

## 1 SECTION 1: PROJECT IDENTIFICATION

- 1.1 Project title:** Enhancing Integrated Natural Resource Management to Arrest and Reverse Current Trends in Biodiversity Loss and Land Degradation for Increased Ecosystem Services in the Tana Delta, Kenya
- 1.2 Project number:** GFL: 9526  
PMS: 1383
- 1.3 Project type:** FSP (Full Sized Project)
- 1.4 Trust Fund:** GEF
- 1.5 Strategic objectives:**  
GEF strategic long-term objective: BD-4 Program 9; CCM-2 Program 4; LD-2 Program 3; LD-3 Program 4; SFM  
Strategic programme for GEF VI: The Restoration Initiative (TRI)
- 1.6 UN Environment priority:** Ecosystem Management  
SP3: EAa (i,iii) and EAb (i,ii)  
2018-2019 PoW and the 2018-2021 MTS.
- 1.7 Geographical scope:** National: Kenya
- 1.8 Mode of execution:** External
- 1.9 Project executing organization:** Nature Kenya
- 1.10 Duration of project:** 60 months;  
Commencing: June 2018  
Technical completion: June 2023

### 1.11. Cost of project

	US\$	%
<b>Cost to the GEF Trust Fund</b>	<b>3,345,413</b>	<b>8.4</b>
<b>Co-financing</b>		
<i>Cash:</i>		
Kenya Forest Service	5,000,000	12.5
National Environment Management Authority (NEMA)	650,000	1.6
Lamu County Government	3,495,000	8.8
Tana River County Government	16,116,667	40.4
Nature Kenya	2,000,000	5.0
World Resources Institute (WRI)	500,000	1.3
<b>Sub-total</b>	<b>27,761,667</b>	<b>69.6</b>
<i>In-kind:</i>		
Kenya Wildlife Service	5,000,000	12.5
Lamu County Government	700,000	1.8
National Environment Management Authority (NEMA)	200,000	0.5
Tana River County Government	770,000	1.9
State Department of Environment	500,000	1.3
State Department of Natural Resources	1,595,000	4.0
<b>Sub-total</b>	<b>8,765,000</b>	<b>22.0</b>
<b>Co-Financing Total</b>	<b>36,526,667</b>	<b>91.6</b>
<b>GRAND TOTAL</b>	<b>39,872,080</b>	<b>100</b>

## 1.1 Project summary

This Project is part of The Restoration Initiative (TRI) Program which has been developed to make a significant global contribution to restoring ecosystem functioning and improving livelihoods through the restoration of priority degraded and deforested landscapes, in support of the Bonn Challenge. The TRI program consists of 11 national Child projects in 10 countries in Africa and Asia, and it is supported by a Global Learning, Financing, and Partnerships project (GCP) to develop and disseminate best-practices and tools, catalyze investment in restoration, expand the scope of countries and actors engaged in forest and landscape restoration, and realize benefits at scale. The Kenya Tana Delta project is one of the TRI national Child projects. The project rationale is based on the premise that much of the land degradation that is occurring in Kenya is due to unsustainable management of resources and the ever-increasing demand for these resources by communities. This has resulted in the degradation of not only productive landscapes but natural ecosystems as well. In order to break this cycle of improper management and continued degradation, sustainable management of natural resources needs to be mainstreamed across resource users and policy makers.

The objective of this project is to strengthen integrated natural resource management and restoration of degraded landscapes in the Tana Delta, and systemically scale up best practices and lessons learned to other priority landscapes in Kenya. The project objectives will be achieved by implementing a four-part strategy to develop a suitable enabling environment for landscape restoration to take place, and support the implementation of restoration plans and scale up best practices to ensure long-term sustainability of ecosystems. The strategy includes:

- Improving the enabling environment for sustainable land management and restoration to take place;
- Supporting local governments and communities to develop and implement plans for achieving human and environmental goals;
- Building capacity of these actors to carry out restoration plans and access finance;
- Enhancing stakeholder knowledge and scale up best practices through the development of comprehensive restoration monitoring systems.

The project activities will be implemented through five components: **Component 1.** Policy development and integration; **Component 2.** Restoration programmes and complementary initiatives; **Component 3.** Institutions and finance; **Component 4.** Scaling-up best practices and tools; and **Component 5.** Monitoring, evaluation and dissemination of project information.

Expected outcomes of the project include the following: Increased county commitment to landscape restoration; Policy, governance, and regulatory frameworks support coordinated and equitable landscape restoration and sustainable land management efforts; Improved landscape management through implementation of landscape restoration plans and integrated landscape management practices (At least 130,000 ha of land is under sustainable livestock, fish and crop management, and 10,000 ha of degraded landscapes are in the process of restoration); 95,000 ha indigenous community conservation areas (ICCAs) in the Tana Delta are being managed for multiple-use to benefit globally-important biodiversity and aligned with restoration targets; Increased private, public and local investment in large-scale landscape restoration through identification and development of sustainable value chains and financing mechanisms (At least two projects are being funded through new sources of sustainable financing in the Tana Delta); Strengthened institutional capacities facilitating large-scale landscape restoration; Scaled up restoration best practices are enabling men and women across sectors to implement landscape restoration and sustainable landscape management approaches; Monitoring and evaluation systems adopted to support adaptive management of landscape restoration interventions and strategies; and Project implementation based on Results Based Management and lessons learned/good practices documented and disseminated.

