures. To respond to this challenge, the project will include measures to include tenant-farmers in project interventions(for example, through agreements with land owners).

235.*SLM is labour-intensive* : Farmers may be put off by the considerable investment required in terms of labour required for the movement of earth and rocks, digging of terraces and construction of walls. For many farmers, especially those who are poorer (or who represent vulnerable groups) labour availability is already a major constraint and limits agricultural production. Many of the poorest households are single-headed (widows) or elderly and hard physical work is impossible. Mechanisms will be put in place to assist farmers with overcoming these obstacles, such as labour-pooling systems or involving those farmers with limited capacity for labour in less labour-intensive activities, such as establishing tree nurseries and tree planting.

236. *Soil fertility*: If the financial benefits of land-use improvements are to be fully realised, soil fertility must be increased. Pilot projects in the West Ulugurus have demonstrated that there is a lag phase in the recovery of soil fertility with the transition to sustainable land improvement measures such as crop rotation, green manure, composting, integrated crop-livestock systems, use of bunds and appropriate application of inorganic fertiliser. Supplies of chemical fertilisers are both limited and beyond the reach of most farmers, and availability of adequate supplies of compost may be a constraining factor. Stall-fed goat production raising improved chickens can be promoted to increase manure supply at the farm level.

237. *Water availability***:** The most promising returns to farmers have been realised through small-scale irrigation of high value crops planted on soil and water conservation structures. This requires access to water during the dry season. While streams are common in the project area, in many cases it is not possible to access stream water, and pumping or carrying water is generally prohibitively expensive or arduous. This means that a critical challenge to overcome is the provision of a reliable water supply, especially during the dry season. The project will address this by promoting measures for rain harvesting and water harvesting, by introducing simple technologies for purifying water and by working with the relevant agencies to provide water points away from rivers.

238. *Historical associations***:** In some other SLM projects in the Uluguru Mountains, there are historical drivers behind reluctance to take up SLM technologies such as bench terracing. Bench terracing was forcibly imposed by the British colonial authorities and strongly rejected by the local people. Despite the fact that independence came over 50 years ago, bitter memories associated with these measures still persist (Blomley, 2013).In addition, some farmers harbour concerns that forest restoration projects may lead ultimately to the gazettement of further protected areas that might lead to them losing their land. The establishment of protected forests in areas such as the Bunduki Gap (in the Ulugurus) and the Derema Corridor (East Usambaras) resulted in people being resettled to make way for the establishment of forest reserves. Although these resettlement processes have included all the necessary compensation measures, some farmers are unhappy with the process, and this might lead to them being suspicious of new forest restoration initiatives (CEPF, 2005; Hall *et al*., 2014). This project can allay these fears through strengthening of stakeholder linkages and development of a common vision for the catchment, bolstered by a comprehensive communication strategy.

COST EFFECTIVENESS

239. The cost effectiveness of the Project is premised on the following:

240. Maximising impact: The project will make catalytic investments in SLM interventions at strategically selected sites with a view to achieving the greatest on-site and off-site impacts (both social and environmental), whilst using the least inputs possible. The Project will conduct a rigorous monetary

and non-monetary cost-benefit analysis of different SLM measures and will undertake proper mapping of SLM practices, and their impacts on land quality and water resources, to ensure that outcomes are achieved in the most economically efficient way.

241. Maximising institutional effectiveness: A little under 10% of the GEF investment will be allocated to strengthening the integrative, technical and administrative capacity of institutions across the water resources management spectrum, to ensure that their capacity, productivity and effectiveness is optimised. This will also contribute to maximising the impact of other aspects of the project as the resources will be more effectively deployed as institutional capacity deficits are reduced.

242. Increasing the effectiveness and sustainability of financial investments inSLM programmes: The project will make a relatively small investment (less than 10% of the GEF funds) in models that can serve as incubators for other interventions and that will have a strong multiplier effects. In addition to interventions that will help grow the pool of funding available for integrating SLM into watershed management, the project will focus on improving the effectiveness of SLM investments. This will be achieved by facilitating linkages and opportunities for joint financial planning across sectors and stakeholder groupings, with a view to developing a comprehensive SLM investment plan, and monitoring systems, for the two catchments. This will include the identification, prioritisation and effective targeting of investment resources according to a set of common economic, social and environmental criteria. The project will also provide technical support and training to enable water basin authorities to develop bankable SLM proposals and access funds from a wider range of sources, thus strengthening their financial autonomy and, thereby, securing ongoing benefits of SLM interventions.

243. Promoting co-operation, collaboration and maximising opportunities for pooling resources: The project will work through partnerships that recognize different skills and comparative advantages and promote dialogue around common interests. This will make it possible to capitalise on the synergistic benefits that can be realized by pooling resources and working towards alleviating land degradation on a catchment-wide scale. Building on the back of stronger stakeholder linkages, the project will invest in activities that incrementally improve the living conditions of communities, and develop theirunderstanding of the rationale underlying basin regulations. This should contribute to improved compliance, which, in turn, will reduce the recurrent costs of monitoring and managing illegal water abstractions and other illegal use of natural resources.

244. Harnessing existing skills, experience and social capital: Wherever possible, the project will use the competencies and technical skills within the mandated government institutions, and existing NGOs and research institutions, to implement project activities and provide information needed for the specialist studies. Wherever possible and applicable, the project resources will be used to strengthen and scale-up existing SLM- and water-related programmes (with proven success in the catchments), in order to build critical mass and avoid duplication and redundancy. The project will build social capital by working, wherever possible through existing local structures that have established norms and procedures for mutual cooperation, and through local champions who can serve as 'multipliers' in the community.

245. Maximising the impact of co-financing: The Project Co-ordination Unit will be supported throughout the life of the project by a Technical Team comprising technical experts from the key implementing partners – this Team participated actively in the project formulation stage and will remain actively engaged in the project, providing overall technical guidance to the Project as part of leveraged co-finance.

246. Throughout the lifespan of the project the PCU will work to target increased co-finance commitments.

Country Eligibility, Ownership and Country Drivenness:

247. The Government of Tanzania ratified the United Nations Convention on Biological Diversity (CBD) in March 1996, the UN Framework Convention on Climate Change (UNFCCC) in April 1996 and the United Nations Convention to Combat Desertification (UNCCD) in June 1997. The country has effectively fulfilled various assessments and reporting requirements under these conventions. The country developed its first National Action Plan (NAP) to combat desertification, land degradation and drought in 1999 and mainstreamed this into its national poverty eradication strategy (known as MKUKUTA). In response to the call from the UN to respond to the UNCDD 10-Year Strategy (2008 – 2018), Tanzania has generated a revised NAP (NAP2) with an associated framework and strategy for financing SLM. Tanzania is, therefore, eligible to receive funding from the GEF and to receive development assistance from the UNDP and other development partners.

248. The Government of Tanzania acknowledges that environmental sustainability and especially good land management is critical to achieving the country's development objectives, and its commitment to addressing these concerns is captured first and foremost in the country's Constitution. In keeping with this, the Government has given high priority to the issues of land degradation, integrated water resource management, rural development and sustainable land management in numerous national policies and strategies including: the National Environment Policy (NEP, 1997). The National Biodiversity Strategy and Action Plan (2002), the Environmental Management Act (EMA, 2004), and the National Environmental Action Plan (NEAP, 2006,2009). Under the National Action Plan to combat desertification, land degradation and drought, and the Integrated Investment Framework and Financing Strategy for SLM (through which the NAP will be given effect), the Government has committed resources to establishing a National Body for co-ordinating SLM in the country, identifying and accessing additional resources for SLM through innovative mechanisms, and mainstreaming SLM and Drivers of Desertification, Land Degradation and Drought (DLDD) issues into national and local government plans, policies, legal instruments and budgeting frameworks. It is fully committed to supporting the process of developing best practices from past and ongoing initiatives and scaling these up to achieve greater traction in the national effort to address the interconnected issues of land degradation, water security and human well-being. Beyond the formulation of national policies and strategies, the government has demonstrated political will to tackle the issues of integrated water resource management through the establishment of appropriate institutions and by putting in place an innovative policy and legislative framework through which the impact of Projects such as the one described here, can be sustained into the future.

PROJECT FIT WITH NATIONAL PRIORITIES, POLICIES AND PLANS

249. This project seeks to solve the interconnected problems of land degradation, water security and poverty that are of high relevance at both local and national levels in Tanzania. National priorities, policies and plans with which the project shows a good fit include:

The National Water Policy (NAWAPO, 2002), Water Resources Management Act (WRMA, Act 11 of 2009) and Water Sector Development Strategy Phase 2(WSDS 2, under development):

250. The *National Water Policy* in Tanzania provides the overall policy framework for management of water resources. It is implemented through the *National Water Sector Development Strategy* (NWSDS), the overriding objective of which is to strengthen sector institutions for integrated water resources management and improve access to water supply and sanitation services. Central to NAWAPO and the NWSDS is the principle that water governance should be achieved through a decentralised and participatory approach that cuts across all levels of basin management, from national down to community association level. Outcomes 1 and 3 of this Project include specific outputs that give direct effect to key aims of NAWAPO and the NWSDS including that the institutional framework for water resources provides for integrated planning and management across sectors (Project Outputs 1.1. and 1.2.); that, at Basin level, the Basin Water Boards (BWBs) and their associated offices are effective in bringing together different sectors and water users, and are able to implement water basin regulations and manage the water resource (Project Outputs 1.4.; 3.1 and 3.2); that, at catchment level, catchment councils (or similar bodies) are in place and able to integrate the planning and development of water resources (Project Output 1.2); and that, at community level,

Water User Associations are established and effective in addressing water needs and conflict resolution at sub-catchment level (Project Output 1.3.).

251. The *Water Resources Management Act* (WRMA Act 11 of 2009) provides the institutional and legal framework for sustainable management and development of water resources, defines principles for water resource management and provides laws to regulate water use and control and prevent water pollution. By putting in place interventions to enhance the capacity of water basin authorities to enforce water basin regulations and engage with stakeholders to garner greater compliance with the law (Project Output 1.4), the Ruvu-Zigi project will be contributing directly to strengthening implementation of the WRMA.

252. The Ministry of Water is currently in the process of developing an ***Operational programme for effective and sustainable protection and Conservation of Water Resources.*** This project (Ruvu-Zigi) has been designed such that it's key outcome areas are fully consistent with the goals identified in the draft Operational Policy, specifically those relating to: (i) establishing effective co-ordination mechanisms to enhance vertical and horizontal collaboration amongst stakeholders (Project Outputs 1.1 and 1.2); (ii) raising awareness and improving stakeholder participation in conservation of water resources (Project Outcomes 1.2. and 3.2.); (iii) strengthening the capacity of Basin Water Boards (BWBs), Water User Associations (WUAs), Catchment and sub-catchment committees to perform their roles more effectively (Project Outcomes 3.1 and 3.2); (iv) strengthening the enforcement of water basin regulations (Project Output 1.4.); (v) promoting improved land use practices and promoting appropriate technologies for efficient and climate-smart water use (Project Outputs 4.1 to 4.4). This Project will contribute directly to meeting the targets that have been set for implementation of the Operational Policy and the coherence of the Project indicators with those of the Operational Policy will ensure consistency in data collection and reporting.

The National Action Plan, v.2 (for combating desertification and land Degradation) – NAP 2

253. The NAP is Tanzania's national action programme to reduce and, where possible, reverse the impacts of Desertification, Land Degradation and Drought (DLDD) in order to contribute to poverty alleviation, improve livelihoods, conserve natural resources and achieve sustainable development goals. The NAP has been prepared in alignment with the operational objectives of the UNCCD 10-year strategy (2008–2018), and under the guiding framework of the Tanzania Development Vision 2025. The Ruvu-Zigi project addresses all of the priority areas specified under the NAP, but aligns most directly with the following NAP objectives: (i) to strengthen community-based awareness campaigns (Project Output 1.2); (ii) to create an enabling environment to harmonise the regulatory framework and implement existing laws addressing DLDD (Project Output 1.4); (iii) to take stock of best practices from previous and existing initiatives and upscale the best practices in the prevention of location specific degradation(Project Outputs 4.1–4.4); and (iv) to develop more innovative financing mechanisms for implementing programmes to combat land degradation (Outputs 2.1–2.3).

The Integrated Investment Framework and Integrated Financing Strategy for Sustainable Land Management in Tanzania (IIF and IFS, 2014)

254. The Integrated Investment Framework (IFF) and Financing Strategy for Sustainable Land Management (IFS) provides a comprehensive and realistic roadmap of prioritised investment needs and a systematic framework for mobilising resources for the implementation of the NAP and UNCCD and the promotion of SLM in Tanzania. Whilst the IIF and IFS are focussed at national level, the Ruvu-Zigi project gives effect at basin level to five key areas of intervention outlined in the IIF and IFS, namely: creating an enabling environment to strengthen SLM (Project Outputs 1.1–1.4); up-scaling ongoing initiatives (Project Outcome 4); increasing resources from both internal and external sources (Project Outcome 2); developing an effective co-ordination mechanism to spearhead SLM and establishing effective mechanisms for monitoring, evaluating and documenting progress in the implementation of SLM projects (Project Outcome 1). Project Outcome 2 of the Ruvu-Zigi project is fully consistent with Project Goal 3 of the IIF (which is to increase internal and external financial

resources by mainstreaming SLM activities in the national budgeting framework and exploring innovative sources of financing), and uses a consistent set of project indicators.

255. Tanzania's Vision 2025, and the complementary ***National Strategy for Growth and Reduction of Poverty (NSGRP***) (known by its KiSwahili acronym, MKUKUTA) both make frequent reference to the linkages between environmental degradation and human well-being. Selected Vision 2025 and NSGRP actions or cluster strategies to which the Ruvu-Zigi project makes a direct contribution under Project Outcomes 1 and 4 include:

- Developing effective mechanisms to ensure equitable access and use of environment and natural resources especially for poor and vulnerable groups.
- Improving land management and adoption of water conservation technologies, and implementation of national plans under MEAs to halt desertification and land degradation, and restore degraded lands.
- Supporting sustainable management of catchment forest areas.
- Ensuring sustainable natural resource use to ensure energy supplies are maintained (forests, water catchments and charcoal industry).

256. ***Other environmental policies***: In addition to supporting these overarching government strategies, the project complies with and supports the realisation of the National Environmental Policy and Forest Policy. Specifically, the project supports Environmental Policy objectives for the water sector which are geared towards ensuring that planning and implementation of initiatives related to water resources are carried out in an integrated way that protects catchment areas and their vegetation (Project Outputs 1.1 to 1.4). National Forest Policy recognises that population pressures and management inefficiencies have contributed to deterioration of catchment forests and resultant water shortages. By putting in place measures to reduce harvesting and restore degraded forests (Project Outputs 4.1 and 4.2), this project addresses key areas of intervention under the National Forest Policy.

CO-ORDINATION WITH OTHER INITIATIVES

257. The proposed project will build on the lessons learnt in the numerous SLM-and water resource-focussed projects that have run –and are still operating–at other locations within the Uluguru and East Usambara Mountains. In particular, the project aims to create close linkages with and build on the lessons learnt and successes of: (i) the Equitable Payment for Watershed Services projects implemented by WWF/CARE and the Wildlife Conservation Society of Tanzania/Royal Society for Protection of Birds in the East Usambara and Uluguru Mountains; (ii) the forest restoration projects run by TFCG (Tanzania Forest Conservation Group), WWF and MJUMITA in the Bunduki Gap in the Uluguru Mountains, and at various locations in the East Usambaras; (iii) the Sustainable Charcoal Project being piloted by the TFCG, MJUMITA and TaTEDO in the Kilosa District (Morogoro Region); (iv) the alternative energy technology (brick rocket stoves and solar lanterns) projects implemented by CARE and TaTEDO in various villages; (v) the SLM and alternative livelihood work (e.g. beekeeping, spice-growing) being led by the Eastern Arc Mountains Conservation Endowment Fund (EAMCEF), TFCG and other NGOs and CSOs in the West and East Usmabaras and the Uluguru Mountains; (vi) the ByT project (which promotes organic and SLM farming practices) and farmer training being provided by Sustainable Agriculture Tanzania (SAT); (vii) various agricultural support programmes such asthe Uluguru Mountains Agricultural Development Project (UMADEP), and other similar initiatives;(viii) the Infonet-Biovision Project (that maintains a web-based information hub that makes available information on SLM production practices); (ix) the IUCN's Pangani River Basin Management Project (which generates information, supports equitable provision and wise governance of freshwater resources to meet livelihood and environmental needs, and assist with the formation of participatory forums; and (x) iWASH (Integrated Water, Hygiene and Sanitation) programme, which works in the Wami-Ruvu Basin to provide training in principles of Integrated Water Resources Management, and supports the developmentof Water User Associations.

In addition the Project will work to create linkages with the Sustainable Rangeland Management Project being implemented in the Dodoma/Manyara Region under the co-ordination of CARE, and will build on the achievements and lessons learnt from the various land use planning and natural resource management projects managed by the Ujamaa Community Resource Team (URCT in north-eastern Tanzania). It will also build on the outcomes of recently completed and current UNDP/GEF initiatives, including the Kilimanjaro Sustainable land Management and Miombo Woodlands projects and the Forest Nature Reserves project, as well asthe extensive body of work being coordinated by the Eastern Arc Mountains Conservation Endowment Fund (EAMCEF) in other mountain blocks within the Eastern Arc.