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- Annex 16:** The EX-ANTE Carbon Balance Tool (EXACT)

## ACRONYMS AND ABBREVIATIONS

ALAP	African Landscapes Action Plan
APR	Annual Project Review
ARLI	African Resilient Landscapes Initiative
AMCEN	African Ministerial Council on the Environment
AMCOW	African Ministerial Council on Water
AFRI100	African Forest Landscape Restoration Initiative
AU	African Union
CBD	Convention on Biodiversity
CBO	Community Based Organisation
CCM	Climate Change Mitigation
CDA	Coast Development Authority
CFA	Community Forest Associations
CIDP	County Integrated Development Plan
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CSA	Climate Smart Agriculture
CSO	Civil Society Organisation
DANIDA	Danish International Development Agency
DEPI	Division of Environmental Policy Implementation (UN Environment)
DFID-UKAid	United Kingdom Aid
EAC	East Africa Community
EANHS	East Africa Nature History Society (The Nature Kenya)
EFA	Environmental Flow Assessments
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Co-ordination Act
EU	European Union
FAO	Food and Agriculture Organisation
FLR	Forest Landscape Restoration
GCP	Global Learning, Financing, and Partnerships project
GEF	Global Environment Facility
GPFLR	Global Programme Forest Landscape Restoration
ICCA	Indigenous Community Conservation Area
ICZM	Integrated Coastal Zone Management
ICRAF	International Center for Research in AgroForestry
IBA	Important Bird Area
INRM	Integrated Natural Resources Management
IUCN	International Union for Conservation of Nature
IMTC	Inter-Ministerial Technical Committee
IW	Inception Workshop
KBA	Key Biodiversity Area
KCDP	Kenya Coastal Development Project
KEFRI	Kenya Forest Research Institute
KFS	Kenya Forest Service
KMFRI	Kenya Marine and Fisheries Research Institute
KWS	Kenya Wildlife Service
LAPSSET	Lamu Port-South Sudan-Ethiopia Transport
LBSA	Land Based Sources and Activities
LD	Land Degradation
LDBA	Biodiversity and Land Degradation
LUP	Land Use Plan
MCA	Members of County Assemblies
M&E	Monitoring and Evaluation

MEA	Multi-lateral Environmental Agreement
MENR	Ministry of Environment and Natural Resources
MTR	Medium Term Review
MOA	Ministry of Agriculture
MOL	Ministry of Lands
MOWI	Ministry of Water and Irrigation
MNPD & V2030	Ministry for Planning, National Development and Vision 2030
NBSAPS	National Biodiversity Strategic Action Plans
NDC	Nationally Determined Contribution
NEC	National Environment Council
NEMA	National Environment Management Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
NFLRC	National Forest Landscape Restoration Committee
NMK	National Museums of Kenya
PCU	Project Coordination Unit
PFD	Programme Framework Document
PIR	Project Implementation Review
PSC	Project Steering Committee
SAP	Strategic Action Programme
SDGs	Sustainable Development Goals
SFM	Sustainable Forest Management
SEA	Strategic Environmental Assessment
SLM	Sustainable Land Management
RAMSAR	The Convention on Wetlands of International Importance
ROA	Regional Office for Africa (UN Environment)
ROAM	Restoration Opportunity Assessment Methodology
REDD	Reducing Emissions from Deforestation and Forest Degradation
REIAs	Regional Economic Integration Agreements
RSBP	Royal Society for the Protection of Birds
TA	Technical Assistance
TAC	Technical Advisory Committee
TARDA	Tana and Athi Rivers Development Authority
TDCN	Tana Delta Conservation Network
TRNPR	Tana River National Primate Reserve
TRI	The Restoration Initiative
TPAC	Tana Planning Advisory Committee
TSDB	Tana Delta Sustainable Development Board
UNFCCC	United Nations Framework Convention on Climate Change
UNCSD	United Nations Convention on Sustainable Development
UNEP	United Nations Environment Programme
UNON	United Nations Office in Nairobi
WARMA	Water Resources Management Authority
WIO	Western Indian Ocean
WIOMSA	Western Indian Ocean Marine Science Association
WIOSAP	Western Indian Ocean Strategic Action Programme for LBSA
WRI	World Resources Institute
WRUA	Water Resources Users Associations
WWF	World Wildlife Fund
VNRC	Village Natural Resource Committees

## SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

### 2.1. Background and context

1. The Tana Delta is located in the coastal region of Kenya at the end of Kenya's longest and largest river; the Tana River (Figure 1). Approximately 90% of the delta lies in Tana River County and about 10% lies in Lamu County. The delta covers a surface area of over 100,000 hectares (or 225,000 ha, including the adjacent terraces) with a population of about 102,000 people. The delta is an Important Bird Area (IBA, Annex 2); a Ramsar Site; a Key Biodiversity Area (KBA); a Global Biodiversity Hotspot; and part of the Coastal Forests of Eastern Africa Hotspot. The natural resources of the delta include its soils, vegetation, and wildlife on which many economic activities are based. A rich mosaic of habitats found in the delta include riverine forests, oxbow lakes, lakes, swamps, open water, river channels, mangrove forests and grassland (Figures 1 and 2). All of these habitats depend on the continuing flow of the Tana River.

2. The main issues affecting the Tana Delta include : (i) influx of large scale mono-agriculture investors to the delta, (ii) changes in the hydrology and river discharge<sup>1</sup>, (iii) deforestation for agriculture expansion and overgrazing leading to the alteration and degradation of the ecosystems and habitats, (iv) resource use conflicts from rapid population growth and increased settlements , (v) increasing human-wildlife conflicts, (vi) unfair decision-making processes, (vii) evolving upstream activities, (viii) population dynamics, (ix) climate change and variability, (x) proposed developments on the coast, and (xi) socio-cultural influences. Other important issues include (i) high poverty levels, (ii) unexploited potential, (iii) lack of enabling infrastructure and services, (iii) expansion and intensification of agriculture, (iv) weak legal and institutional frameworks and multiple and competing policies, institutions and legislation, (v) climate change, (vi) safeguarding environmental flow reserve and (vii) biodiversity loss, among others (for more details please refer to Annex 5). The multi-purpose dams constructed in the upper Tana Basin have altered the flow of the Tana River and reduced sediment load to the Lower Tana<sup>2,3</sup>. This has led to the alteration and modification of both aquatic and terrestrial ecosystems including landscapes and forests within the delta. The political and social conditions in the Tana Delta have been volatile for some decades due to different lifestyles, culture and livelihood requirements of two main communities which are based on sedentary farming and migratory livestock rearing. Inter-ethnic conflicts have occurred as a result of a combination of several factors including rapid population growth and expansion, increase in size of livestock herds, reduced river discharge (stream flow), lack of alternative livelihoods, the onset of climate change, and new administrative structures<sup>4</sup>. There is also increasing human-wildlife conflicts caused by expansion of human settlements within the migration corridors of elephants, buffalos and other large mammals in the Tana Delta (Annex 1). Without consistent efforts focused on the restoration of degraded landscapes and forests, including implementation of integrated natural resources management, wildlife cannot be accommodated within the Tana Delta. The competition for scarce natural resources is set to increase in the short-term unless there is implementation of landscape restoration measures including an introduction of agreed standards for land use planning and integrated management of natural resources within the delta.

3. The Tana Delta has been considered as a largely undeveloped area suitable for agricultural development using water from the Tana River; and several large irrigation schemes have since been established in the delta. Within the last decade a new threat to the delta has emerged through widespread international interest in the exploitation of its resources for biofuels and food export schemes.

4. The communities found in the Tana Delta have a Low Human Development Index score of 0.509 and high poverty level of 76.9% which is above the national average of 45.9%<sup>5</sup>. A high proportion of the population in Tana River and Lamu Counties therefore lives below the poverty line with with limited socio-economic opportunities (Annex 7). This has led to high dependence on natural resources as the main source of livelihoods, and when combined with a lack of livelihood alternatives, has resulted in local communities over-exploiting natural resources and using destructive harvesting practices which degrade the ecosystems within the delta. As a result, there are now large areas of degraded and deforested landscapes within the delta.



5. There is also increasing pressure from the rapidly growing population (2.67% growth rate per annum). The rapid population growth and expansion is already stressing the Tana River Delta ecosystems through increased exploitation of natural resources, overgrazing by livestock, increased extraction of freshwater, discharge of wastewaters/effluents, and destruction of habitats from settlement and agriculture expansion. Rising population within the delta and increasing competition for its limited water, land and forests have led to increased tensions between different community groups, which have in the recent past led to inter-ethnic conflicts (Annex 9, Tables 1-30). The expansion of agriculture and urban areas is also leading to changes in key ecosystems and habitats in the Delta and by the year 2050 major changes are expected to have occurred (Annex 8).

6. Within the Tana River Delta, anthropogenic stresses are increasing, causing damage to the integrity of the ecological systems. The increasing threats arising from various development projects such as large-scale irrigation agriculture, upstream damming for hydro-electric power generation, livestock grazing, water abstraction for rural and urban development, among others, mean that the Tana River Delta will continue to be degraded to the point where it will cease to provide essential goods and services. This will have severe consequences at county, regional, national, and global levels.

7. The current conservation initiatives in the Delta are limited and are largely insufficient to effect significant reversal of the degradation of the landscapes and forests. This project aims to make significant contributions to restoring ecosystem function to the Tana Delta and improving livelihoods through restoration of priority degraded and deforested landscapes. Strengthened policy and regulatory frameworks, building the capacity for landscape restoration and provision of alternative livelihood systems to the local communities are required to reverse degradation of the Delta and conserve biodiversity. These changes will result in local environmental benefits in the Tana Delta, and more broadly in Kenya and the world.

8. The proposed Tana Delta landscape restoration project will promote sustainable development within the delta in Tana River and Lamu Counties. The project will contribute to enhancing the conservation of key ecosystems in the delta, particularly tropical forests, riverine forest, flood plain grassland, mangrove forests, sand dunes, thickets and water bodies (oxbow lakes, rivers and estuaries)<sup>6</sup>. These diverse habitats and their biodiversity support local, county and national economies in Kenya through tourism, production of agricultural crops, and fisheries production, among others.

## 2.2. Global significance

9. The Tana River Delta is a Key Biodiversity Area (KBA) and a Global Biodiversity Hotspot, and is also part of the Coastal Forests of Eastern Africa Hotspot. The natural resources of the Tana Delta include its soils, vegetation and wildlife on which many economic activities are based. A rich mosaic of habitats makes up the delta, including riverine forests, oxbow lakes, swamps, river channels, mangrove forests and grasslands. These habitats depend on the continuing flow and flooding cycles of the Tana River. In recent decades, the populations of some large mammals such as elephants, buffalo, giraffe, waterbuck and zebra have declined due to increased competition over grazing land with livestock, the spread of human settlements into traditional migratory routes from Tsavo East National Park and the North-Eastern rangelands to the delta. Habitat loss has also resulted in a decline in hippopotamus populations. The

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<sup>1</sup>Maingi J. K., and Marsh S. E. (2002). Quantifying hydrologic impacts following dam construction along the Tana River, Kenya. *Journal of Arid Environments* 50: 53-79. doi:10.1006/jare.2000.0860 <http://www.units.miamioh.edu/geography/wp-content/uploads/quantifying-hydrologic-impacts.pdf>

<sup>2</sup>Kitheka, J.U., Mavuti, K.M., Nthenge, P. and Obiero, M.(2014). The Dynamics of the Turbidity Maximum zone in a Tropical Sabaki Estuary in Kenya. *J. Environ. Sci. Water Resour.* 3(4): 086-103.

<sup>3</sup> Kitheka, J.U and K. M. Mavuti (2016): Tana Delta and Sabaki Estuaries of Kenya: Freshwater and Sediment Input, Upstream Threats and Management Challenges. In: *Estuaries: A Lifeline of Ecosystem Services in the Western Indian Ocean*. Springer International Publishing Switzerland 2016 Springer, p.89-111.

<sup>4</sup>Odhengo P. Matiku P., Nyangena J., Wahome K., Opaa B., Munguti S., Koyier G., Nelson P and Mnyamwezi E., (2014a). Tana River Delta Strategic Environmental Assessment. Published by Tana River and Lamu County Governments.