258. During the project formulation process organisations such as WWF, CARE, Tanzania Forest Conservation Group (TFCG), Eastern Arc Mountains Conservation Endowment Fund (EAMCEF) and Sustainable Agriculture Tanzania (SAT), as well as CSOs such a UWAMAKIZI, JUWAKIHUMA and the Zigi-Mkulumuzi Water User Association were invited to participate in the stakeholder workshops and to present the lessons learnt from their projects so that these could help shape the design of the current project. Similar opportunities for collaboration, knowledge exchange and lesson-sharing will be created throughout the life of the Project,as described under the various outputs in the Project Strategy. Wherever practicable, the project activities will be implemented through partnerships between these NGOs, CSOs and the relevant government agencies, and this should further ensure good alignment between this Project and other initiatives, as well as promoting the cost-effectiveness of the Project. In particular the Project will co-ordinate closely with the WWF, CARE and TFCG in relation to the PES projects that were piloted in the East Usambaras and the Ulugurus – although the current project will not itself focus on PES, it will build on the lessons and outputs of the PES projects and will focus on enhancing the social capital that these projects built for promoting wise and informed watershed management and the adoption of sustainable production systems.

259. The Project will also work to ensure strong linkages with international and regional networks such as WOCAT (the World Overview of Conservation Approaches and Technologies - an international network of soil and water specialists) and TerrAfrica (a NEPAD-led partnership present in 24 African countries) that support the development of innovative solutions to sustain landscapes, address land and water degradation and adapt to climate change. The Government of Tanzania, assisted by TerrAfrica partners, is establishing a National SLM Platform to oversee and co-ordinate the development and implementation of the National Framework for SLM. The National Framework and Platform for SLM will be supportive of multi-partner, co-ordinated efforts – such as this Project – that are in line with the objectives and approach advocated by the TerrAfrica partnership. As the TerrAfrica lead GEF Agency for Land Degradation and the Co-ordinator of the UN agencies in Tanzania, the UNDP will ensure close co-ordination of these broader SLM initiatives with the Project.

SUSTAINABILITYAND REPLICABILITY

260. The project has been designed to address sustainability in the following ways:

261. ***Environmental sustainability*****:** The project will ensure that local-scale environmental gainscan be sustained into the future byputting in place integrated land use plans that give simultaneous consideration to environmental and social gains, the location of a land-uses at the landscape scale, and the long term impacts of land use on land quality and water resources. Implementing SLM in the context of carefully-crafted Integrated Land Use Management Plans will mean that the environmental gains at particular sites contribute to maintaining ecological functionality at a landscape scale and over time. It will also help ensure that environmental gains achieved at one site are not compromised later by inappropriate location of other land uses or developments. Environmental sustainability will be further enhanced by the development of spatial decision-support systems that make it possible to track the impacts of SLM on land degradation and watershed services, as this will enablethe adaptive land and water resource management approach that will be required to sustain environmental gains over the longer term.

262. One of the issues that has compromised the sustainability of SLM interventions in the past has been the lack of co-ordination, knowledge-sharing and other capacities needed for integrated planning and management of baseline programs.In order to sustain SLM programmes (and the associated environmental gains) catalysed under this Project, attention will be given to strengthening capacity for integrated planning and management as well as promoting knowledge-exchange.

263. The Project investments will collectively contribute to the medium and long term restoration of watershed services and land quality through reforestation, improving land cover, reducing human-induced pressures on protected forests, and introducing SLM in agriculture and livestock management systems. Environmental sustainability will be further enhanced by implementing SLM activities at sites that willnot only make the greatest contribution to securing hydrological processes, but that also deliver the most direct socio-economicgains. For environmental gains to be sustainable, SLM practices need to be scaled up and adopted widely across the catchment, and it is those SLM measures with the best economic returns that will be most rapidly and widely taken up.

264. Institutional sustainability: The project places strong emphasis on increasing institutional and individual capacities in key institutions across the water management spectrum. The sustainability of SLM interventions in the targeted river catchments (and elsewhere) is currently compromised by the staffing, resource and technical capacity deficits in the institutions that are responsible for watershed management. This means that the gains made in individual projects tend not to be sustained once the external support has been removed, as the institutions that inherit the projects do not have the resources or technical skills base required to support the work into the future. By focussing on trainingand capacity development (including technical skills, knowledge of SLM and IWRM as well as management, and financial skills), and enhancing the financial sustainability of key water management agencies, the project will contribute to institutional sustainability.

265. Social sustainability: The social sustainability of the project will be enhanced through the establishment of multi-stakeholder partnerships that foster collaboration, and through activities that contribute to incremental improvements in the living conditions of communities. The project will support the establishment of forums, associations or committees that promote integration, co-ordination and complementarity, and that identify opportunities for participation, co-operation and collective action. They will facilitate knowledge-exchange, lesson-sharing, mutual learningand self-improvement, and will help to resolve conflicts and improve the efficiency and effectiveness of interventions.

266. The project seeks to enhance the livelihoods and well-being of communities living in the two river catchments by promoting uptake of sustainable income generating activities (IGAs) and the adoption of SLM technologies that improve economic, food and water security. Measures being put in place by the project to ensure that these alternative income generating activities(and the benefits derived from them) become self-sustaining over the longer term, include: (i) empowering local stakeholders, and especially those from vulnerable groups, to lead the process of mainstreaming SLM; (ii) building social capital and focussing on group capacity to foster an environment of collaboration and collective action. This helps overcome barriers to uptake of IGAs and promotes their sustainability – focussing on group cohesiveness enables communities to enter group saving schemes for expensive items, thus spreading financial burdens that might be beyond the reach of individuals, and makes possible strategies such as labour pooling, that enable poorer and more vulnerable groups (widows, older people, youth) to be involved; (iii) providing training in technical and managerial skills including financial and business administration, and strengthening the organisational capacity of community structures, thus enhancing their capacity to communicate with outside agencies and institutions.

267. Financial sustainability:Financial sustainability will be achieved by supporting the development and implementation of an integrated SLM investment plan, and monitoring system, for each catchment, along with criteria for strategic, equitable and efficient allocation of SLM resources. It will facilitate linkages and opportunities for joint financial planning by sectoral departments and other water management authorities, as well as donors, NGOs, business and other stakeholders, in order to align existing allocations, reduce redundancies and duplications and explore opportunities for new and

innovative funding streams for SLM. Financial sustainability will be further enhanced by providing technical support and training to enable water basin authorities to develop viable funding proposals and to improve their financial management and budgeting skills.

268. Overall sustainability of the project has been built into the project design by aligning key areas of intervention with those that will be supported through national policies, strategies and action plans including the Water Sector Development Program, the National Action Plan(2) for combating desertification, land degradation and drought and the Integrated Funding Strategy for SLM.

297. Replicability of the project will be achieved through direct replication or adaptation of selected project elements and scaling up of experiences –it must be borne in mind that SLM practices have to be fine-tuned to the specific environmental, social, economic and cultural context in which they are to be implemented. The project will invest in models that can serve as incubators for other interventions that can be implemented elsewhere, beyond the life of the project. The Project outputs will include documentation of lessons learnt, and a collation of the tools and templates and any other materials developed during implementation. The Project Coordinating Unit (PCU) will ensure the collation of all the project experiences and information, so that this knowledge can be made available to different stakeholder groups and can be used to contribute to the adoption of best practice in integrating SLM into watershed management in other catchments.

PART III: Management Arrangements

PROJECT IMPLEMENTATION ARRANGEMENTS

270. The project will be implemented over a period of 5 years(2015 – 2020). The GEF Implementation Agency (IA) for the project will be the UNDP Tanzania Country Office (CO). The project will be implemented under the National Implementation Modality (NIM) procedures by the Implementing Partner (IP), which will be the Tanzanian Ministry of Water (MOW), working in close collaboration with other responsible parties including other line ministries, the National Land use Planning Commission, the Wami-Ruvu and Pangani Basin Water Boards, and the relevant Water Supply and Sanitation Authorities (Tanga-UWASA, DAWASA and DAWASCO).

271. Project governance and management will involve the following entities: The UNDP CO (the GEF Implementation Agency); the Ministry of Water (Tanzanian Implementing Partner); a Project Co-ordination Unit (PCU), supported by a Technical Team (TT); and a Project Steering Committee (PSC).

Roles and responsibilities

272. The **UNDPCO** will monitor the implementation of the project, review projectprogressand delivery of outputs, ensure the proper use of UNDP/GEF funds and take responsibility for project quality assurance.The UNDP COwill provide advice to the project in respect of aspects such as procurement, contracting of service providers, human resource management and financial management, in accordance with the relevant UNDP Rules and Procedures and Results-Based Management (RBM) guidelines.The UNDP CO will serve on the Project Steering Committee and will arbitrate on and ensure resolution of any conflicts, contribute opinions on PSC decisions, ensure that any standards defined for the project are met and used to good effect, and monitor any risks that might affect project implementation.

273**. The Ministry of Water**:The project will be nationally implemented (NIM) by the**TanzanianMinistry of Water**(MOW) in line with the Standard Basic Assistance Agreement (SBAA of 30 May, 1978) and the United Nations Development Assistance Plan (UNDAP, 2011-2015).MOW will be responsible for reporting progress and results of the project to the UNDP Country Programme Outcome Board. The **Division of Environment**(DoE) in the Vice President's Office (VPO),working closely with MOW, will be responsible for communicating the outcomes of the project to the broader public.

274. The MOW will have the overall responsibility for achieving the project goal and objectives. It will be directly responsible for creating the enabling conditions for implementation of all project activities. MOW will work in close cooperation with the Vice President's Office (VPO)-Division of Environment (DoE) as the GEF Focal Point. The MOW will also coordinate activities on a local landscape level with the Prime Minister's Office-Regional and Local Government (PMO-RALG) through direct engagement with district and regional government offices. The roles of the other responsible parties will be captured in a Memorandum of Understanding to be drawn up at project inception, and signed by the Project Steering Committee Chairperson.

The MOW will appoint the Focal Person under the Directorate of Water Resources, to act as the Project Overseer (PO). The PO will provide the strategic oversight and guidance to project implementation[13].

275.**The Project Steering Committee (PSC)**: The Project Steering Committee (PSC) will be responsible for providing overall guidance and strategic direction to the project. It will be responsible for making management decisions for the project when such guidance is required by the Project Co-ordination Unit. These decisions will include making recommendations to the UNDP and the Implementing Partner for the approval of project plans and revisions where these are deemed necessary. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager (i.e. UNDP Resident Represenatie).

276.The Project Steering Committee will provide overall policy input and functional guidance to the project, ensuring that it remains within the specified constraints. It will:

- review project progress reports and budgets;
- endorse financial allocations;
- identify management actions to address emergent risks;
- assess and decide on any project changes that may be necessary;
- provide recommendations; and
- ensure that the agreed deliverables are produced according to plan.

277. It will also: review the Combined Delivery Reports (CDR) prior to certification by the Implementer; appraise Annual Review Reports (ARR), with recommendations for the next Annual Work Plan (AWP), and inform the Outcome Board of the results of the review; review and approve the end-of-project Report and make recommendations for follow-on actions.

278. The Project Steering Committee shall be constituted as follows:

279. Chairperson: Permanent Secretary, Minister of Water;

- The Permanent Secretary in the Ministry of Water, or his/her nominated representative, shall serve as the Chairperson of the Project Steering Committee. The Chair will ensure Government ownership of the project and that the project gives value-for-money, ensuring a cost-conscious approach. The Chair will also ensure that the project remains focussed on achieving its objectives and delivering the intended outputs.

280. Members:

- A senior representative (Permanent Secretary or his/her nominee) from the following Ministries: The Ministry of Natural Resources and Tourism; The Ministry of Agriculture, Food Security and Co-operatives; The Ministry of Lands and Human Settlements; The Ministry of Livestock Development and Fisheries; the Ministry of Energy and Minerals; the Ministry of Finance.

[13] The PO will not be paid from the project funds, but will represent a Government in-kind contribution to the Project.

- A senior representative (minimum Director Level) of: The Division of Environment in the Vice President's Office; the National Land Use Planning Commission; PMO-RALG and the National Irrigation Commission.
- The Regional Assistant Secretary (RAS) for Tanga and Morogoro regions.
- The UNDP Country Office representatives.

281. The Project Coordinating Unit shall serve as Secretariat to the Project Steering Committee.

282.**The Project Co-ordination Unit (PCU):**The day-to-day administration and management of the project will be carried out by a Project Coordination Unit (PCU) that will sit within the Ministry of Water. The PCU will be staffed by a full-time Project Co-ordinator (PC), a full-time Project Administrator/Finance Officer(PA) and a full-time Monitoring and Evaluation Expert (M& E), all of whom will be paid from the project funds. Although the Project Co-ordinator and the Project M&E Expert will be directly responsible for delivery of some of the key technical outputs of the project, delivery of the full suite of project outputs will require that the PCU works in partnership with a number of other individuals and institutions, some of which will be contracted on a short-term consultancy basis, and others on a longer-term basis, through a range of contractual agreements. The staff of the project will also be augmented through secondment from partner institutions (funded by the MOW as part of their co-finance) of three individuals to serve as Community Development Officers, dedicated to delivering on the outputs of this project. The PCU will be hosted by the MOW at its headquarters in Dar es Salaam, but the Community Development Officers will be based in the Water Basin Offices in Morogoro and Tanga (See Figure 1 in SECTION IV, Part I).

283. The Project Coordinator(PC) will have the authority to administer the project on a day-to-day basis on behalf of MOW, within the constraints laid down by the Project Steering Committee (PSC). The Project Coordinator's prime responsibility is to ensure that the project produces the results specified in the Project Document, to the required standard and within the specified constraints of time and cost. The Project Coordinatoris accountable to the Permanent Secretary and Director of Water Resources Management (MOW) for the quality, timeliness and effectiveness of the activities carried out, as well as for the use of funds.

284. Key amongst the tasks of the Project Coordinator will be to:

- Prepare Annual Work Plans (AWP) in advance of each successive year and submit them to the Project Steering Committee for approval.
- Work closely with all partner institutions to link the project with complementary national programs and initiatives and represent the interests of the Project wherever appropriate.
- Manage project staff and the recruitment of specialist support services and procurement of any equipment and materials for the project, in consultation with the Project Overseer (PO) and in accordance with relevant recruitment and procurement rules and procedures.
- Provide support to the Project Administrator (PA), as needed.

285. The Terms of Reference for the Project Coordinator, Project Administratorand M&E Expert are detailed in Section IV, Part 1 of this Project Document, as are indicativeTerms of Reference of key national and international service providers to be contracted by the Project.

286**. The TechnicalTeam:**The Project Coordinating Unit(PCU) will be supported by a Technical Team, comprising technical staff members from key departments and agencies. The Reference Group that participated in the development of the project should become the Technical Team, with the addition, if necessary, of further co-opted members (from MDAs, NGOs or tertiaryeducation/research institutions)or contracted national/international service providers. The role of the Technical Team will be to:

- Provide ongoing technical inputs and guidance during the implementation of the project.
- Assist the PCU by providing access to information held by its member institutions.

- Assist the PCU by developing Terms of Reference, reviewing or contributing to the development of various technical reports and studies as may be prepared or conducted during the tenure of the project.
- Advise the PCU, where appropriate, in respect of stakeholder engagement and keep them informed of emergent issues in the two river catchments.

287. Membership of the Technical Team shall include, but may not be limited to: the Ministry of Water (MOW), The National Land Use Planning Commission (NLUPC); the Ministry of Natural Resources and Tourism (MNRT), the Ministry of Agriculture, Food Security and Cooperatives (MAFC); Prime Minister's Office-Regional Administration and Local Government (PMO-RALG); the Morogoro District Council; the Tanga District Council; the offices of the Pangani and Wami-Ruvu Basin Water Boards (PBWB and WRBWB), DAWASA, DAWASCO, Tanga-UWASA and Ardhi University (or other tertiary institutions). The Technical Team may invite representatives of relevant NGOs to contribute information at their meetings, where this is indicated. Members of the Technical Team will not be remunerated through the project for their services; instead their participation will be provided as an in-kind contribution to the project by the implementing partners.

288. The Technical Team will convene quarterly, but members may be consulted on an *ad hoc* basis as needs require.

FINANCIAL AND OTHER PROCEDURES

289. The financial arrangements and procedures for the project are governed by the UNDP rules and regulations for national Implementation Modality (NIM). All procurement and financial transactions will be governed by the applicable UNDP regulations under NIM.