<sup>5</sup> Kenya Inter-Agency Rapid Assessment (2014): Tana River Secondary Data Review as at 2014.

<sup>6</sup>Government of Kenya (2009). State of the Coast Report.Towards Integrated Management of Coastal and MarineResources in Kenya. National Environment ManagementAuthority (NEMA), Nairobi. pp 88



populations of the rare and most iconic of the Delta's wildlife – the Red Colobus and Crested mangabey monkeys that live in dense riverine forest<sup>7</sup> – is stable but the forest habitat is under constant threat from deforestation.

10. The Tana Delta provides vital ecosystem services to a much wider area than the delta itself, due to its retention of water in wetlands during the dry seasons and the availability of grazing for both wildlife and domesticated animals (Annex 3). Large herbivores have used fixed migratory routes between Tsavo East National Park and other areas of North East Kenya for centuries (Annex 1). The migrations take place twice per year and are of great importance for preserving elephant and antelope populations across the entire region. The wildlife migration routes are also used by pastoralists when herding cattle between the delta and wet season grazing areas<sup>8</sup>. In addition to the established migratory routes, land lying between separated blocks of riverine forest and other habitats within the delta serves a similar function in allowing mobile species, like primates and birds, to travel to and from different areas. Conversion of these areas from forest, thicket, scrub or grassland to permanent agriculture increases the isolation of remote habitats and increases the pressure on the survival of rare species.

11. The Tana Delta ecosystem is an Important Bird Area (IBA) and the delta was recently designated as a Ramsar site. At least 345 species of birds have been recorded at the Delta<sup>9</sup> (Annex2). These include five globally threatened and four regionally threatened bird species. More than 22 species of wetland birds gather in the delta in numbers which are of international significance, and there are a number of large colonies of water birds such as egrets, herons and ibis. Surveys taken in 2008 and 2010 recorded large numbers of gregarious water birds including four globally endangered bird species, two listed as vulnerable and seven as near-threatened.



<sup>7</sup>Hamerlynck, O., Luke, Q., Nyange, T.M., Duvail, S. and Leauthaud, C (2012). Range Extension, Imminent Threats and Conservation Options for Two Endangered Primates: The Tana River Red Colobus *Procolobus rufomitratus rufomitratus* (Peters, 1879) and the Tana River Mangabey *Cercocebus galeritus* (Peters, 1879) in the Lower Tana Floodplain and Delta, Kenya. *African Primates* 7 (2): 211-217.

<sup>8</sup>Hamerlynck, O., Nyunja J., Luke, Q., Nyangi, D., Lebrun, D. and Duvail, S. (2010). The communal forest wetland, rangeland and agricultural landscape mosaics of the lower Tana, Kenya: A socio-ecological entity in peril. In Belair, C., Ichikawa, K., Wong,

<sup>9</sup>Bennun, L. and Njoroge, P. (1999). Important Bird Areas in Kenya. East Africa Natural History Society.