AUDIT CLAUSE

290. Audit will be conducted according to UNDP Financial Regulations and Rules and applicable audit policies.

Part IV: Monitoring Framework and Evaluation

MONITORING AND REPORTING

291. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be carried out by the Project Co-ordination Unit and the UNDP Country Office, with support from the UNDP/GEF Regional Coordination Unit. The Strategic Results Framework (SRF) presented in Section III describes indicators for project implementation and their corresponding means of verification. These will form the basis of the project Monitoring and Evaluation (M&E) system which will be focussed on a number of points through the project cycle, including: project inception, quarterly reporting, annual reporting, periodic monitoring through site visits, and mid-term and end-of-project evaluations.

Project Inception Workshop

292. A Project Inception Workshop will be held within the first 3 to 4 months of project start up with those with assigned roles in the project organization structure, UNDP CO and, where appropriate/feasible, regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year Annual Work Plan.

293. The Inception Workshop (IW) should address a number of key issues including:
a) Assist all partners to fully understand and take ownership of the project.
b) Clarify roles and responsibilities, with particular attention to:

- The roles, support services and complementary responsibilities of UNDP CO and the UNDP-GEF Regional Coordination Unit vis-à-vis the project team.
- The roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.
- The Terms of Reference for project staff and the Technical Team.

c) Based on the project results framework and the relevant GEF Tracking Tool, if appropriate, finalize the first Annual Work Plan (AWP) as well as review and agree on the indicators, targets and their means of verification, and re-check assumptions and risks.

d) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.

e) Discuss financial reporting procedures and obligations, and arrangements for annual audit.

f) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Steering Committee meeting should be held within the first 6 months following the inception workshop.

294. The Inception Workshop Report will be a key reference document for the project and must be prepared and shared with participants within 2 weeks of the IW to formalize various agreements and plans decided on during the meeting. Following the Inception Workshop, the project will be publicly launched at a Launch Event.

Quarterly Reporting

295. Progress shall be monitored using the UNDP Enhanced Results Based Management Platform.

- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high and theserisks need to be monitored particularly carefully and the information used to adapt project management if appropriate.

- Based on the information recorded in ATLAS, quarterly Project Progress Reports (PPRs) can be generated in the Executive Snapshot.Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annual Reporting

296. Annual Project Review/Project Implementation Report (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period. The APR/PIR combines both UNDP and GEF reporting requirements.

297. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward the project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual)
- Lessons learned/best practices developed
- Annual Work Plan and other expenditure reports
- Risk and adaptive management
- ATLAS Quarterly Progress Reports (QPR)
- Portfolio level indicators (i.e. GEF Focal Area Tracking Tools).

Periodic Monitoring through Site Visits

298. UNDP Country Office (CO) and the UNDP Regional Co-ordination Unit (RCU) will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to

assess first hand project progress. Other members of the Project Steering Committee may also join these visits. A Field Visit Report/BTOR(Back to Office Report) will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Steering Committee members.

Mid-term of Project Cycle

299. The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction measures, if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term Evaluation will be prepared by the UNDP Country Office based on guidance from the UNDP-GEF Regional Co-ordination Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Centre (ERC).

300. The relevant GEF Focal Area Tracking Tools (Land Degradation PMAT and Capacity Development Scorecard) will also be completed during the mid-term evaluation cycle.

End of Project

301. An independent Final (Terminal) Evaluation will take place three months prior to the final Project Steering Committee meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP Country Office based on guidance from the UNDP-GEFRegional Coordination Unit.

302. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

303. The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

304. During the last 6 months of implementation, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned and problems encountered and will identify areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing

305. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums (including the existing framework in the water resources department), and through implementation of the communication strategy as detailed under Output 1. In particular, new structures and products established through the project will be used to share knowledge which supports the implementation of SLM.

306. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects and will ensure strong linkage with knowledge-sharing networks such as the Eastern Arc Mountains website operated by EAMCEF, the Infonet-Biovision web-based information hub and the TerrAfrica and WOCAT Knowledge Networks.

307. Finally, there will be a two-way flow of information between this project and other projects of a similar focus. The Project will develop an exit strategy which will mainstream the project's activities in relevant sectors to ensure sustainability.

Communications and visibility requirements

308.Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

309. Full compliance is required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/ thegef.org/files/ documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Monitoring and Evaluation (M&E) Workplan and Budget

M&E Activity	Responsible parties	Budget US$ (excluding PCU staff time)	Time frame
Project Inception Workshop and Launch Event	PCU UNDP CO, UNDP GEF	5,000	Within 3 months of project start-up
Project Inception Report	PCU, UNDP CO	Nil	2 weeks after the Inception Work
Internal Progress monitoring by implementation team	PC to oversee hiring of specific studies and institutions and delegate responsibilities to team members	Nil (Any consultancy fees to be determined at Project Inception and confirmed under the relevant project outputs in the full project budget)	At start, mid-term and end of project evaluation cycle and annually when required
Measurement of means of verification for Project Progress (on output and implementation)	UNDP GEF Regional Technical Advisor and PC to oversee measurements by regional field officers and local Implementing Agencies (IAs)	To be determined as part of annual work plan preparation	Annually, prior to Annual Progress Report (APR)/Project Implementation Report (PIR) and according to annual work plans
APR/PIR	PCU UNDP CO UNDP RTA UNDP GEF RCU	Nil	Annually
Tri-partite Review (TPR)	Government counterparts,	Nil	Annually, after receipt of

and TPR Report	UNCP CO, UNDP GEF-RCU and Project Team		APR
Steering Committee Meetings	PCU, UNDP CO	15,000	Following Inception Workshop and subsequently at least once a year ahead of APR
Periodic status/ progress reports	PCU	Nil	Quarterly
Technical Reports	Project team Consultants, as needed	consultancy fees built into the project budget under individual outputs	To be determined according to need as agreed by Project Team (PT) and UNDP CO
Mid-term evaluation	PC UNDP CO UNDP RCU External consultant(s) – evaluation team	40,000	Mid-point of project implementation period
Final External Evaluation	PC UNDP CO UNDP RCU External Consultants (Evaluation team)	40,000	At least 6months before end of project
Project Terminal Report	PCU UNDP CO	Nil	At least 3months before end of project
Lessons learnt report	Project Team, UNDP GEF RCU	5,000	Annually
Audit	UNDP CO Project manager and team	17,500 (3,500 per year)	Annually
Field visits	UNDP CO UNDP RCU (if required) Government representatives	Paid from IA fees and operational budgets	Annually
TOTAL COSTS *Excl. project staff costs (PC, PA and M&E Expert) and UNDP staff and travel expenses*		122,500US$	

*Note: Costs included in this table are part and parcel of the UNDP Total Budget and Work Plan (TBW) in the PRODOC, and not additional to it.

Part V: Legal Context

310. This document, together with the United Nations Development Assistance Plan (UNDAP 2011-2015), constitute a Project Document as referred to in the Standard Basic Assistance Agreement.

311. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

312. The implementing partner shall:
    a. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried out; and
    b. assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

313.UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

314. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

SECTION II:STRATEGIC RESULTS FRAMEWORK (SRF)

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: **UNDAP Outcome 2:**Relevant MDAs, LGAs and Non-State Actors improve enforcement of environment laws and regulations for the protection of ecosystems, biodiversity and sustainable management of natural resources.					
UNDAP Outcome Indicators: Indicator 1: Tools, models and best practices deployed Indicator 2: Number of successful Green Economy models introduced in target sectors					
UNDP Strategic Plan Outputs and Indicators: Output 2.5: Legal and regulatory frameworks, policies and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation. Indicator 2.5.1: Number of countries with legal, policy and institutional frameworks in place for conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems.					
Applicable GEF Strategic Objective: LD-3: Reduce pressures on natural resources from competing land uses in the wider landscape					
Applicable GEF Expected Outcomes: Outcome 3.1: Cross-sectoral enabling environment for integrated landscape management (in support of SLM) Outcome 3.2: Integrated landscape management practice adopted by local communities Outcome 3.3: Increased investments in integrated landscape management					
Applicable GEF outcome indictors: Integrated land management plans developed and implemented INRM tools and methodologies developed and tested Appropriate actions to diversify the financial resource base					
Outcome	**Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Project Objective: Sustainable land and natural resource management alleviates land degradation, maintains ecosystem services and improves livelihoods in the Ruvu and Zigi sub-catchments of the Eastern Arc Mountains in Tanzania.	Reduction in land degradation in the Ruvu and Zigi catchments as measured by at least a 25% increase in land cover in forests and rangelands	See GEF LD Tracking Tool (land degradation within the project area is significant and the current land use practices and management approaches lack integration and targeted financing to promote INRM and SLM)	• A 10% reduction in soil erosion, improved soil organic matter and as reflected in the GEF LD Tracking Tool • A 10% improvement in water quality and quantity in rivers at intervention sites as measured by water flows, annual rainfall , sediment	GEF LD Tracking Tool completed at PPG stage, at mid-term and at terminal stages Project Progress Reports	**Assumptions**: The current high level of support for SLM as a component of watershed management by Government and development partners is maintained Public institutions, private sector partners, NGOs and resource users will be willing to adopt a partnership approach and work collaboratively to plan

			load, using methods to be established at project inception • At least 10,000 ha of degraded forest restored (5,000 in protected forest and 5,000 ha outside of protected areas • At least 25 % improvement in household welfare and 10% increase in annual food production for at least 40% of the households in pilot villages, measured as a percentage increase in household incomes, percentage reduction in the number of food insecure days, and other indicators to be determined at project inception • At least 30% of livestock keepers adopt sustainable rangeland management practices, with a 25% improvement in land cover over 2,000 ha of rangeland		and implement SLM in the Ruvu and Zigi catchments **Risks**: Future Government administrations may be reluctant to allocate budget for SLM and integrate SLM into watershed management policies, legislation and practice Production sectors and land users may be reluctant to embrace land-use zoning and setting aside of areas for no-development or rehabilitation Local communities may show reluctance to shift land-use practices, comply with laws or pursue alternative sustainable livelihoods The effects of external factors such as climate change may exacerbate land degradation and water supply and limit production despite the uptake of SLM at the project sites
<u>Outcome 1:</u>	Number of land use	Formal integration of	SLM integrated into	Land use and catchment/	

Enabling institutional arrangements are in place to support mainstreaming of SLM into Integrated Water Resource Management in the Ruvu and Zigi catchments	management plans integrating SLM	SLM is currently limited or non-existent	7 District Land Use Plans in the Ruvu and Zigi catchments	basin management plans that incorporate SLM principles	
Output 1.1 Integrated Land Use Management Plans and Village Land Use Management Plans are developed and implemented in 7 districts (Morogoro Urban, Morogoro Rural and Mvomero (in Morogoro Region) and Muheza, Mkinga, Korogwe and Tanga City (in Tanga Region), ensuring optimal allocation of land to generate critical environmental and development benefits.	Number of District Land Use Plans developed and operationalised	3 District Plans (Morogoro DC, Muheza and Mkinga) developed but not implemented, 1 (Mvomero) initiated but need resources needed to continue 9 Village Land Use Plans developed but not operational in Zigi Basin 5 Village Land Use Plans developed but not operational in Ruvu Catchment	• District Land Use Plans developed and operationalised in at 7 Districts (the number of villages to be determined at project inception) • GIS-based LD/SLM database and land-use decision support-tool/system is in place and at least 50% of land use planning officers, front line extension workers and community associations are trained in the use of the decision-support tool to strengthen land use planning and develop land use maps	District Land Use Plans District Land Use Registries Project Progress Reports	
Output 1.2 Multi- stakeholder committees are established (or strengthened) and are	Number of multi-sectoral stakeholder landscape co-ordination committees (Catchment Forums) formed and	Interagency co-operation is currently very weak or non-existent, no joint vision for SLM in place	• At least one multi-stakeholder committee established and operating effectively	Quarterly Annual Reports of District Offices shows evidence of improved decision making and enforcement	

active in promoting co-ordination and dialogue in support of mainstreaming SLM into other sectors, programmes and policies	operational in each Basin	2 Environmental Committees – Mabayani Dam 1 Community Association - Uwamakizi 1 Community Association - Wakuakuvyama	in each basin as a result of the projectAt least 75% of District Officers (Participatory Land Use Management teams) and Village land use committees trained in participatory land-use planning, monitoring and implementation of land use plans	Project Reports	
Output 1.3 Water User Associations (WUAs) and River Committees are established and capacitated to perform their roles effectively in all key sub-catchments within the two river basins	Number of registered, operational Water User Associations and Sub-catchment Committees in each catchment	Zigi: 1 WUA- Zigi-Mkulumuzi (functional, but requires strengthening) Ruvu: 4 WUAs– Mfizigo Sub-catchment; Lower Ngerengere and Upper Ngerengere A & B (all are non-functional)	• At least 5 new Water User Associations and 2 new sub-catchment committees established, registered and operational and with a plan for upscaling in place • All Water User Associations and Sub-catchment Committees trained in the principles of SLM and the role of SLM in protection of water resources, provisions of all relevant land and water-use legislation; financial management and the development of	MOU between diverse stakeholders Catchment Forum Constitution and Committee meeting agendas and minutes detailing not only joint decision making but also progress in implementation of IWRM/SLM Project implementation report	

			funding proposals; entrepreneurship skills; the costs and benefits of alternative sustainable livelihoods • Up-to-date database of stakeholders and projects established for each Basin Water Office		
Output 1.4 Wami-Ruvu and Pangani River Water Basin Authorities and water users understand water basin regulations and are capacitated to identify and prosecute water and land-use infringements and harness greater compliance	% increase in rates of compliance with water basin regulations Number of staff and members of community associations trained in provisions of land and water-use legislation	Currently not known, although rates are generally low. To be determined at project inception. 226 (Ruvu) and 162 (Zigi)people trained in basic provisions of water-use legislation No people trained in provisions of relevant land-use legislation	• 50 - 75% of all staff in target institutions, all WUAs and VNRCs trained in provisions of water and land-use legislation • At least 50% of water users issued with water use permits and 60% of industries and commercial farming operators complying with water discharge permits • Gender-sensitive communications strategy developed and operationalised	Annual Reports of Basin and District Offices Water Basin Office records (permit applications received and granted; payments for water rights received) Site inspections and quality assurance reports (from UWASAs) Project M &E reports	
Outcome 2: Finances available for SLM investments are increased by accessing new streams of public	% increase in public funds allocated to SLM interventions in the Ruvu and Zigi catchments	No SLM funds currently allocated to water resources management agencies	15% increase in earmarked for SLM interventions in the Ruvu and Zigi catchments	Public Finance Expenditure Reviews; Annual MTEF budgets and reports;	**Risks** Political will and high levels of in-principle support for SLM declines – mitigated by demonstrating significant well-publicised returns.

finance and more effective alignment of existing sectoral contributions				Financial Sustainability Scorecard	
Output 2.1 New streams of public finance are identified and accessed	Amount of funding accessed for SLM through new streams of public finance and other financing mechanisms	0 -The key organisations do not have adequate resources for integrating SLM into watershed management and the financing requirements have not been comprehensively assessed As per UNDP Capacity Scorecard	At least 2 new streams of funding for SLM accessed via sources such as Incentive and Market Based Mechanisms (IMBMs), Public Private Partnerships (PPP)s	Business Case Report and Integrated Financing Strategy M&E reports Approved funding proposals	**Risk:** Lack of understanding of importance of SLM by leaders leads to lack of motivation to allocated funds – can be mitigated by providing accessible information on the benefits of SLM
Output 2.2 Sectoral (forestry, agriculture and water) allocations to SLM are re-aligned	Amount of sectoral allocations aligned to SLM strategies	1 - The resource requirements for integrating SLM into watershed management are known but are not being addressed As per UNDP Capacity Scorecard	Resource allocation criteria and to inform allocation of resources to SLM	Public Finance Expenditure Reviews; Annual MTEF budgets and reports; Financial Sustainability Scorecard	
Output 2.3 The effectiveness of SLM investments is improved	Increase in the targeted SLM investments	No effective SLM investment strategy in place	Integrated SLM investment strategy and M&E system in place to track the effectiveness and impact of SLM investments	Quarterly/Annual Reports (of basin and district officers)	
Outcome 3: Institutional capacity is built for promoting sustainable land and forest management in support of IWRM in the Ruvu and Zigi Catchments	Increase in awareness and capacity of local communities and institutions (e.g. extensions services, district authorities, Basin Water Offices) for integration of SLM into	1 – The required skills and technologies are identified, as well as their sources but are only partially developed As per UNDP Capacity Scorecard	3 -The required skills and technologies are available and there is a nationally-based mechanism for updating the required skills and upgrading technology	Quarterly/Annual Reports (of basin and district officers)	**Assumptions:** Staff have the required baseline competency baseline **Risks:** Loss of skills due to transfers, retirement and

	resource use and management practices(measured as per UNDP Capacity Scorecard).		As per UNDP Capacity Scorecard		resignation of trained staff
Output 3.1 The institutional capacity (staff and resource requirements for promoting SLM) is strengthened in the Wami-Ruvu and Pangani Water Basin Offices and regional offices of line ministries and local government institutions	Staffing and resources development plans developed and implemented for Basin Water Office, District Authorities and WUAs	1 – The required skills and technologies are identified, as well as their sources but are only partially developed As per .UNDP Capacity Scorecard	Staff and resource deficits for integrating SLM into watershed management decreased by at least 75% in water basin management agencies and other targeted institutions	Project Review of Capacity Development Indicator Scorecard Quarterly/Annual Reports of target institutions Project M&E Reports	
Output 3.2 Output 3.2: The technical knowledge and skills for integrating SLM into IWRM are increased amongst relevant staff of Water Basin Offices, relevant line ministries, and local government institutions	Number of technical staff in Water Basin Offices, District and local government institutions, WUAs and Village structures completing skills and knowledge improvement training programmes	1 – The required skills and technologies are identified, as well as their sources but are only partially developed As per .UNDP Capacity Scorecard	At least 50% of technical officers in Water Basin Management Agencies, extension services and other targeted institutions have received training to enhance their knowledge and skills for integrating SLM into watershed management	Quarterly/annual Reports from District Offices/regional offices of line ministries Extension reports Project Training Reports Project M&E reports (surveys)	
Output 3.3 Extension services are capacitated to promote adoption of SLM and promote alternative sustainable	% of population in targeted villages aware of SLM and SLM-related activities in their area (as a result of the project) and satisfied with extension services	Ruvu Basin: 36 extension officers with fair levels of technical skill, but not enough officers in each ward and lack knowledge of modern SLM and current water and land-use	• At least 50 % of land users in the target areas report an improvement in the extension services provided and number of trained	Quarterly/annual Reports from District Offices/regional offices of line ministries Extension reports	**Risk:** Budget cuts or failure to fill empty posts leads to a decrease in the number of extension officers

livelihoods	Number of trained extension officers available to provide SLM messages in agricultural and livestock extension services	legislation Zigi (Muheza): 12 extension officers; Technical capacity and knowledge is outdated and there are not enough officers in each ward	extension personnel increased by 50% • Increase of 25% in number of community members trained to serve as 'para professional' extension officers, with equal focus on men and women • At least 75% of land-users in targeted areas aware of the benefits of SLM as a result of improved extensions services	Project Training Reports Project M&E reports (surveys)	
<u>Outcome 4</u>: Landscape-level adoption of SLM measures in the Ruvu and Zigi catchments promoted to reduce the effects of land degradation on watershed services and to improve livelihoods	Reduction in extent of degradation in the Ruvu and Zigi catchments and improvement in the livelihoods of basin communities due to increased benefits from adoption of SLM practices	To be determined at project inception	• Over 15,000 - 20,000 ha under direct SLM as a result of this project in the target areas in the Ruvu and Zigi catchments • Household incomes increased by at least 25% in at least 40% of the households in participating villages, as a result of uptake of SLM practices introduced through the project, with special focus on most vulnerable households	TFS annual reports Project Reports Seedling regeneration and survival counts; % cover of desirable species Number of trees planted Socio-economic monitoring reports as part of the participatory project monitoring systems	**Risks** Factors such as climate variability or pests and disease cause degradation or cause tree mortality Ongoing immigration of people into the area leads to increased pressure
Output 4.1	% decline in illegal	To be determined at	• Forest cover restored	Field surveys	

Sustainable land management practices promoted and natural rehabilitation facilitated in 10,000 ha of forest	harvesting from protected forests % improvement in land cover in rangelands	project inception	over at least 5,000 ha of riverine habitat in protected forests and 5 000 ha outside of protected areas • Land Cover improved by 25% over 2,000 ha of rangelands At least a 25% decline in the rate of illegal harvesting from protected forests	Extension agents reports Field assessments	
Output 4.2 Household food production and incomes increased by 30% (for actively participating villages) through promotion of sustainable income generating activities in participating villages	% increase in household incomes and production rates as a result of SLM practices	To be determined at project inception	• At least 2 new sustainable livelihood practices taken up in each of the target areas and contributing 10% to production and overall incomes • At least a 15 % increase in annual agricultural produce for key crops as a result of SLM practices introduced by the project in the target villages • At least 25% of households in target villages using clean energy cooking technology and 75% of households aware of alternative energy solutions	Commissioned socio-economic studies Farmer's financial records	**Risk:** Natural disasters such as droughts or floods reverse the investments made by farmers

			through capacity building of men, women and youth • At least 25% of farmers in the target villages benefitting from accessing micro-finance and the development of new markets for agricultural products		
Output 4.3 Sustainable livestock management technologies developed and tested and infrastructure developed to operationalise SLM in rangelands	% increase in number of farmers using SLM techniques	To be determined at project inception	• At least 50% of farmers trained in the use of sustainable land management techniques • At least 30% of livestock keepers adopt alternative livestock management technologies • At least 20% increase in number of farmers in target villages consistently applying 2 to 5 SLM techniques introduced by the project	Extension officer reports Community surveys	**Risk:** Social resistance to change in tradition slows uptake (to be mitigated through awareness-raising and working through champions) **Risk:** Natural disasters such as drought or floods affect the ability of farmers to convert to SLM technologies

SECTION III: TOTAL BUDGET AND WORKPLAN

`Atlas Award ID:	00086631	**Business Unit:**	Tanzania
Atlas Project ID:	00093855	**Project Title:**	Securing Watershed Services through Sustainable Land management in the Ruvu and Zigi Sub-catchments (Eastern Arc Mountains), in Tanzania
Award Title:	PIMS 5077	**Implementing Partner**	Tanzania Ministry of Water

GEF Outcome/ Atlas Activity	Responsible Party	Fund ID	Donor	ATLAS Budget Code	ATLAS Budget Description	Amount YR 1 (USD)	Amount YR 2 (US)	Amount YR 3 (USD)	Amount YR 4 (USD)	Amount YR 5 (USD)	TOTAL	#
Component 1: Establishing a collaborative framework for water basin authorities to effectively plan, monitor and adapt land management and leverage national and regional investments for integrating SLM into watershed management												
Outcome 1 Enabling institutional arrangements are in place to support mainstreaming of SLM into integrated water resource management	NIM	GEF Trust 62000	GEF-10003	71300	Local consultants	44,000	94,000	54,000	44,000	24,000	260,000	1
				71600	Travel	6,000	4,000	8,000	5,000	7,000	30,000	2
				72100	Contract. services - Comp	30,000	30,000	20,000	15,000	5,000	100,000	3
				72200	Equipment and Furniture	15,000	10,000	10,000	15,000	0	50,000	4
				72800	Info. Technology Equip	35,000	40,000	40,000	0	4,000	119,000	5
				74200	Audio-visual & printing	15,000	20,000	20,000	6,000	0	61,000	6
				75700	Training, workshops and conferences	35,000	45,000	50,000	45,000	5,000	180,000	7
					Sub-total (GEF)Outcome 1	**200,000**	**223,000**	**202,000**	**130,000**	**45,000**	**800,000**	
Outcome 1: Contd.	NIM	UNDP 04000	UNDP 00012	71300	Local consultants	0	18,000	15,000	0	0	33,000	8
				71600	Travel	6,000	7,000	11,000	10,000	7,000	41,000	9
				72100	Contract. services - comp	20,000	30,000	30,000	20,000	15,000	115,000	10
				72200	Equipment & Furniture	0	0	45,000	0	0	45,000	11
				73400	Maint. & Oper. transport equip	2,000	2,000	5,000	5,000	5,000	19,000	12
				74200	Audio-visual & printing	0	10,000	15,000	10,000	5,000	40,000	13
				75700	Training, workshops and conferences	40,000	50,000	40,000	20,000	20,000	170,000	14
					Sub-total (UNDP) Outcome 1	**68,000**	**117,000**	**161,000**	**65,000**	**52,000**	**463,000**	
					TOTAL OUTCOME 1 (GEF + UNDP)	**268,000**	**340,000**	**363,000**	**195,000**	**97,000**	**1,263,000**	

Outcome 2: Finances available for SLM increased by accessing new streams of public finance and more effective alignment of existing contributions	NIM	GEF Trust 62000	GEF 10003	71300	Local consultants	20,000	20,000	5,000	5,000	0	50,000	15
				71400	Contract. Services – Individ.	22,000	22,000	22,000	22,000	22,000	110,000	16
				71600	Travel	0	5,000	7,000	6,000	4,000	22,000	17
				74100	Professional Services	10,000	10,000	5,000	5,000	0	30,000	18
				74200	Audio-visual & printing	0	5,000	14,000	5,000	4,000	28,000	19
				75700	Workshops	30,000	30,000	0	0	0	60,000	20
					Subtotal (GEF) Outcome 2	**82,000**	**92,000**	**53,000**	**43,000**	**30,000**	**300,000**	
Outcome 2:contd	**NIM**	**UNDP 04000**	**UNDP 00012**	71200	International Consultants	0	20,000	20,000	12,000	10,000	62,000	21
				71600	Travel	5,000	12,000	8,000	5,000	0	30,000	22
				72100	Contract Services – Comp.	0	20,000	20,000	0	0	40,000	23
				74200	Audio-Visual and Printing	0	15,000	15,000	15,000	0	45,000	24
				75700	Training, Workshops	0	30,000	35,000	55,000	0	120,000	25
					Subtotal (UNDP) Outcome 2	**5,000**	**97,000**	**98,000**	**87,000**	**10,000**	**297,000**	
					TOTAL (UNDP + GEF) OUTCOME 2	**87,000**	**189,000**	**151,000**	**130,000**	**40,000**	**597,000**	
Component 2: Reducing the effects of land degradation on watershed services and improving livelihoods through increased landscape level uptake of SLM measures												
Outcome 3 Institutional capacity is built for promoting sustainable forest and land management in support of IWRM in the Ruvu and Zigi Catchments		GEF Trust 62000	GEF 10003	71200	International consultants	30,000	20,000	12,000	0	0	62,000	26
				71300	Local consultants	15,000	15,000	0	0	0	30,000	27
				71600	Travel	5,000	9,000	7,000	6,000	10,000	37,000	28
				72100	Contract services - Comp	0	30,000	30,000	0	0	60,000	29
				72200	Furniture and Equipment	110,000	50,000	15,000	14,000	0	189,000	30
				72800	Info. Technology Equip	50,000	20,000	20,000	10,000	0	100,000	31
				74100	Professional Services	54,000	79,000	79,000	64,000	44,000	320,000	32
				74200	Audio-visual & printing	20,000	20,000	10,000	10,000	2,000	62,000	33
				75700	Training, Workshops	20,000	35,000	30,000	30,000	25,000	140,000	34
					Subtotal (GEF) Outcome 3	**304,000**	**278,000**	**203,000**	**134,000**	**81,000**	**1,000,000**	
Outcome 3 (contd)	NIM	04000	UNDP 00012	71300	Local Consultants	0	0	10,000	10,000	10,000	30,000	35
				71400	Contract Services - Individ	22,000	22,000	22,000	22,000	22,000	110,000	36
				71600	Travel	8,000	10,000	7,000	9,000	5,000	39,000	37
				72100	Contract Services - Comp	25,000	25,000	20,000	0	0	70,000	38

				72400	Communications and Audio	2,000	2,000	2,000	2,000	2,000	10,000	39
				72500	Supplies	1,000	1,000	1,000	1,000	1,000	5,000	40
				73200	Furniture and Equipment	0	35,000	36,000	0	0	71,000	41
				72800	Info. Technology Equip	30,000	15,000	10,000	5,000	0	60,000	42
				73400	Maint.& Oper. Transport Equip	5,000	5,000	5,000	5,000	5,000	25,000	43
				74100	Professional Services	0	30,000	15,000	30,000	0	75,000	44
				75700	Workshops	25,000	20,000	20,000	10,000	0	75,000	45
					Subtotal Outcome 3 (UNDP)	**118,000**	**165,000**	**148,000**	**94,000**	**45,000**	**570,000**	
					TOTAL OUTCOME 3	**422,000**	**443,000**	**351,000**	**228,000**	**261,000**	**1,570,000**	
Outcome 4 Increased uptake of SLM secures watershed services and improves livelihoods	NIM	GEF Trust 62000	GEF 10003	71200	International consultants	0	0	40,000	0	40,000	80,000	46
				71300	Local consultants	15,000	10,000	10,000	10,000	5,000	50,000	47
				71400	Contract. services - Individ	0	25,000	25,000	25,000	20,000	95,000	48
				71600	Travel	15,000	10,000	10,000	5,000	5,000	45,000	49
				72100	Contract. services - Comp	35,000	35,000	35,000	45,000	25,000	175,000	50
				72200	Equipment and Furniture	15,000	35,000	35,000	15,000	0	100,000	51
				72300	Materials and goods	85,000	130,000	95,000	65,000	15,000	390,000	52
				74100	Professional Services	30,000	40,000	40,000	40,000	25,000	175,000	53
				74200	Audio-visual & printing	25,103	10,000	15,000	10,000	5,000	65,103	54
				75700	Training and workshops	70,000	50,000	55,000	25,000	0	200,000	55
					Subtotal 1 (GEF) Outcome 4	**290,103**	**345,000**	**360,000**	**240,000**	**140,000**	**1,375,103**	
Outcome 4 (contd)		04000	UNDP 00012	71300	Local consultants	0	0	15,000	0	15,000	30,000	56
				71400	Contract. Services – Individ	0	20,000	20,000	15,000	10,000	65,000	57
				71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000	58
				72300	Materials and Goods	15,000	30,000	30,000	20,000	15,000	110,000	59
				72100	Contract Services - Comp.	20,000	20,000	20,000	15,000	10,000	85,000	60
				72200	Equipment and Furniture	0	30,000	45,000	45,000	20,000	140,000	61
				72500	Supplies	5,000	5,000	5,000	5,000	5,000	25,000	62
				74100	Professional Services	0	15,000	15,000	15,000	0	45,000	63
					Subtotal 2 (UNDP) Outcome 4	**45,000**	**125,000**	**155,000**	**120,000**	**80,000**	**525,000**	
					TOTAL OUTCOME 4 (GEF + UNDP)	**335,103**	**470,000**	**515,000**	**360,000**	**220,000**	**1,900,103**	
Project Management		GEF Trust	GEF	71400	Contract. Services – Indiv	30,000	30,000	30,000	30,000	30,000	150,000	64
				72400	Communications	2,255	1,000	1,000	1,000	1,000	6,255	65
				74100	Professional Services	3,500	3,500	3,500	3,500	3,500	17,500	66

					Subtotal 1-Project Management-GEF	**35,755**	**34,500**	**34,500**	**34,500**	**34,500**	**173,755**	
Project Management			UNDP	71300	Local Consultants	0	0	30,000	0	30,000	60,000	67
				71600	Travel	8,000	6,000	5,000	4,000	3,000	26,000	68
				72200	Furniture and Equipment	11,500	0	0	0	0	11,500	69
				72800	Info. Tech. Equip	8,500	5,000	0	0	0	13,500	70
				74200	Audio and Printing	3,000	3,000	3,000	3,000	2,000	14,000	71
				75700	Participation of Counterparts	8,000	2,500	3,500	2,500	3,500	20,000	72
					Subtotal 2-Project Management-UNDP	***39,000***	***16,500***	***41,500***	***9,500***	***38,500***	***145,000***	
					TOTAL PROJECT MANAGEMENT (GEF + UNDP)	**74,755**	**51,000**	**76,000**	**44,000**	**73,000**	**318,755**	
Grand Total GEF						**924,858**	**985,500**	**845,500**	**569,500**	**323,500**	**3,648,858**	
Grand Total UNDP						**275,000**	**520,500**	**603,500**	**375,500**	**225,500**	**2,000,000**	
GRAND TOTAL GEF and UNDP						**1,199,858**	**1,506,000**	**1,449,000**	**945,000**	**549,000**	**5,648,858**	

Budget item #	Budget Notes
COMPONENT 1	
Outcome 1: Enabling institutional framework	
GEF	
1	Contracting the services of two **national/local consultants**: (i) An **Information Systems Management Expert (indicative ToR outlined in Section IV, Part I)** to: identify data needs and suitable data collection methodologies for setting up the GIS-based database and decision-support system for informing and monitoring land use planning and land degradation; design and establish suitable electronic information management systems; identify and install hardware and software needs and networking requirements; develop data access and maintenance protocols, and provide training in the use and maintenance of the system databases, as described under Output 1.1; to develop a Projects and Stakeholder database for the Water Basin Offices (Output 1.2) and a data management and monitoring system for payment compliance (Output 1.4) and training relevant people in the use of these systems. The Consultant will be appointed in Year 1 of the project, but will also be required to provide follow-up service throughout the first few years of the project, especially to assist with early maintenance of the IT systems and ongoing training.(ii) A **Communications Specialist** to work with stakeholders (as outlined in Section IV, Part I) to identify awareness-raising/communications needs (suited to various stakeholders); develop a catchment-wide communications strategy (for each catchment), develop appropriate materials and communications tools; and design and print relevant SLM/IWRM information/awareness raising materials (brochures, fact sheets, pamphlets etc. (Output 1.3). The Communications Specialist shall be procured in Year 1, but will provide the bulk of their services in Years 2 and 3.In both cases the lump-sum cost of contracting the service providers should include their professional fee and a provision for their travel for attending meetings, communications, sundry supplies and any secretarial or report production services.
2	Local travel (fuel/transport) and DSA costs for (i)Community Development facilitators from Water Basin Offices to conduct consultations for the formation and capacitation of WUAs and Catchment Committees (Output 1.3),and the transport costs for water users to attend relevant meetings to establish the WUAs