Figure 1a: Tana Delta

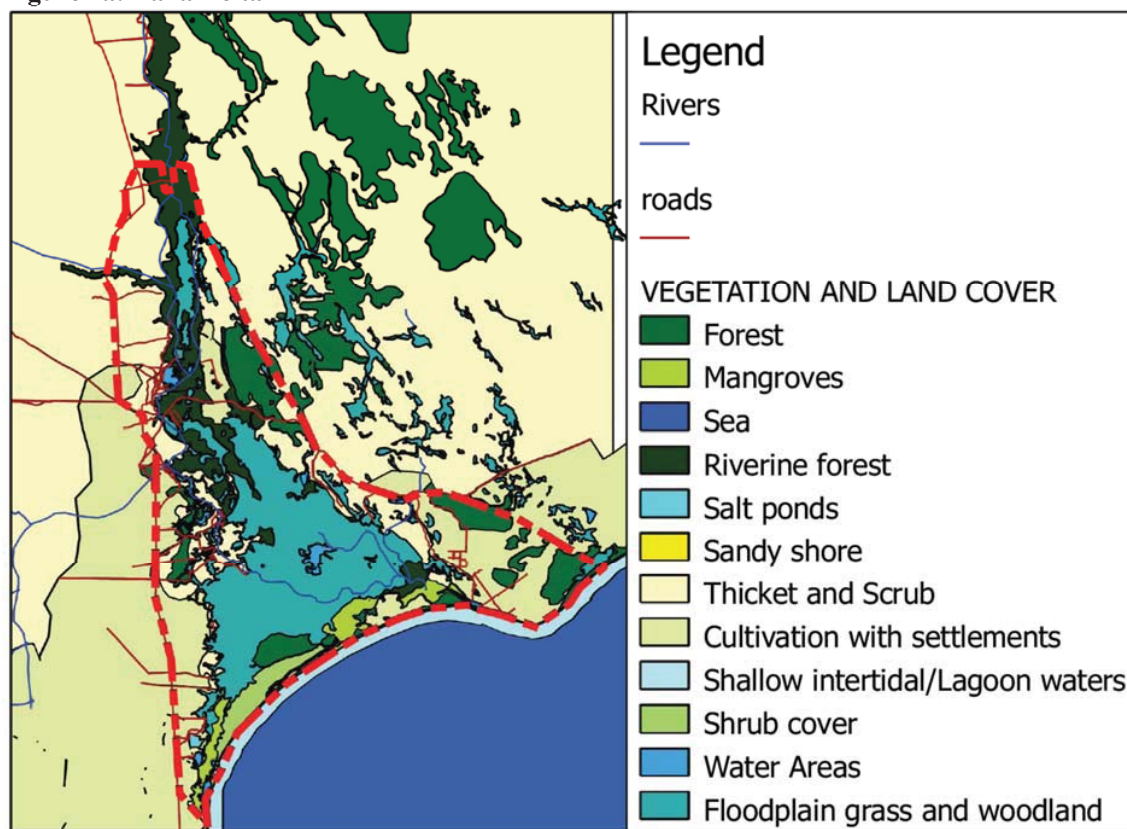


Figure 1b: T the key ecosystems found in the Tana Delta

12. Other wildlife of conservation concern in the Tana Delta include the threatened, range-restricted East African coast subspecies of the Topi, and the marine species *Dugong dugong* (globally categorized as vulnerable but regionally as critically endangered) and turtles nesting on the sandy beaches along the coast of the delta. The rivers and the delta channels support large numbers of hippos and crocodiles. Twenty-two freshwater fish species have been recorded from the lower Tana, including three eels. The mangrove forests provide vitally important spawning and nursery grounds for many species of fish and crustaceans. The extensive mangrove forests include the only significant stands in Kenya of the plant *Heritiera littoralis*<sup>10</sup>.

13. The Tana Delta has high plant diversity. There are 320 plant taxa in the Lower Tana River; 58 of them tree species, of which two are considered Critically Endangered globally. Twenty-one percent of the plants are of conservation concern, and the area is home to seven plants on the IUCN Red List of Threatened Species. The discovery of several trees of *Cassipourea gummiflua* in 2005 was only the second time this species has been recorded in coastal Kenya and possibly only the third time in Kenya<sup>11</sup>. Three shark species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix 1 have been recorded in the Tana Delta. The sharks enter estuaries occasionally, and their populations are greatly impacted by habitat degradation<sup>12</sup>. A further two fish species in the Delta are Red-listed as data deficient. Three important amphibians include the endemic Tana River caecilian, *Boulengerula denhardtii* and the near endemic mud-dwelling caecilian *Schistometopum gregorii*. Reptiles in the Delta include the near-endemic Tana writhing skink *Lygosoma tanae* and the Ngatana or mabuya-like writhing skink *Lygosoma mabuiiformis*<sup>13</sup>.

<sup>10</sup>Bennun, L. and Njoroge, P. (1999). Important Bird Areas in Kenya. East Africa Natural History Society.

<sup>11</sup>Luke, Q., Hatfield, R. and Cunneyworth, P. (2005). Rehabilitation of the Tana Delta Irrigation Project Kenya. An Environmental Assessment. A report compiled for Critical Ecosystem Partnership Fund [http://www.cepf.net/Documents/Final.TDIP\\_Environmental\\_Assessment.pdf](http://www.cepf.net/Documents/Final.TDIP_Environmental_Assessment.pdf)

<sup>12</sup> Nyingi et al, (2007)

<sup>13</sup> Malonza et al., (2006)

14. Tana River forests are composed of riparian forest patches maintained by underground water from the Tana River in a broad floodplain, with a width ranging from 1 to 6 km<sup>14</sup>. There are about 71 distinct forests patches, ranging in size from 1 to 1,100 ha and covering about 3,700 ha in total. The riverine forests are found on both banks of the river. Of the 71 forest patches, 16 forest patches covering 1,000 ha fall within the 17,100 ha Tana River Primate National Reserve<sup>15</sup>, which is an important habitat for the endangered Red Colobus and Crested mangabey monkeys (Figure 2).

15. Tana River forest patches are important bird habitats (Annex 2). At least 200 bird species have been recorded in the forest patches and surrounding areas. Notable bird species in the forest patches include the endangered Basra Reed Warbler and five near threatened species including Southern Banded Snake Eagle, Fischer's Turaco, East Coast Akalat, Plain-backed Sunbird and Malindi Pipit. Tana River Forests provide the only remaining habitat for two endangered primates, the Red Colobus and the Crested mangabeys<sup>16</sup>. The populations of these species have decreased considerably in recent years and both are among the 25 most endangered primates in the world. The restoration of degraded landscapes and deforested forests in the Delta will play an important role in safeguarding bird habits.

16. Tana River forests also have a high diversity of amphibians and fish. The Lower Tana riverine forests are unique in Kenya, being remnants of continental forests resembling western African vegetation communities. Up to 175 woody plant species belonging to 48 families have been recorded in 12 forests patches within Tana River National Primate Reserve (TRNPR). Due to long geographic isolation of this forest community from the rain forests of Central Africa<sup>17</sup> there are high levels of endemic plant and animal species within the forest patches. At least 61 plants found in the forests are globally or nationally rare and notable species<sup>18</sup>.

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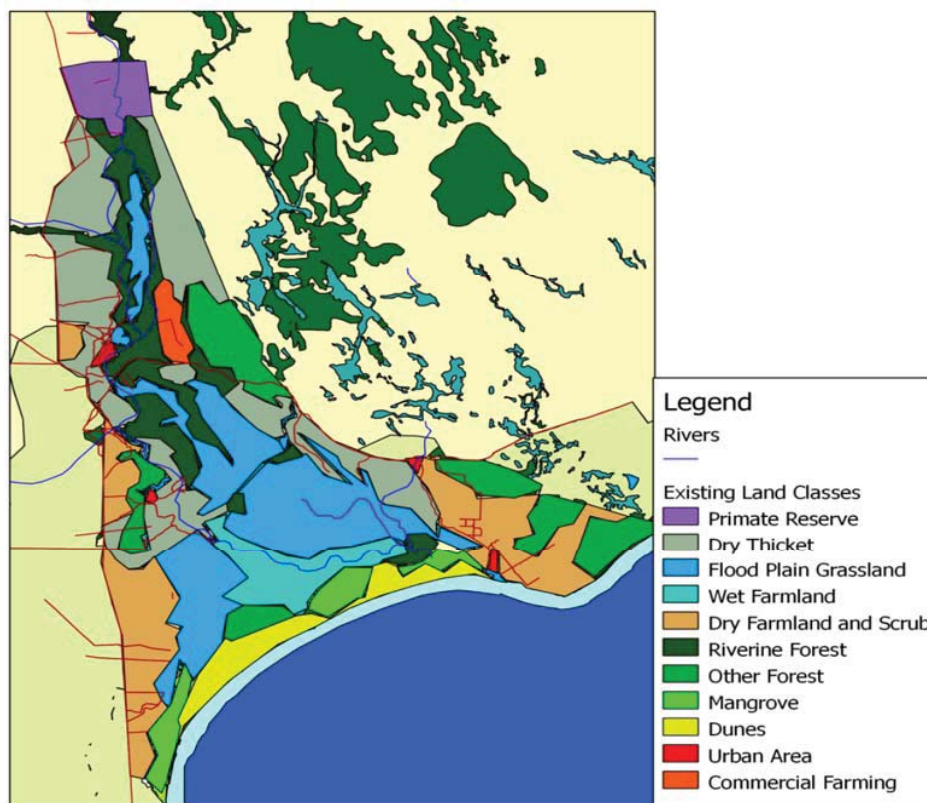
<sup>14</sup>Bennun, L. and Njoroge, P. (1999). Important Bird Areas in Kenya. East Africa Natural History Society.