	(Output 1.2) and Catchment Committees, and for them to commence their operations (Output 1.3).
3	Costs for co-ordination of land use planning processes (working alongside NLUPC facilitators and District Authorities); assess the support needed to build capacity for planning; monitor ongoing implementation of plans and (working with the Project's M&E Specialist) set up protocols and systems for monitoring and evaluation of SLM practices and the current and potential effects on ecosystem services and for tracking land-use changes (as outlined under Output 1.1). Budget allocation covers the fees of the NGO/entity, appointment by the NGO of a Planning Co-ordinator and Technical Advisor/s, the costs of their travel f or attending meetings as well as for document production and communications related to this output.
4	Procurement of basic furnishing and office equipment for WUA offices (as per Output 1.3), including tables, chairs, filing cabinets, office stationery and supplies, and a provision for communications equipment for each WUA.
5	Budget allocated for purchase of the relevant computer hardware and software (database and GIS), routers and other networking needs, printers and scanners required to operate and maintain the GIS-linked land use data base and decision support system for each Water Basin Office, and the databases to be developed under Outputs 1.1, 1.2 and 1.4
6	Costs of producing and disseminating: (i) maps, land use management plans and other documents (such as by-law notices, signage) required for the land use planning process in 7 districts and 20 villages (Output 1.1)
7	Workshop costs associated with (i) RRA and PRA workshops for developing the land use plans in 7 Districts and 20 villages under Output 1.1 (budget includes travel and DSA costs for District Planning Co-ordinators, village leaders and members to attend RRA and PRA land use planning workshops; (ii) Training workshops for PLUMS teams (Output 1.1).
UNDP	
8	Communications Specialist to assist relevant institutions and stakeholders with developing a system for monitoring the impacts of the awareness-raising programme, training them in its application, and empowering community associations and other community members to lead the SLM mainstreaming process in the catchments. The allocation includes a contribution towards consultancy fees, the costs of travel for attending meetings, sundry supplies and any secretarial or report production services required for delivery of the project Output 1.3.
9	Travel costs of the Project Team, relevant Water Basin Organisation staff and other contracted parties related to: (i) setting up the multi-agency enforcement teams; (ii) regular site visits and inspections in the catchments by the enforcement teams (Output 1.4)
10	Support to the staff of Water Basin Offices for: (a) bringing stakeholders together to develop a common SLM vision and strategy for each catchment, (b) establishing catchment committees (Output 1.2), (c) the formation of WUAs and sub-catchment committees and providing technical advice to the Community Development Officers and WUAs for at least the first two years of the project(Output 1.3); and (d) for establishing multi-stakeholder enforcement teams (Output 1.4). Budget allocation should cover a contribution towards costs (fee) of the NGO/entity, and the costs of sundry supplies and communications.
11	The costs of purchasing one motorcycle for each WUA, with a provision for training motorcycle operators in operation and care of the motorcycles(for 7 motorcycles at a cost of US$ 5,000 per motorcycle).
12	Maintenance and repair costs for the vehicles used by the WUAs, Community Development Officers and other Water Basin Staff and core project staff in delivering on the outputs under Component 1.
13	The costs of producing audio-visual and printed materials for the Communications and Awareness-Raising Strategy (Output 1.2)
14	Workshop and meeting costs associated with: (i) RRA and PRA workshops for developing the land use plans in 7 Districts and 20 villages under Output 1.1; (ii) implementation of the Communications and Awareness-Raising Strategy and development of the common SLM Vision and Strategy for each catchment (under Output 1.2); (iii) workshops convened in the process of establishing WUAs and Sub-Catchment Committees (Outcome 1.3) and (iv) training for WUAs, Basin Water Officers, District Facilitation teams, and other relevant institutions in the provisions of relevant legislation, and the role of SLM in the protection of water resources (as per Outcomes 1.3 and 1.4)
Outcome 2: Sustainable financing	

GEF	
15	Allocations are for: (i) A local **Economist Or Financial Analyst/Planner** to conduct the financial and economic assessments (as outlined in the ToR under Section IV, Part I), develop a business case for leveraging funding for SLM, conduct the Public Expenditure review, identify new/alternative financing mechanisms and a plan of action for accessing these; conduct the feasibility study for establishing an SLM Fund and identify measures for its establishment; and work with stakeholders to develop a joint SLM investment strategy and monitoring plan, as detailed under Outputs 2.1, 2.2 and 2.3. The service provider will also serve as a Technical Advisor to the project in the first two years, to provide support to the PCU in facilitating linkages and opportunities for joint financial planning by sectoral departments, donors, the private sector and other stakeholders, as well as presenting the business case for SLM to potential donors, lobbying government to include SLM as a component in national development and environmental policies and plans, and provide support to Water Basin authorities in developing the financial components of SLM proposals. The service provider will also assist the PCU, with the support of the Communications Specialist (See Item 2, above) in developing appropriate promotional materials to be used in approaches to potential funders.
16	**M&E Expert**who will be responsible for delivering on all technical M&E-related outputs under Component 1 (Outcomes 1 and 2), for providing M&E-related training in the Project Development training workshops, for assisting the PCU with the M&E-related components of the quarterly and annual reports and for assisting with preparations for the mid-term review.
17	**Travel costs** include: (i) Fuel/transport and DSA costs of participants attending joint financial planning meetings and for the project team (including the PC, the M&E Expert and the service provider procured under Item 16 above) to travel to meetings to mainstream SLM into other decision-making systems, present the business case for SLM to relevant government departments and other potential donors (Outcome 2.2)
18	Provision for involving professional facilitators in the workshops to develop a joint SLM/IWRM investment strategy in each catchment (Output 2.3). It is preferable that the same entity be hired to provide all the workshop facilitation services required under the various project outputs under Outcome 2 and that adequate time be built into their service agreement to enable their participation in the workshop planning as well as being in attendance during the workshops to develop the SLM investment strategy for each catchment (Outcome 2.3)
19	Costs of preparation and printing: (i) the SLM investment strategy for each catchment (Output 2.3); (ii) the business case for mainstreaming SLM into decision-making (Output 2.1); (iii)information sheets, promotional/briefing materials, and the preparation of professional presentations to be used in attracting new sources of funding (Outputs 2.2 and 2.3)
20	**Workshop costs** (venue, refreshments, stationery, documentation, signage) for: (i) at least 2 multi-stakeholder workshops in year 1 and 2, and several smaller focus-group work sessions (in years 1 –2) to develop a **joint SLM investment framework/plan** for each catchment (Output 2.3); (ii) **training workshops** or all relevant organisations in budgeting, financial planning, budget-management and monitoring and reporting (Outcome 2.3). The training should be delivered by a team including experts from local tertiary education institutions working in partnership with existing expertise within key implementing institutions, and with inputs from the financial analyst/economist contracted under budget line 16.
UNDP	
21	Cost of procuring an **International Project Development Specialist** to work with the project's M & E Expert and UNDP CO representatives to provide training in the development of SLM proposals in Years 2, 3 and 4 of the project, as described under Output 2.1. The consultant should provide in-country training at a minimum of 2 workshops each year, and should provide review-inputs and feedback on proposals between workshops, and in Year 5. The budget allocated under this item will cover the professional fee and costs of sundry supplies needed by the consultant but excludes the workshop costs and travel, which are included under Budget Items 23 and 26.
22	Travel costs (flights, DSA etc.) for: (i) the International Consultant to travel to Tanzania to conduct the project development workshops under Outcome (2.1) and to attend workshops in Morogoro, Tanga and Dar es Salaam; (ii) participants to attend the financial planning/management training workshops (Outcome2.3).
23	Provision for entering a partnership (bound by a Service Level Agreement) with a local research/tertiary education institution conduct research to determine

	degradation trends and economic impacts of adaptive water and land management in order to facilitate access to funds through sources such as the NAP, etc (Output 2.1). The provision could take the form of a small research grant.
24	Costs of preparation and printing of project development training materials to be used in the project development workshops.
25	All workshop costs (venue, refreshments, stationery, signage, travel and DSA for participants) for (i) at least 2 **Project Development Workshops** per year in years 2 - 4 (Output 2.1) for the PCU, Technical Team, relevant staff form the Water Basin Offices and staff from other key water management agencies; these workshops to be led by the International Project Development Consultant (see Budget Item 22), working in association with the project's M& E Expert, and staff of the UNDP CO.
COMPONENT 2	
Output 3: Capacity Development	
GEF	
26	**Institutional Capacity Development Expert** to work in partnership with local experts and the Project Team (including members of the Technical Team), to: (i)conduct a full capacity and resource needs assessment and design a capacity (staff, resources and technical skills) development plan (Outputs 3.1 and 3.2); (ii) formulate a skills and knowledge development monitoring and sustainability plan (Output 3.2); and, (iii) conduct an assessment of extension capacity and development needs (Output 3.3) and formulate a capacity development plan for the extension service. The indicative terms of reference for the consultant are included in Section IV, Part II. This service provider will be procured in Year 1, but will need to provide inputs in later years to provide ongoing implementation, training, mentorship and monitoring support. Their terms of reference shall incorporate working in partnership with local service providers/experts in this field to further develop their capacity.
27	Allocations under this item will be used for: (i) procuring the services of a **Co-ordinating Editor** in Years 1 and 2, to lead the development of the locally-contextualised best practice SLM guideline (Output 3.3). This service provider shall be responsible for convening the necessary workshops as well as collating, writing and editing contributions, and working with the appointed Desk Top Publishing service provider (see Budget Item 19) to take the book through the production process
28	**Travel** (fuel or transport and DSA) for: (i) the Institutional Capacity Development Experts (local and international, the Project Co-ordinator and Technical Team members) to travel within the catchments in the course of conducting the capacity development assessment (Outcome 3.1); (ii) relevant staff to **attend training workshops/courses** as detailed in the skills development plan (Output 3.2)
29	Costs of appointing a company with suitable **Graphic Design/desk top publishing** capability to handle art direction, typesetting, layout and printing of the best practice guidelines and to develop suitable promotional pamphlets linked to the best practice guide (Output 3.3).
30	Costs of purchasing: (i) portable water monitoring and soil testing kits, hydro-met stations, and other basic tools required to deliver project outputs, as per the resource development plan (Output 3.2); (ii) a dedicated vehicle (dedicated to delivering on the project outputs in the Ruvu and Zigi catchments) for use by core project staff, relevant staff of Water Basin Offices (the community development officers and relevant technical staff such as the hydrologists (Outputs 3.2 and 3.3).
31	Costs of purchasing: (i) Laptops, software licences, portable hard drives, routers, printers, 3G cards, and ISP contracts for the Project Co-ordinator and M&E Expert, as well as relevant staff of Water Basin Offices (e.g. community development officers) water user associations, catchment committees and other relevant institutions, as identified in the institutional resources development plan (Outcome 3.2).
32	Implementation of professional and technical skills-development programmes, as per the skills development plan (Output 3.2). The budget will be used to set up partnership arrangements with local tertiary education institutions, (possibly in collaboration with international institutions with relevant expertise), NGOs or other appropriate professional service providers to enable relevant staff of water management agencies, (and other relevant stakeholders) to attend **short courses and participate in learning exchanges** to improve their technical skills, The courses should include (but may not be limited to): principles and techniques of SLM and IWRM (basic and advanced); GIS, mapping and remote sensing; land use planning; environmental assessment; data gathering,

	collation, management, modelling and analysis; community engagement and conflict resolution, and advanced enforcement techniques.
33	Budget to be allocated to (i) production (printing) and distribution of the best-practice guideline (Output 3.3); (ii) layout and printing of other awareness-raising materials to be used by extension officers and during farmer learning-exchanges (Output 3.3); (iii) audio-visual materials required for the delivery of training (under Outcomes 3.2 and 3.3).
34	All costs of workshops and meetings to: (i) train extension officers and farmer's associations, Water User Associations and other relevant stakeholders in use of the best-practice guidelines; (ii) train extension officers and farmers and other community members (with a focus on women) to serve as 'para-professionals' forming a farmer-centred and farmer-driven extension service (Output 3.3); (iii) capture lessons learnt for producing the best practice guideline (Output 3.3); (iv) facilitate learning exchange workshops/seminars for farmers (Output 3.3).
UNDP	
35	Contribution towards the costs pf contracting a suitably experienced local professional (who could be associated with a particular NGO or other entity such as a tertiary institution) to serve, on a consultancy basis, as a **Technical Advisor** to the farmer's associations and extension officers who will promote uptake of SLM by farmers in the catchments, using the best-practice guide as a key tool (Output 3.3).
36	Hal the costs of procuring the **full-time M&E Expert** who will deliver on all of the M&E-related aspects under Outcomes 3 and 4, and will assist the PCU with project reporting, preparation for the terminal evaluation of the project and the compilation of a lessons learnt document based on the experiences of the project
37	Travel costs (fuel, DSA, bus fares) associated with: (i) farmer's associations and community extension officers travelling within the catchments as part of the community extension service, and to facilitate farmer learning exchanges (Output 3.3); (ii) contribution towards **travel costs of** extension officers (district) to enable them to visit villages more frequently (Output 3.3)
38	Costs of engaging: (i) a local **Institutional Capacity Development** company/NGO/entity (which could be a tertiary education institution), to work alongside the international capacity development specialist (procured under Budget Item 27) to deliver on all of the Outputs under Outcome 3
39	Budget for meeting the communications costs of core project staff, including the Project Co-ordinator and Project M&E Expert
40	Procurement of office supplies for core project staff (PC, PA and M&E Expert), community development officers and farmer's associations involved in the community extension programme
41	Costs of: (i) equipment and materials needed by extension staff to deliver the SLM message and provide appropriate support to participating farmers (Output 3.3); (ii) office furniture (chairs, tables, desks, etc.) required to equip, farmer's associations and other relevant institutions, as per the resources development plan (Output 3.2)
42	Costs of: (i) purchasing hand-held GPS instruments for Water Basin Offices and other relevant technical staff in key stakeholder institutions(Output 3.2)
43	Provision for maintenance and repairs to the dedicated project vehicle used by core project staff and the community development officers working in the Ruvu and Zigi catchments
44	Contribution to the implementation of professional and technical skills-development programmes, as per the skills development plan (Output 3.2). The budget will be used to set up partnership arrangements with local tertiary education institutions, (possibly in collaboration with international institutions with relevant expertise), NGOs or other appropriate professional service providers to enable relevant staff of water management agencies, (and other relevant stakeholders) to attend **short courses and participate in learning exchanges** to improve their technical skills, The courses should include (but may not be limited to): principles and techniques of SLM and IWRM (basic and advanced); GIS, mapping and remote sensing; land use planning; environmental assessment; data gathering, collation, management, modelling and analysis; community engagement and conflict resolution, and advanced enforcement techniques.
45	All costs of (i) workshops and focal-group sessions to be convened during the institutional capacity assessment and formulation of the capacity, resources and skills development plans (Outputs 3.1 and 3.2); (ii) training workshops (SLM and IWRM) for WBO's, district offices, regional representatives of line ministries, and other relevant institutions (Output 3.2); and (iii) learning exchanges between the project implementers, relevant tertiary institutions, NGOS and CSOs (Output 2.2)

Outcome 4: Uptake of SLM, SRM and forest restoration	
GEF	
46	Contracting the services of (i) an Independent **International Consultant** to conduct the Midterm Evaluation in Year 3; and (ii) an Independent **International Consultant** to conduct the Final Evaluation/Terminal Review of the project in Year 5 (all Outputs)
47	**Professional Facilitators** (individuals or a suitable NGO/entity) to provide independent facilitation, translation and conflict resolution services for: (a) meetings and workshops convened to set up co-operation agreements and forest management/resource utilisation plans with forest-adjacent communities (Output 4.1); and, (b) establishment of the Sustainable Rangeland Management Forum (in Year 2), and during its initial meetings in at least Year 3 (Output 4.3). This budget allocation includes all costs associated with hiring of facilitators.
48	Contribution to the costs of hiring temporary, c**ontract labour** to be involved in well construction, digging of terraces, the establishment of tree nurseries, tree planting, support to bee-farming and other conservation farming activities (Outputs 4.2 and 4.3), calculated as person days required for establishment and maintenance per year
49	Travel/fuel and DSA costs required for: (i) the international and local M&E consultants, and relevant member of the Project team, and any stakeholders, during the mid-term and final project evaluation missions; (all Outputs) (ii) travelling to villages to set up co-operation agreements, develop forest management/resource utilisation plans; and (iii) to provide village-based training to forest patrollers and teachers (Output 4.1).
50	Budget required to set up a service agreement with one, or more, suitably experienced NGOs (or other relevant entities) to : (i) Work with the TFS, communities and other stakeholders to develop forest management/resource-utilisation plans, establish co-operation agreements; train forest patrollers (and provide ongoing mentorship); work with communities to set up tree nurseries, provide training and oversee implementation of assisted natural regeneration and enrichment planting restoration programmes (Output 4.1); (ii) Co-ordinate the implementation of project activities linked to promotion of alternative energy solutions and training of community members who will be responsible for ongoing awareness-raising (Output 4.1). (iii) Co-ordinate the establishment and operationalisation of the Ruvu Catchment Sustainable Rangeland Management Forum and the development and implementation of the Sustainable Rangeland Management Plan; including overseeing the siting and construction of water points for cattle, development of well maintenance plans and training of users (Output 4.3). (iv) Co-ordinate and monitor all aspects of SLM and SRM (Sustainable Rangeland Management) training to be delivered under Outcome 4. Preferably, one suitably experienced NGO should be appointed to carry out these functions, with the support of the Project Co-ordinator.
51	Allocations for purchasing and maintaining: (i) Portable reverse osmosis water purification kits (Output 4.1); (ii) Alternative energy solutions including solar lanterns, material for construction of rocket stoves (or other energy efficient cookstoves) (Output 4.1); (iii) furniture and office equipment needed for the secretariat of the SRM Forum (Output 4.3)
52	The costs of purchasing: (i) compost, fertiliser, tools (hoes, planting sticks), seeds and seedlings (required for crop-cultivation) (Output 4.2); (ii) poles and binding materials, animal feeds (required for cattle enclosures) (Output 4.2); (iii) bee hives and stands, protective clothing, honey extractors, honey filters, stainless steel storage tanks, buckets, jars etc. (required for bee-keeping) (Output 4.2); seeds and seedlings; compost and fertiliser; seedling trays/pots/bags; irrigation equipment (required for tree nurseries) (Output 4,2); (iv) poles, ropes, animal feeds; buckets, gloves, milking equipment, sterilisers, stainless steel storage vats; veterinary products (required for zero-grazing dairy farming) Output 4.2; (vi) biocides, termicides, rope, buckets, tools (rippers, picks, shovels, valves, bolts and nuts), and other building materials (required for construction of water points) (Output 4.3).
53	Funds will be spent on (i) providing training in SLM farming practices for community members under Outputs 4.1 and 4.2 (for example by attending courses at the Farmer Training Centre operated by Sustainable Agriculture, Tanzania) (ii) hiring specialist well technicians to provide technical guidance in the construction of cattle watering points (Output 4.3).