<sup>15</sup>Bennun, L. and Njoroge, P. (1999). Important Bird Areas in Kenya. East Africa Natural History Society.

<sup>16</sup>Hamerlynck, O., Luke, Q., Nyange, T.M., Duvail, S. and Leauthaud, C (2012). Range Extension, Imminent Threats and Conservation Options for Two Endangered Primates: The Tana River Red Colobus *Procolobus rufomitratus rufomitratus* (Peters, 1879) and the Tana River Mangabey *Cercocebus galerritus* (Peters, 1879) in the Lower Tana Floodplain and Delta, Kenya. *African Primates* 7 (2): 211-217.

<sup>17</sup>Medley (1992)

<sup>18</sup>Bennun, L. and Njoroge, P. (1999). Important Bird Areas in Kenya. East Africa Natural History Society.



**Figure 2: The main landuse classes based on the Land Use Plan of the Tana Delta**

17. The status and condition of the natural environment in the Delta is highly dependent on the protection and enhancement of the many varied habitats which give rise to its biological diversity. The deterioration of any component of the Delta will weaken the whole ecosystem. However, some areas are regarded as of exceptional importance because together they sustain the most important fauna and flora of the Delta. These areas are regarded as primary habitats. The term “primary habitat” is used to distinguish between the core areas and other ‘secondary’ habitats that are important for individual species but are not the primary reason for the area’s designation as a Ramsar site.

18. In addition to the specific habitats, another critical component of the Delta’s biodiversity is the existence of migratory land corridors through the buffer zone which are used by wild animals and livestock in order to pass between the core of the Delta and the wider rangelands (Annex 1). There is a need for each of the existing five corridors to be maintained with a minimum width of two kilometers and a length of ten kilometers, through parts of the thicket and scrub zone lying within the Delta.

19. In general, it can also be noted that the Delta provides a wide range of ecosystem services including provisioning, such as the production of food and water; regulating, such as the control of climate and diseases; supporting, such as nutrient cycles and crop pollination; and cultural, such as spiritual and recreational benefits<sup>19</sup> (Annex 3). These services are threatened by unsustainable development in the Delta. The project goal is to enhance the ability of the Delta to continue to provide these services through integrated natural resource management and landscape restoration.

<sup>19</sup> Hamerlynck, O., Nyunja J., Luke, Q., Nyingi, D., Lebrun, D. and Duvail, S. (2010). The communal forest wetland, rangeland and agricultural landscape mosaics of the lower Tana, Kenya: A socio-ecological entity in peril. In Belair, C., Ichikawa, K., Wong, B.Y.L. and Mulongoy, K.J. (Eds), Sustainable use of biological diversity in socioecological production landscapes, background to the Satoyama Initiative for the benefit of biodiversity and human well-being, pp. 54-62. Convention on Biological Diversity Technical Series No. 52. Montreal: Secretariat of the Convention on Biological Diversity

20. The forests in the Tana Delta have shown signs of degradation in the recent past as a result of various anthropogenic activities. Deforestation activities, such as the clearing of forests for human settlements and agriculture, livestock grazing, and timber and charcoal production, have had significant impacts in the Delta. In addition, forests cover has declined due to the reduction in the influx of flood waters into the Tana River flood plains where the riverine forests are found. The declining forest cover in the Delta affects biodiversity and livelihood of the local communities contributing to increasing poverty among the local communities.

### **2.3. Threats, root causes and barrier analysis**

21. The Tana Delta forests and landscapes have in the recent past faced serious degradation as a result of various anthropogenic activities. The processes for the Strategic Environmental Assessment (SEA) and Tana Delta Land Use Plan (2014) identified the key issues that need to be resolved and provided recommendations for a comprehensive planning strategy for avoiding problems and maximizing opportunities for sustainable development in the Delta (see also Annexes 5). The key issues identified in the two processes include the following:

#### ***Influx of Investors***

22. For more than half a century, the Tana Delta has been perceived as a tract of land with low levels of population, extensive patches of fertile soils suitable for cultivation and an abundance of water from Tana River including several lakes found in the area. These resources have been promoted for development by successive national governments, beginning during the colonial administration, and assisted over the decades by international aid agencies. Unfortunately, the failure of successive agricultural schemes and the changing circumstances in terms of population, land use and water resources have not been factored into subsequent development plans, leading to increased social tensions within the Delta and a declining economic base.

23. External investors and previous governments have attempted to generate wealth from the Delta through poorly conceived irrigation agriculture projects including the Bedford biofuels project, a former G4 Industries farming project, and proposed allocation of land in the delta to the Qatar Government to grow food for export. These projects, without an appropriate planning framework, have the potential of accelerating degradation of forests and agricultural landscapes in the Tana Delta.

#### ***Changes in Hydrology and Water Use***

24. The Tana river has been affected by construction of hydro-electric dams in the Upper Tana Basin. The planned construction of a very high dam known as High Grand Fall Dam (HGFD) in the Upper Tana Basin to store water for irrigation and hydro-electricity generation is expected to compound the problem in the Tana Delta. Dams in the upper catchment have attenuated flood flows, reduced sediment loads and stream flow in the Tana Delta. The HGFD will greatly add to the regulation of natural flows throughout the year, significantly reducing the occurrence of major flood events that currently occur on a cyclical timescale of five to seven years. The normal flow conditions in the Tana River as it enters the Tana Delta at Garsen are currently above 60m<sup>3</sup>/s and this flow rate is critical to the survival of the Tana Delta forests and livelihoods of the local communities. Plans for the development of water resources in Kenya inevitably affect the Tana River since it carries 70% of the country's river flow. Without proper planning for water resources development, there is potential that the degradation of riverine forests and other tropical forests and landscapes in the Tana Delta will be accelerated in the coming years.

#### ***Resource Use Conflicts***

25. Political and social conditions in the Tana Delta have been volatile for some decades, reflecting the very different lifestyles, culture and livelihood requirements of the two main groups of inhabitants which are based on sedentary farming and migratory livestock rearing. Rapid population growth, increase in the size of livestock herds, reduced water flows, the onset of climate change and new administrative



structures have all played a part in creating the conditions for armed conflicts in the Delta<sup>20, 21</sup>. The continued degradation of landscapes and forests in the Tana Delta will impact on livelihood systems, increase competition for scarce natural resources and consequently increase conflicts in the Tana Delta.

### ***Increased Human-Wildlife Conflicts***

26. The migratory wildlife corridors in the Tana Delta have been encroached upon in the recent past as a result of human settlement expansion. The routes from the Tana Delta to Tsavo East National Park and Northern rangelands through which elephants, buffaloes and other large mammals have followed have been blocked making it difficult for wildlife to find water in the dry season and to breed (see Annex 1). In addition, land in the Delta has been cordoned by dykes and fences to allow for irrigation of crops such as maize and rice, which attract herbivores in large numbers. Without provision of alternative livelihood systems to the local communities, the wildlife migration corridors will continue to be greatly impacted with severe consequences to biodiversity. Wildlife unable to migrate to other areas will lead to the deterioration of the already degraded landscapes and deforested forests in the Tana Delta.

### **Root Causes**

27. The main root causes of environmental degradation in the Tana Delta as further elaborated in the SEA and Tana Delta Land Use Plan (2014) and confirmed during the project design phase (PPG) are as follows:

28. **Economic Development:** The quest for unsustainable economic development is considered to be one of the major root causes of degradation of the Tana Delta. There have been major developments in urban and rural areas located in the Tana river basin, leading to the degradation of landscapes and forests. These in addition to the expansion of the industrial and agricultural sectors have stimulated the need for increased demand for water, food and cash crops such as cotton. Subsequently, the government initiated a number of large-scale irrigation projects in the Tana Basin such as Bura and Hola Irrigation schemes. The total water demand in the Tana River Basin is estimated at 268 million m<sup>3</sup> per year which is equivalent to 6% of the total annual flow of the Tana river. A total of 64,425 ha of land is under irrigation in the Tana basin representing 45% of all irrigated land in Kenya. In addition, Kenya's main flagship projects set out in the Vision 2030<sup>22</sup> are located in the Tana basin. These include the Galana-Kulalu Irrigation Project, Grand Falls High Dam and Lamu Port and LAPSSET Corridor project. Lamu Port and LAPSSET Corridor project is expected to increase the exploitation of water from the Tana river due to high water demands of the two projects (Annex 6). It is also expected that these new mega projects will continue to exert more pressure on the Tana Delta landscapes and forests, therefore impacting on the biodiversity and livelihood of the local communities. There is a need for proper planning of economic development in the Tana Delta in order to ensure conservation of biodiversity and also in order to safeguard the livelihood of the local communities.

29. **Population Growth and Expansion:** River Tana catchment has a population of over 7 million people<sup>23</sup>. The 2015 projected population for Tana River County was 284,505<sup>24</sup> with a population density of 7.3 persons per Km<sup>2</sup> which is relatively low as compared to other parts of the country. According to the 2009 national population census, the population within the Delta is estimated to be 102,000<sup>25</sup> which is approximately 36% of the total population of Tana River County. Only a small segment of population of Lamu County resides with the Tana Delta<sup>26,27</sup>. The population in the Tana Delta villages has been growing

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<sup>20</sup> The Sentinel Project for Genocide Prevention (2013). Tana Delta Field Survey Report <http://www.thesentinelproject.org/wp-content/uploads/2013/06/Tana-Delta-Field-Report-May-2013.pdf>

<sup>21</sup> Tana Delta Renewed Clashes. Tana Delta Multi Agency Preliminary report. 4th January 2013. Participants in report consolidation: Kenya Red Cross Society, National Drought Management Authority, MSF International, United Nations Office for the Coordination of Humanitarian Affairs, United Nations Children's Fund, United Nations World Food Programme and Catholic Relief Services

<sup>22</sup> Government of Kenya (2013). Second Medium Term Plan, 2013 – 2017 Transforming Kenya: Pathway to Devolution, Socio-economic Development, Equity and National Unity. Kenya Vision 2030, Ministry of Devolution and Planning

<sup>23</sup> Government of Kenya (2010). Kenya Population and Housing Census Vol 1A. Kenya National Bureau of Statistics, Nairobi.

<sup>24</sup> GOK (2015). Tana River County Statistical Abstracts 2015. Kenya National Bureau of Statistics, Nairobi, Kenya.

<sup>25</sup> Odhengo P. Matiku P., Nyangena J., Wahome K., Opaa B., Munguti S., Koyier G., Nelson P and Mnyamwezi E., (2014a). Tana River Delta Strategic Environmental Assessment. Published by Tana River and Lamu County Governments.