54	Printing and dissemination of (i) the Sustainable Rangeland Management Plan; (ii) awareness-raising and training materials required under Outputs 4.1, 4.2 and 4.3; (iii) joint forest management/resource utilisation plans
55	Workshop costs (including venues, refreshments, stationery, documentation, signage, travel and DSA for participants and facilitators) for: (i) Meetings and workshops to establish the Ruvu Catchment Sustainable Rangeland Management Forum, and to enable the Forum to meet at least twice a year (Output 4.3); (ii) stakeholders to attend the information-gathering workshop to be convened under Output 4.1; (iii) Teacher training workshops (Output 4.1) and (iii) all other training workshops under Outputs 4.2 and 4.3.
UNDP	
56	Costs of contracting the services of: (i) a local consultant to participate in the Mid-term review of the Project in Year 3; (ii) a local consultant to participate I the final review of the project in Year 5.
57	Contribution towards the costs of hiring temporary contract labour to assist with digging of wells, and for digging of terraces, the establishment of tree nurseries, tree planting, support to bee-farming and other conservation farming activities (Outputs 4.2 and 4.3) patrollers.
58	Travel costs for project staff and other contracted parties conducting community consultations for setting up the Sustainable Rangeland Management Forum, and for conducting the field assessments for well construction.
59	Budget for purchasing start-up mushroom-growing goods and materials including: gypsum, compost turners, watering equipment, mushroom chambers, mushroom trays/bags, casing layers and mushroom spawn (Output 4.2);
60	A contribution towards the costs of procuring the services of the NGO/entity appointed under item 52, to co-ordinate and oversee the development of alternative Income Generating Activities (IGAs) in the catchments, including bee-keeping, zero-grazing dairy farming, organic spice-growing, mushroom farming etc., including planning, training and implementation (Output 4.2)
61	Allocations for purchasing and maintaining: (i) Portable reverse osmosis water purification kits (Output 4.1); (ii) Alternative energy solutions including solar lanterns, material for construction of rocket stoves (or other energy efficient cookstoves) (Output 4.1); (iii) furniture and office equipment needed for the secretariat of the SRM Forum (Output 4.3)
62	Office supplies for: (i) the Sustainable Rangeland Management Forum; (ii) for generating the project document packs required for the midterm and final evaluations
63	The costs of hiring the services of well-technicians to conduct the field studies required for identifying suitable well sites and to provide technical inputs and oversight of the design and construction of the wells
Project Management	
GEF	
64	Appointment of a full-time Project Administrator/Finance Officer(240 weeks)
65	Pro rata Mobile phone and other telecommunications costs of the Project Administrator
66	The cost of conducting the annual financial audit, as per the project M&E plan.
UNDP	
67	The costs of contracting the services of: (i) a local M&E consultant to participate in the midterm evaluation of the project in Year 3; (ii) a local &E consultant to participate in the terminal review of the project in Year 5.
68	Travel costs (fuel, DSA, cost of drivers etc.) for: (i) the local M&E consultants participating in the midterm and final evaluations of the project; (ii) pro rata travel costs of the project staff; (iii) a provision for the costs of drivers
69	The costs of purchasing furniture and office equipment for setting up the office of the project Co-ordination Unit
70	The costs of purchasing a computer, software, portable hard-drive, printer, router, 3G cards, ISP contract and data projector for the Project Admin/Finance

	Officer
71	The costs of printing document packs for the Inception Workshop, Steering Committee meetings and Technical Team meetings, and other printing needs of the PCU, and promotional materials for the Project Launch Event
72	Costs of: (i) the Inception Workshop and Launch Event in Year 1, and (ii) Project Steering Committee meetings and Technical Team (venue, refreshments, documentation) in Years 1 - 5

SUMMARY OF FUNDS*:	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**TOTAL**
Funder - GEF	**924,858**	**985,500**	**845,500**	**569,500**	**323,500**	**3,648,858**
Funder -UNDP	**275,000**	**520,500**	**603,500**	**375,500**	**225,500**	**2,000,000**
TOTAL	**1,199,858**	**1,506,000**	**1,449,000**	**945,000**	**549,000**	**5,648,858**

SECTION IV: ADDITIONAL INFORMATION

PART I: Terms of Reference for Core Project Staff

PROJECT COORDINATOR (FULL TIME)

General description

The Project Coordinator will be locally recruited, based on an open competitive process.He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision of project staff, consultants and sub-contractors. The Project Coordinator will report to the Project Overseer in the MOWfor all of the project's substantive and administrative issues and will report on a periodic basis to the Project Steering Committee (PSC). Generally, he/she will be responsible for meeting government obligations under the project, under the national implementation modality (NIM). The incumbent will perform a liaison role with the Government, UNDP, Vice Presidents Office, implementing partners, NGOs and other stakeholders, and maintain close collaboration with any donor agencies supporting project activities.

The Project Co-ordinator should be an enthusiastic and motivating leader who will bring to the position status and credibility that is recognised by the partner institutions. S/He should be a goal-orientated, strategic thinker who can work systematically and effectively under pressure and manage work and resources within tight timelines. They must be able to identify opportunities and constraints that might emerge during the tenure of the project, and develop solutions accordingly. The Project Co-ordinator must have excellent communication skills including the ability to write clearly in English and KiSwahili; s/he should have above-average interpersonal skills, an ability to work effectively and sensitively with people from diverse backgrounds and an ability to harness the co-operation of stakeholders to achieve the goals of the project.

<u>Duties and Responsibilities</u>

- S upervise and coordinate the production of project outputs, as per the project document;
- M obilize all project inputs in accordance with procedures for nationally implemented projects;
- S upervise and coordinate the work of all project staff, consultants and sub-contractors;
- C oordinate the recruitment and selection of project personnel;
- P repare and revise project work and financial plans;
- L iaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
- F acilitate administrative backstopping to subcontractors and training activities supported by the project;
- O versee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, MOW and other oversight agencies;
- D isseminate project reports and respond to queries from concerned stakeholders;

- Represent the Project in meetings and conferences to which the project may be invited;
- Report progress of the project to the Project Steering Committee, and ensure the fulfilment of Project Steering Committee directives;
- Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally;
- Ensure the timely and effective implementation of all components of the project;
- Assist relevant government agencies and project partners - including donor organizations and NGOs - with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;
- Coordinate and assistproject partners with the initiation and implementation of any field studies
- Carry out regular inspections of all sites and the activities of any project site teams.

Qualifications and experience

- A post-graduate university degree inNatural Resource Management, Environmental Science, Environmental Engineering, Land Use Planning, Water Resources Management or a related field; or, Business Management or a related field.
- At least 10 years of relevant experience in business and/or natural resource planning and management (preferably in the context of Integrated Water Resource Management, Sustainable Land use Management or a related field).
- At least 5 years of project management experience, preferably in large, multi-stakeholder projects.
- Ability to work effectively across sectors.
- Experience in mainstreaming.
- Ability to administer large budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.
- Excellent writing, presentation and reporting skills in English is a requirement.
- Strong computer skills.
- A good working knowledge of Kiswahili is a requirement.

Demonstrable work experience in international projects or within international organisations is highly desirable as is experience of working with the project's national stakeholder institutions and agencies.

PROJECT ADMINISTRATOR/FINANCE OFFICER (FULL TIME)

Description

The Project Administrator/Finance Officer (PA) will be locally recruited based on an open competitive process. He/She will be responsible for the overall administration of the project. The

Project Administrator will report to the Project Coordinator. Generally, the Project Administrator will be responsible for supporting the Project Coordinator in meeting government obligations under the project, under the national implementation modality (NIM). The Project Administrator will be responsible for general administration, managing procurement processes, keeping records of expenditure, assisting with the preparation of all project reports and other project documentation, arranging meetings and workshops and maintaining linkages with related projects and programmes.

The Project Administrator should be a person who can work effectively and to high standards under situations of pressure to produce the required outputs on deadline. S/he should have strongly developed administrative and organisational skills. As the person who will often be the first point of contact for stakeholders, the Project Administrator must be able to represent the Project with a high level of confidence and professionalism.

Duties and Responsibilities

- Collect, register and maintain all information on project activities.
- Contribute to the preparation and implementation of progress reports (including financial reports).
- Assist with drawing up and managing project budgets and keep records of financial expenditure.
- Advise all project counterparts on applicable administrative procedures and ensure their proper implementation.
- Maintain project correspondence and communication.
- Support the preparation of project work-plans and operational and financial planning processes.
- Assist in procurement and recruitment processes.
- Assist in the preparation of payment requests for operational expenses, salaries, insurance, etc. against project budgets and work plans.
- Follow-up on timely disbursements by UNDP Country Office.
- Receive, screen and distribute correspondence and attach necessary background information.
- Prepare routine correspondence and memoranda for the Project Coordinator's signature.
- Assist in logistical organization of meetings, training sessions and workshops.
- Prepare agendas and arrange field visits, appointments and meetings (both internal and external) related to the project activities and write minutes from the meetings.
- Maintain a project filing system and stakeholder database.
- Maintain an inventory of project equipment.
- Perform all other reasonable duties as required.

Qualifications and experience

- A first degree in business administration, accountancy, project management, financial administration, economics or a related field.
- At least 5 years of relevant administrative and/or bookkeeping experience.
- Work experience in international projects or within international organisations is highly desirable.
- Demonstrable ability to administer project budgets, and track financial expenditure.
- Demonstrable ability to maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops.
- Excellent computer skills, in particular mastery of all applications of the MS Office package and an ability to work with Excel spreadsheets.
- Excellent written communication skills.
- A good working knowledge of Kiswahili and proficiency in English is desirable requirement.

MONITORING AND EVALUATION EXPERT (PART TIME)

Description

The Monitoring and Evaluation Expert will be contracted on a part-time basis to guide the project's M&E procedure, assist with the development of monitoring systems required under various project outputs, provide training in M&E and make recommendations to national authorities and donors in respect of project M&E.

Roles and responsibilities

The roles of the M & E specialist will be to:

- Work with the PC to fine-tune the project indicators and the M&E framework at the start of the project;
- Assist the PC and PSC in monitoring the risks faced by the project and help adapt the risk management strategy as required;
- Co-ordinate and assist national Implementing Partners with the initiation and implementation of any monitoring components of the project;
- Support the mid-term and the final evaluations;
- Provide training in M&E, as required
- Assist the international evaluation consultant in assessing project progress, achievement of results and impacts; support the drafting of the evaluation report(s) and discuss it with the project team, government and UNDP;
- Participate in discussions to extract lessons learntand best-practices for UNDP and GEF.

- Provide guidance and recommendations to the project team and ongoing M & E support throughout the tenure of the project.

Qualifications and Experience

- A postgraduate degree in public policy research, resource-economics, social services or other discipline relevant to the assignment.
- At least 7 years relevant experience, 5 of which should be in monitoring and evaluation of complex, multi-stakeholder projects.
- Demonstrable experience in evaluation, performance management, training and reporting in environmental and development projects, including:
  - Experience with logical framework analysis and other strategic planning approaches;
  - M & E principles and approaches
  - Planning, design and implementation of M & E systems
  - Training in M&E development and implementation and/or facilitating learning-orientated analyses of M & E working with multiple stakeholders (government, NGOs, development partners, civil society)
  - Proficiency in the use of M &E database software
  - Proficiency in standard data and information analysis and report writing.

OTHER CONSULTANTS/ CONTRACTED INDIVIDUALS

Although the Project Co-ordinator and the Project M&E Specialist will be responsible for delivery of some of the technical outputs of the project, the services of other individuals and contracted parties will be required for delivery of the full suite of project outputs. Wherever possible, the key project activities will be implemented through the establishment of partnerships (formalised through Memoranda of Understanding)with relevant government agencies and existing NGOs (or other institutions) that have a demonstrated track record of success in the required areas of technical competency. The required studies will also be carried out through partnerships with suitable local or international research institutions and NGOs wherever possible. If the required expertise is not available within these institutions, it may be necessary to hire the services of professional service providers/consultants. Indicative terms of reference for the key studies to be commissioned during the project are provided below:

Study	***Tasks to be performed***
Information/data management systems	Outputs 1.1, 1.2, 1.4 and 3.2 The services of a suitably qualified information management systems specialist (national or international consultant or company) will be required to work with designated institutions to: identify the scope of data management needs; develop data and information collection methodologies and storage protocols (data standards); collate existing and new information; convert information into electronic datasets; design and establish an electronic information management system; identify hardware, software and networking requirements; develop data access and maintenance protocols; and train staff from key water basin

Study	*Tasks to be performed*
	authorities and other relevant agencies in data management and analysis, GIS, geospatial database administration, non-spatial data management and applications development. The service provider will be responsible for, inter alia: working alongside relevant agencies and other technical experts to developthe GIS-based spatial land degradation/SLM data base and land-use decision support tool under Output 1.1 and in training relevant staff in its use and maintenance; developing the framework for the stakeholder and projects database to be established in each Water Basin Office, and in training staff in its use and maintenance.; and developing a data management system for tracking payment compliance and allocation of water user fees received, and in training staff in its use and maintenance.
Communications and awareness-raising	<u>Output 1.2</u> *The project will require the inputs of a skilled communications expert (or NGO or other institution) or suitably experienced project partner to:* • identify information and awareness-raising needs suited to various stakeholder groups • work with stakeholders to develop a catchment-wide communications and awareness-raising strategy and develop indicators for monitoring the impact of the strategy • Work with stakeholders to develop appropriate communications/awareness raising materials and tools (using multiple means such as printed materials, radio, internet and websites, mobile phones, cultural gatherings and other special events, school programmes, workshops, demonstrations, study tours, symposia) The service provider/project partner's brief should include: working closely at all stages of the development process with staff of the Water Basin Offices and members of community to ensure that the material takes account of local knowledge and cultural norms and is appropriately contextualised; assisting the Water Basin staff and community members with planning a dissemination and awareness-raising strategy and monitoring system and training them in its use.
Financial and socio-economic studies (2)	<u>Outputs 2.1, 2.2 and 2.3:</u> *The project will require the services of a suitably qualified professional (local or international) with financial planning/economic anlaysis expertise to:* • undertake a detailed cost/benefit analysis of the different SLM practices and production systems within selected landscapes in the Ruvu and Zigi Catchments and use this to develop a business case for leveraging new streams of public finance • undertake a Public Expenditure Review to quantify the sources and amounts of funding currently available for SLM in the Ruvu and Zigi catchments • identify potential/likely sources of additional public finance and other financing mechanisms that can be tapped for the implementation of SLM

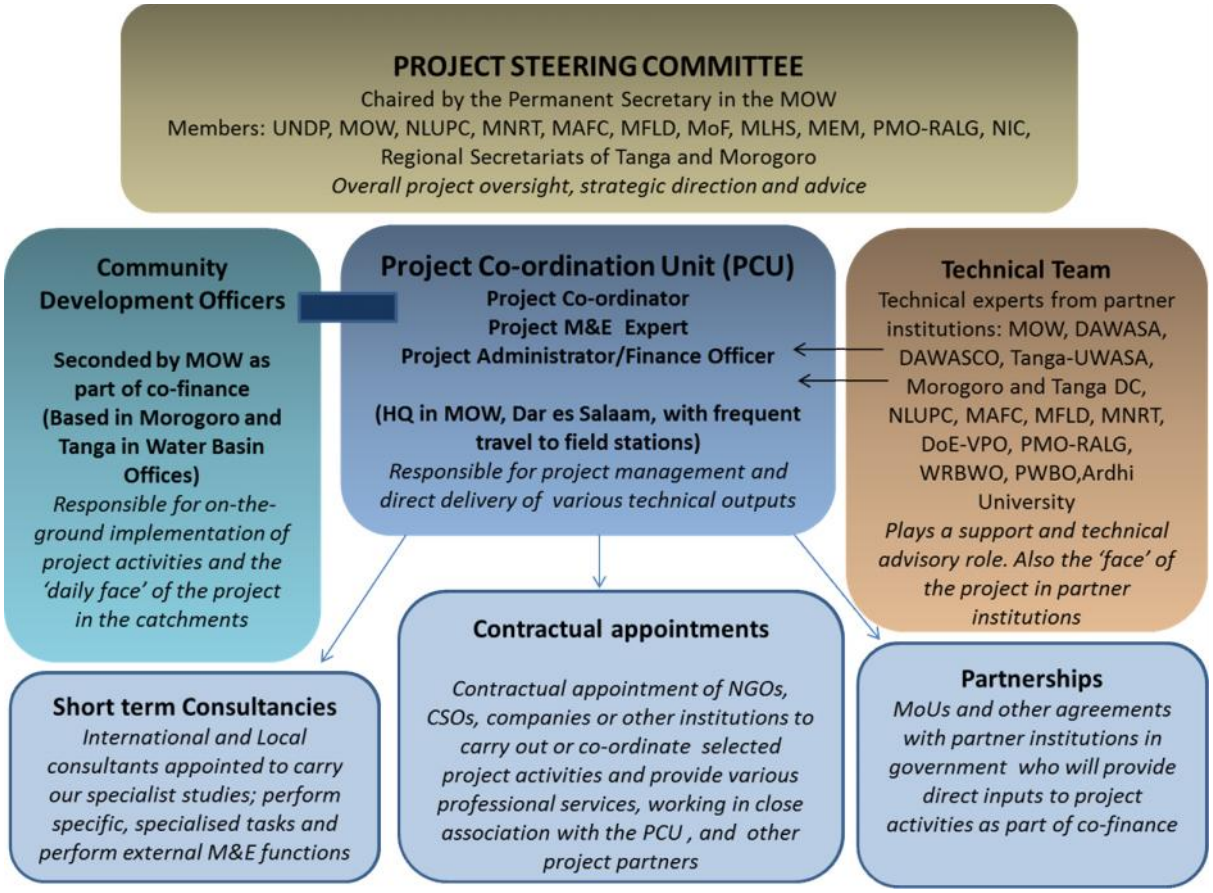
Study	*Tasks to be performed*
	in the Ruvu and Zigi catchments (e.g. including new and non-traditional sources of financing such as SME banking; Debt Swaps, Clean Development Mechanisms; Incentives and Market-Based Mechanisms; Public-Private Partnerships and Private Sector Investments) • develop a set of resource distribution/allocation criteria that can be used to improve the effectiveness of SLM investments in the two catchments, reducing duplication and redundancy • investigate the feasibility of establishing an SLM Fund and identify measures for its establishment during the tenure of the project • develop a plan of action for increasing the amount of funds available in the targeted areas by at least 10% over 2.5 and 15 % over 5 years. In carrying out this work, the service provider must build on the large volume of existing information that has been generated by various studies in the Uluguru and East Usambara Mountains (e.g. the PES work undertaken by CARE/WWF and WCTS/RSPB), and must work in close alignment with the recommendations detailed in the Integrated Investment Framework and Integrated Financing Strategy for Sustainable Land Management in Tanzania which has been developed through the Global Mechanism under the United Nations Convention to Combat Desertification (2014). <u>Output 4.2:</u> *A suitably qualified service provider (local) with resource economics expertise is required to:* • review the existing socio-economic data available for the Ruvu and Zigi catchments and use this as the basis for identifying data gaps to be addressed in this study (such as current trends in household incomes, current production rates) • assess the costs/benefits of different SLM practices and production systems and their benefits to ecosystem functioning and livelihoods in the two catchments • building on previous studies, conduct an assessment of current Intergovernmental Agreements (IGA)s and quantify their contribution to local level economies and household incomes in selected villages • asses the economic potential of the alternative IGAs that have been identified to sustainably increase local economic activity and household incomes • identify any barriers that may prevent uptake of alternative IGAs and identify solutions for overcoming these barriers • develop a set of livelihood and welfare indicators that can be used to assess and monitor the impact of the uptake of alternative SLM-related IGAs • identify structural market inefficiencies that currently limit productivity

Study	*Tasks to be performed*
	of farmers and develop recommendations on how these can be overcome; • identify a set of micro-financing and savings options that are suited to the needs of the farmers in the two river catchments, with a special focus on members of vulnerable groups • Develop a programme of action for increasing SLM-related activities in the selected villages, outlining the costs, benefits and trade-offs, and providing guidelines to ensure that the programme does not accelerate land and watershed degradation.
Institutional Capacity Development (2 – 1 International, 1 National)	<u>Outputs 3.1, 3.2 and 3.3</u> The services of a national or international consultant or NGO or research institution with relevant experience will be required to work with a local institutional development entity/individual to expand and complete the initial capacity assessment that was conducted during the project development phase and then design a multi-pronged, reflexive resource and capacity-development programme that responds to the identified needs and better enables all relevant institutions to mainstream SLM into integrated watershed management. The scope of work shall include to: • work with the project team to identify additional institutions to whom the existing capacity assessment should be extended and identify further capacity assessment questions that need to be addressed; fill existing information gaps and gather new information to answer capacity development questions that have not already been addressed; • conduct a detailed analysis of the barriers/root-causes underlying the institutional capacity status quo • identify detailed indicators for monitoring the implementation of the capacity development programme • identify staff and resource needs • identify technical knowledge and skills development needs and the most appropriate means of addressing these • workclosely with all relevant institutions to design a multi-pronged, reflexive institutional capacity development programme to be implemented over the five year duration of the project. The resultant institutional capacity and resources development programme must be multi-pronged to address the developmental, integrative, technical and administrative capacities of a range of stakeholder institutions in government and civil society (including agencies responsible for watershed management, land use planning and extension). The capacity and resource development programme must also: (i) build on the lessons learnt and best practices established in institutional capacity development in other regions and abroad (especially following established UNDP principles and practices; (ii) address issues of social and gender equity (and other issues identified in the Environmental and Social Safeguards Policy); and, (iii) include a sustainability plan.

Study	***Tasks to be performed***
Bio-physical studies	Outcome 4: The services of bio-physical experts will be required to undertake certain studies. If the information cannot be gathered through lesson-sharing workshops or if the studies cannot be conducted by experts in partner institutions, it may be necessary to hire external consultants, and provision needs to be made for this eventuality. The work would include undertaking various surveys and assessments to , *inter alia*: • update land-cover data for the two catchments • identify and map badly degraded areas both within and outside of protected areas, especially those that might require specific rehabilitation measures • assess the extent of land that is currently under settlement and correlate this with population sizes and densities • undertake a survey to establish the extent of land in each basin under livestock, current stocking rates, seasonal movements and fluctuations in livestock numbers; numbers of livestock-keeping households; predominant livestock management strategies in the two study areas; current production costs and incomes and an assessment of well-being in livestock-keeping households • identify (by type, location and scale), a suite of prospective sustainable livestock management technologies • develop indicators that can be used to monitor the impacts of changed livestock management technologies on land cover, soil erosion and the condition of riverbanks, as well as socio-economic impacts (changes in income and other well-being indicators).
Evaluation expert for mid-term (1) and final (1) evaluation	M&E The standard UNDP/GEF project evaluation TOR will be used. This will include: leading the mid-term and the final evaluations; working with the local evaluation expert in order to assess the project progress, achievement of results and impacts; developing the draft evaluation report and discussing it with the project team, government and UNDP; and as necessary, participating in discussions to extract lessons for UNDP and GEF.

Complete ToRs for thesestudies, and any other technical studies that may be required, will be developed at project inception by the Project Co-ordinator, supported by the Technical Team, and with guidance from the UNDP Country Office. Specific terms of reference (built into MoUs) will also be developed for the various components of work to be implemented through partnerships with NGOs and CSOs and research institutions, and any other work that may need to be outsourced (e.g. hiring of expert facilitators for workshops).

The implantation model t be followed in this project is depicted graphically in the Figure 1, below).



Note: Final membership of the PSC and the Technical Team may be adjusted at project inception. The Community Development Officers may be seconded from partner institutions other than the MOW, but the secondment will be financed as part of the MOW co-financing commitment.

Part II: Project Maps and Figures

Map 1: Administrative map of Tanzania

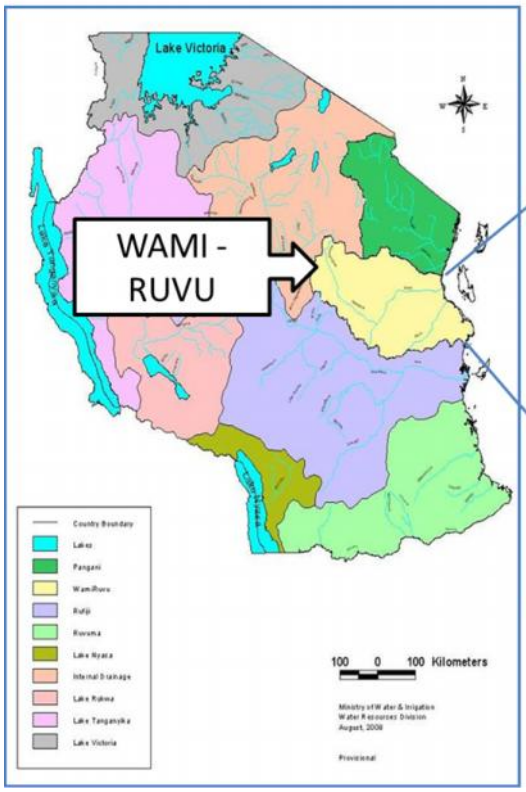
(Source:

Map 2: Map of 9 Water Basins in Tanzania(Source: MOW)

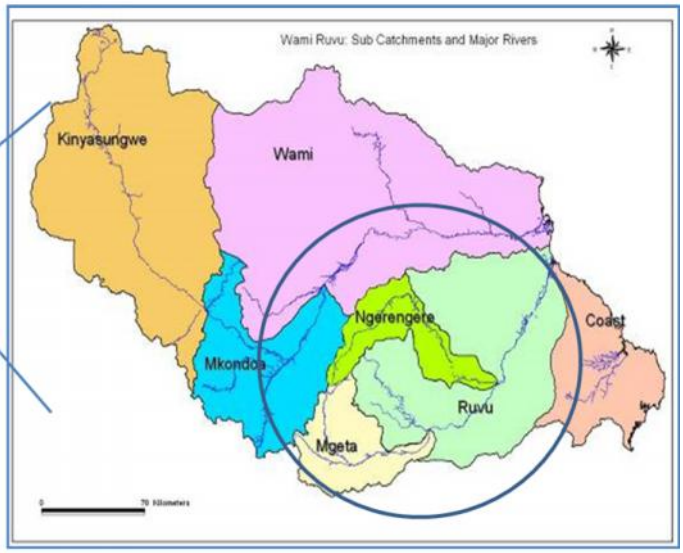
Map 3: Map showing location of the Eastern Arc Mountains of Tanzania (Source: Wikimaps/EAMCEF)

Map4: showing the Main sub-catchments of the Wami-Ruvu Basin.

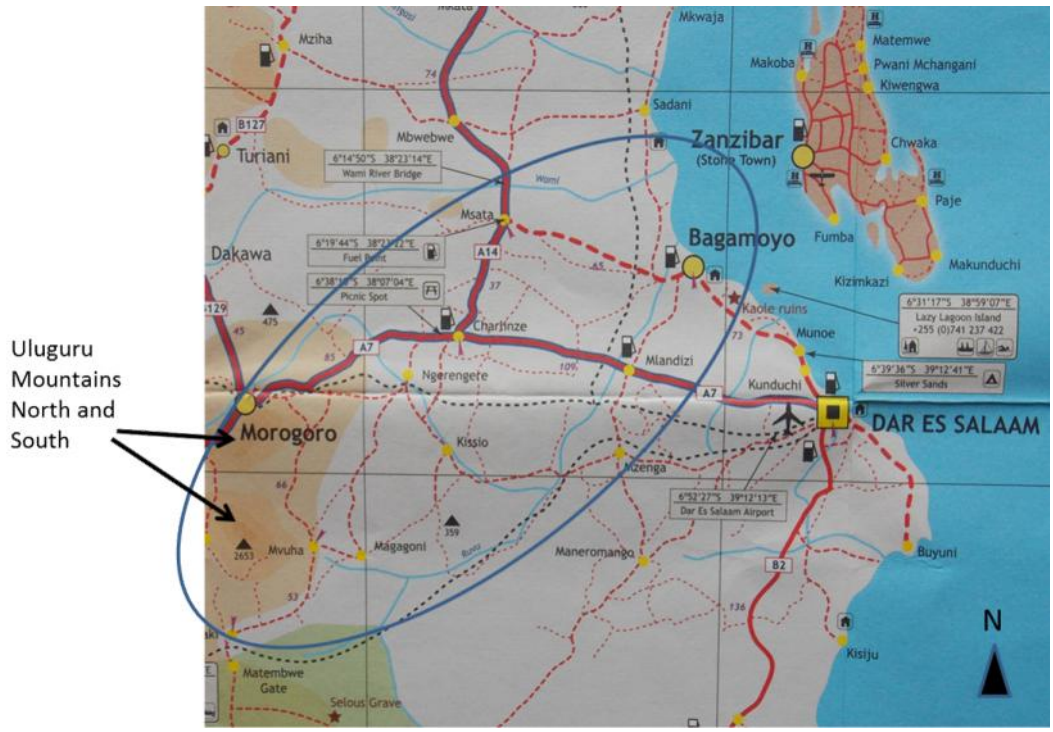
9 Water Basins of Tanzania



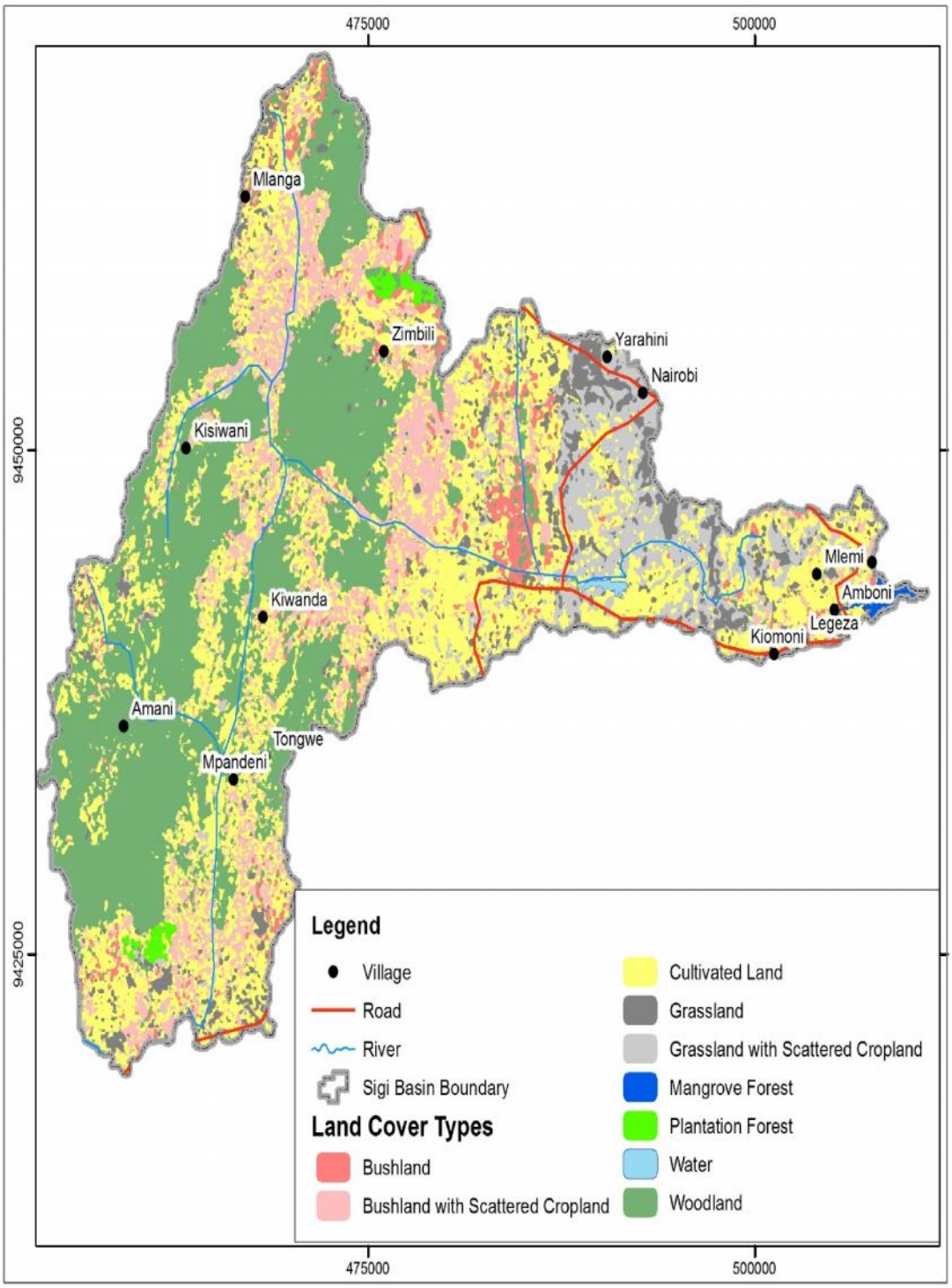
Wami-Ruvu Basin, showing the Ruvu Sub-basin (circled), the main Ruvu catchment and its two main tributaries (the Mgeta and the Ngerengere)



(Source: Wami-Ruvu Basin Water Office)

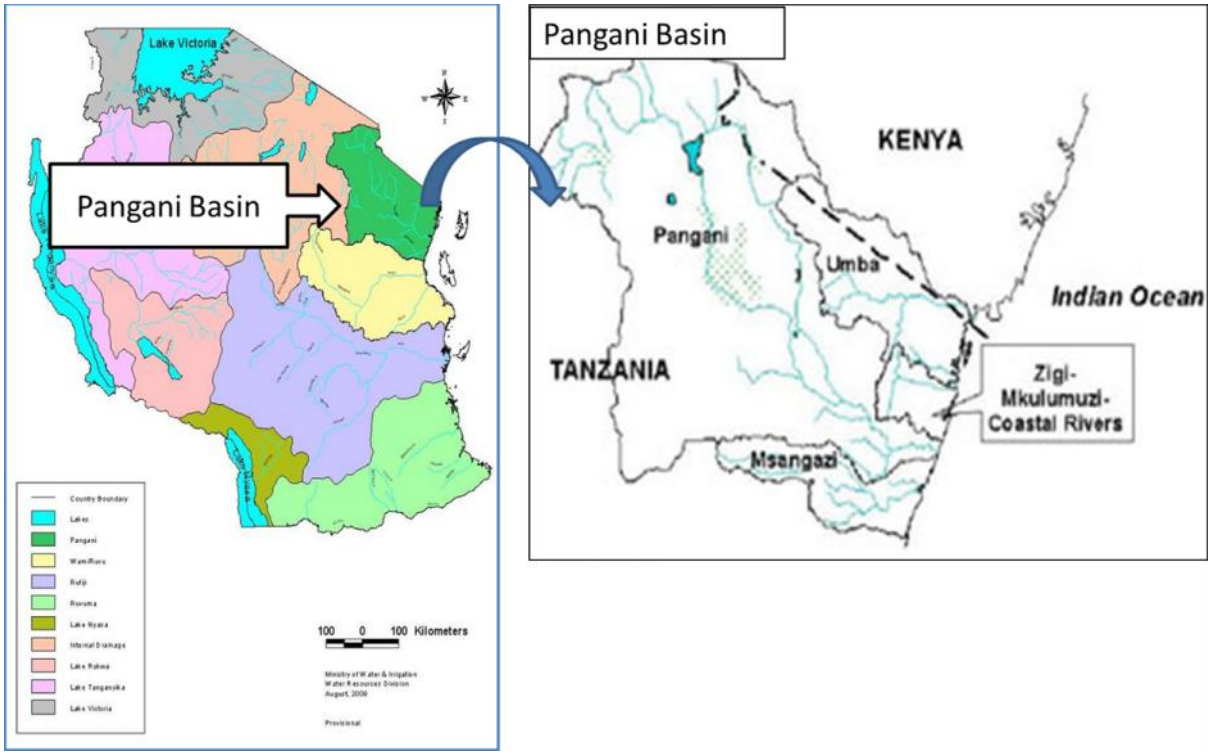


Map 5a:The Zigi River Catchment, showing land use cover change 2010/4

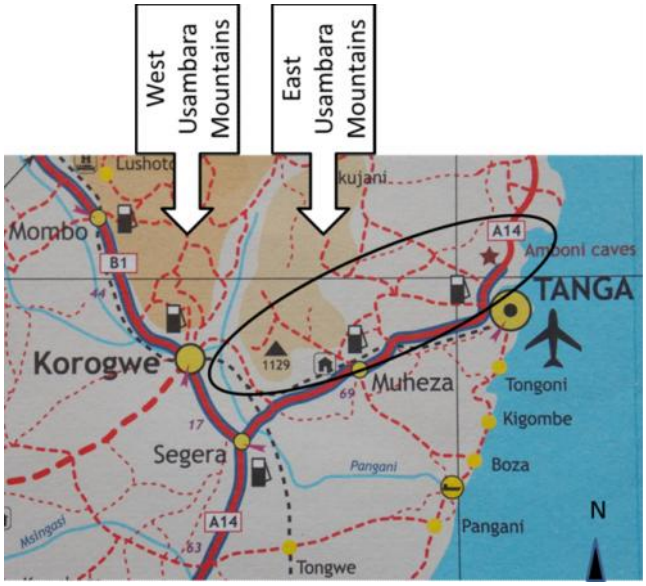


Source: : Institute of Resources Assesment, 2014- supplied by Dr Riziki Shemdoe (Ardhi University)

Map 5 B: The Pangani Basin, showing the location of the Zigi-Mkulumuzi Rivers



(Source: Pangani Basin Water Office and WRBWO)



PART III: STAKEHOLDER INVOLVEMENT PLAN

1.Stakeholder identification

During the project preparation stage, a stakeholder analysis was undertaken in order to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in project implementation (See Table 3 in main body of ProDoc).

The Ministry of Water (MOW), and its regional counterparts (the Water Basin Offices), will be the main institutions responsible for different aspects of project implementation. In doing so, it will work in close cooperation with other responsible parties including the National Land Use Planning Commission and other line Ministries (Ministry of Natural Resources and Tourism, Ministry of Agriculture, Food and Co-operatives, Ministry of Lands and Human Settlement Development), Tanga-UWASA, DAWASA and DAWASCO.

2. Information dissemination, consultation, and similar activities that took place during the Project Preparation Grant (PPG)

Throughout the project's development, close contact was maintained with stakeholders at the national and local levels, as follows:

(i) ***The Project Reference Group***: All affected national and local government institutions were directly involved in project development through the agency of the Project Reference Group (RG), which was made up of representatives from key agencies involved in watershed management, including: MOW, National Land use Planning Commission (NLUPC); Wami-Ravu Basin Water Office (WRBWO), Pangani Basin Water Office (PBWO), Tanga Urban Water and Sanitation Authority (Tanga-UWASA); Dar es Salam Water and Sanitation Authority (DAWASA); Dar es Salam Water and Sanitation Company (DAWASCO); Division of Environment (DoE) and Prime Ministers' Office Regional Administration and Local Government (PMO-RALG). The Project Reference Group participated directly in site visits during the missions undertaken by the Project Development Consultant, contributed to data collection and made direct inputs to the development of the project documentation. They provided a direct channel through which progress could be reported to key stakeholder institutions and through which the institutions could make input to the project formulation process. The Project Reference Group convened at the inception of the project formulation process, during each of the missions undertaken by the Project Development Consultant and between the second mission and the validation process in order to review and provide inputs on the draft Strategic Results Framework.

(ii) ***High-level consultations***: At the national level, consultations were held in Dar es Salaam with the senior management of the MOW, the Vice President's Office (Directorate for Environment), the National Land Use Planning Commission and the UNDP Country Office. These meetings were designed to seek clarification as well as confirmation of government commitments, particularly related to co-financing of the project.

(ii) ***Field visits and stakeholder consultations***: A series of site visits and consultative meetings were conducted in each catchment. The purpose of the field visits was to: observe environmental impacts and socio-economic conditions in the catchments; identify key challenges that the project could address and activities through which this could be done; identify the best sites for project implementation: and consult with regional (Regional Administrative Secretary) and district authorities, community leaders and associations and community members to gain their insights and inputs.

(iii) ***One-on-one consultations***: Selected NGOs who are implementing related projects in the target

areas including Tanzania Forest Conservation Group (TFCG), CARE, Sustainable Agriculture Tanzania (SAT) and WWF) were engaged via email and Skype in order to understand the scope of their projects and explore possibilities for synergy (including co-financing) and to gain their insights and inputs.

(iv) ***A consolidated stakeholder workshop:*** This was convened in Dar es Salaam, in order to:

- Provide information to stakeholders about the project, including a description of the Objective, Outcomes and intended Outputs
- Give key stakeholders the opportunity to seek clarity, raise concerns and identify issues that the project should address or opportunities upon which it could build
- Capture lessons learnt from related projects that have already been implemented in the target areas by both government institutions and NGOs
- Involve stakeholders actively in the development of relevant project activities.

Workshop participants included: the Permanent Secretary in the Ministry of Water, the Director of Water Resources, members of the Project Development Team (including UNDP and the Project Development Consultant,) and approximately 60 stakeholders representing some 28 institutions (both government and civil society organisations). Institutions represented included: the Vice President's Office (DoE and PLRO); the (MOW) Ministry of Water; The Ministry of Minerals, Energy and Mining (MEM); The Ministry of Lands and Human Settlement (MLHS); The National Land Use Planning Commission (NLUPC); the Ministry of Agriculture, Food Security and Co-operatives (MAFC) ; the Ministry of Livestock and Fisheries Development (MLFD); the Prime Minister's Office- Regional and Local Government (PMO-RALG); Morogoro DC; Mvomero DC; Muheza DC; Mkinga DC; The Tanzania Forestry Service (TFS); Amani Nature Reserve; Uluguru Nature Reserve; Office of the Pangani Basin Water Board (PBWB); Office of the Wami-Ruvu Basin Water Board (WRBDW); Tanga-UWASA, DAWASCO, DAWASA; Tanzania Forestry Research Institute (TAFORI), EAMCEF, TFCG, SAT,WWF; Zigi-Mkulumuzi WUA; Uwamakizi community association. Apologies were received from CARE International-TZ.A full attendance register is available upon request.

(v) ***Circulation of documentation***: The draft documentation wascirculated at all key stages for review by the stakeholder institutions, through the medium of the Reference Group. The final draft of the ProDoc was circulated more widely amongst other stakeholders so that they could provide the necessary comments on the accuracy, adequacy and practicability of the proposed interventions.

3. Stakeholder Involvement Plan

Approach: The approach to stakeholder involvement and participation during project implementation is premised on the principles of inclusivity, accessibility and access, transparency, fairness and accountability. The stakeholder engagement process will be used as an essential means of adding value to the project and will be directed towards addressing stakeholder needs and building their capacity. The Project will seek at all times to promote public interest, manage conflict and promote equity and social justice. Although the stakeholder engagement process will be rationally planned and well-coordinated, it will be implemented flexibly and subject to ongoing reflection, adjustment and improvement in order to respond to emergent needs.

Process: The project's design incorporates several features to ensure ongoing and effective stakeholder participation in the project's implementation, including at least the following elements:

(i) <u>Project inception workshop to enable stakeholder awareness of the start of project implementation</u>

At project inception, the PCU will convene a stakeholder workshop at which representatives of the key partner institutions will meet to address a number of key issues including: stakeholder ownership of the project; roles, support services and complementary responsibilities of the implementing

partners; roles, functions, and responsibilities within the project structure, including reporting and communication lines, and conflict resolution mechanisms. The Workshop will also be a forum to: finalize the first annual work plan as well as review and agree on the indicators, targets and their means of verification, and re-check assumptions and risks; provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements; and plan and schedule project meetings for the Project Steering Committee.The Project will then be publicly launched at a multi-stakeholder Launch Eventthat will provide an opportunity to provide all stakeholders with the most updated information on the project and the project work plan. It will also establish a basis for further consultation as the project's implementation commences.

(ii) Constitution of a Project Steering Committee to ensure representation of stakeholder interests in project

A Project Steering Committee (PSC) will be constituted to ensure broad representation of all key interests throughout the project's implementation. The representation, and broad terms of reference, of the PSC are further described in Section I, Part III (Management Arrangements) of the Project Document.

(iii) Establishment of a Project Co-ordination Unit to oversee stakeholder engagement processes during project

The Project Co-ordination Unit- comprising a Project Coordinator, Project Administrator/Financial Officer and part-time M&E Specialist - will take direct operational and administrative responsibility for facilitating stakeholder involvement and ensuring increased local ownership of the project and its results. The Project Coordinator and Project Administrator will be located close to, or in, the MOW offices in Dar es Salaam to ensure coordination among key stakeholder organizations at the national level during the project period.

(iv)Involvement of a Technical Team:

The Technical Panel will replace the former Project Reference Group. They will provide ongoing technical inputs and guidance during the implementation of the project and will provide for direct lines of communication with the partner institutions. They will assist the PCU by providing access to information held by the member institutions and advise the PCU, where appropriate, in respect of stakeholder engagement and keep them informed of emergent issues in the two river catchments.

(iv) Project communications to facilitate ongoing awareness of project

The project will develop, implement and maintain a communications strategy to ensure that all stakeholders are informed on an ongoing basis about: the project's objectives; the projects activities; overall project progress; and the opportunities for involvement in various aspects of the project's implementation. This strategy will ensure the use of communication techniques and approaches that appropriate to the local contexts such as appropriate languages and other skills that enhance communication effectiveness.

(v) Stakeholder consultation and participation in project implementation

A comprehensive stakeholder consultation and participation process will be developed and implemented for each of the following activities:

- Negotiation and formalization of agreement Memorandum of Understanding (MOU) between the MOW and other responsible parties (such as the National Land Use Planning Commission and the relevant Water Supply and Sanitation Authorities
- Involvement of local communities inland use planning
- Formation of Catchment/sub-catchment committees, river committees and Water User Associations

- Identification and piloting of alternative income-generating activities in targeted villages

A participatory approach will be adopted to facilitate the continued involvement of local stakeholders including the vulnerable and marginalized members of the community (including women) and institutions (such as NGOs and CSOs) in the implementation of the project activities within the targeted areas. Wherever possible, opportunities will be created to train and employ local residents from villages within, or adjacent to, the targeted FNRs

(vi) Capacity building

All project activities are strategically focused on building capacity - at the systemic, institutional and individual level to ensure sustainability of initial project investments. The project will also invest in building the capacity of executive management staff, planning staff and operational management staff. Wherever possible, the project will also seek to build the capacity of communities (e.g. local community groups and vulnerable and marginalized segments) to enable them to actively participate in project activities.

4. Coordination with other related initiatives

The project will work closely in partnership with NGOs, CSOs, development partners and other agencies to ensure complementarity of its activities with the numerous other related projects and programmes currently underway in Tanzania. The experiences learnt from previously implemented projects, such as theUNDP/GEF-funded Conservation and Management of Eastern Arc Mountain Forests will directly guide the achievement of project goals and the implementation of the project activitiesWherever practicable, the project will share capacity and resources with other projects (e.g. NGOs/CSOs) in the implementation of complementary project activities such as those targeting Payment for Ecosystem Services, Reduced Emissions from Deforestation and Forest Degradation as well as initiatives aimed at improving the socio-economic and livelihood wellbeing of forest adjacent communities in the Ruvu and Zigi catchments, and surrounding areas.

The project will liaise closely with key institutionsto explore further opportunities for co-financing pilot and possibly incremental activities. The project will, as required, use the capacity and resources of UNDP and the Vice President's Office to facilitate the regional sharing of lessons learnt from, and best practices developed in, project implementation.

Part IV: Letters of Co-Financing Commitment

(Letters appended as separate files)

Table summarising co-finance commitments

No.	Institution	Amount
1	Ministry of Water	US$ 13 million
2	Tanga-UWASA	US$ 6,5 million
3	UNDP	US$ 2 million
4	National Land Use Planning Commission	US$ 2,5 million
5	DAWASA	under negotiation
TOTAL COMMITTED (as per letters)		US$ 22 million
TOTAL REQUIRED (from PIF)		US $ 15 million

Part V: Land Degradation Scorecard; Capacity Development Scorecard

Full Land Degradation Scorecard appended separately.

Table 5.1 Summary of Capacity Development Scorecard scores

(Full scorecard appended as a separate file)

Capacity Results (CR) Area	Project Score	Total possible score	%
CR 1: Capacity for engagement (measured by mandate and legitimacy of institutions, existence of co-operative management mechanisms and strength of stakeholder linkages)	1	3	33%
CR2: Capacity to generate, access and use knowledge	5	15	33%
CR 4: Capacity for management and implementation	2	6	33%
Average systemic capacity	8	24	33%

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