<sup>26</sup> GOK (2015). Lamu County Statistical Abstracts 2015. Kenya National Bureau of Statistics, Nairobi, Kenya.

<sup>27</sup> Government of Kenya (2010). 2009 Kenya Population and Housing Census Vol 1A. Kenya National Bureau of Statistics, Nairobi.

rapidly at an estimated growth rate of 2.67 per annum<sup>28</sup>. The current population is considered to be well above the carrying capacity of the Tana Delta. The increased population has led to high demand for food, water and energy which has consequently led to the degradation of landscapes and forests in the Delta.

30. **Human Settlements and Migration:** Within the Tana Delta, the main urban centers are Garsen, Tarassa, Witu and Kipini. However, nearly 93% of the people live in rural areas in more than 100 villages (see Annex 9 Table 3). Most people in the Delta practice unsustainable crop farming (i.e. high rates of tilling, cultivating in areas prone to flooding, over-cultivation, clearing natural habitat to make room for agriculture), livestock rearing and fishing, although there are other minor activities as shown in Annex 7. In addition, pastoralists migrate from other counties to the Tana Delta during the dry season leading to high concentration of livestock in the delta. The majority of houses in the Delta are temporary structures and less than 1% of the residential houses are semi-permanent or permanent<sup>29</sup>. There is evidence that some pastoralists in the Delta are already giving up their migratory way of life in the face of increasing competition for grazing land and this has contributed to the formation of more permanent and dense settlements in the Tana Delta. The human settlements in villages have led to encroachment and degradation of riverine forests, wetlands and other protected areas. Human settlements have also encroached upon livestock and wildlife migratory routes thus impacting the annual migration patterns of wildlife and livestock. Coupled with widespread charcoal burning for domestic use and income, this has negatively impacted on the biodiversity within the Tana Delta.

31. **Intensification of irrigated agriculture:** The lower Tana basin has been targeted for development of large-scale irrigation schemes in the hope of increasing crop production and opening up undeveloped land. These irrigation schemes include Hola, Bura and Tana Delta irrigation schemes. In addition, other large-scale irrigation schemes are planned in the area (e.g Galana-Kulalu Irrigation Project). These irrigation schemes remove huge volumes of water from the Tana River, leading to a reduction in streamflow to the Tana Delta<sup>30</sup>. In addition, the irrigation schemes have led to water pollution as a result of continued use of inorganic fertilizers and pesticides. The daily water demand in the Tana Delta has been estimated to be 227,500 m<sup>3</sup>/day and this is bound to increase following the implementation of the planned Vision 2030 flagship projects. The reduction of the flow of the Tana River is already having major impacts on the riverine forests and other tropical forests that are becoming increasingly degraded. The future expansion of agriculture in the Tana Delta is expected to have major impacts on forests, riverine forests, mangroves, thickets and scrubs including also wetlands (Annex 8).

32. **Intensification of Pastoralism/Livestock grazing:** The Tana Delta and its buffer zone is an important grazing area for livestock (cattle, goats, sheep and camel) that are kept by the migratory pastoral communities, some of whom in the recent past have settled permanently in the Delta (see Annex 9-Tables 1 and 2)<sup>31</sup>. During the wet season, it is estimated that around 220,000 heads of cattle graze in the Delta and this number increases to around 735,000 in the dry season when pastoralist move their livestock into the Delta from the more arid northern Kenya hinterlands. High concentration of livestock in the Delta during dry season has led to overgrazing and destruction of forests. This has negatively impacted the biodiversity within the Delta and the buffer zone. There is possibility of increased livestock population in the Delta as more pastoral communities establish permanent settlements. Without proper interventions focused on controlling livestock grazing and provision of alternative livelihood systems, the Tana Delta forests and landscapes will continue to be degraded with significant impacts on biodiversity and livelihood systems.

33. **Increasing energy needs/demand:** Kenya has experienced an increased demand for electricity since 1963 when the country attained independence. Kenya's current electricity generation capacity is 3,000 megawatts against a demand of 2,500 megawatts. By 2030, the demand for electricity will be 15,000 megawatts. The increased consumption of electric energy has been necessitated by recent developments in

<sup>28</sup> Kenya Inter-Agency Rapid Assessment (2014): Tana River Secondary Data as at 2014.

<sup>29</sup> Government of Kenya (2010): Kenya Population and Housing Census Vol 1A. Kenya National Bureau of Statistics, Nairobi.

<sup>30</sup> Kithaka, J. and K. M. Mavuti (2016): Tana Delta and Sabaki Estuaries of Kenya: Freshwater and Sediment Input, Upstream Threats and Management Challenges. In: *Estuaries: A Lifeline of Ecosystem Services in the Western Indian Ocean*. Springer International Publishing Switzerland 2016. Springer, p.89-111.

<sup>31</sup> Irungu, P. (2000). Cattle Keeping Practices of the Orma People. A Household Survey in Tana River District, Kenya



the domestic, commercial and industrial sectors. The Upper Tana Basin offers the most suitable sites for the construction of hydro-electric power (HEP) dams in Kenya. Consequently, five major dams have been constructed in the Upper Tana Basin for hydroelectric power generation. These dams include Kamburu, Kiambere, Gitaru, Masinga, and Kindaruma<sup>32</sup>. The hydro-electric power produced in the Upper Tana basin accounts for more than 60% of the total electricity output in Kenya. The HEP dams, particularly Masinga and Kiambere have resulted in the significant modification of the hydrology of the Tana river through storage of large volume of water and sediments in the reservoirs. The flood flows to the Tana Delta have been significantly reduced with the exception of extreme floods. Also, there has been a significant reduction in sediment transport into the Tana Delta<sup>33</sup>. Planned construction of Grand Falls High Dam is expected to cause major impacts in the Tana Delta. Therefore, there is a need for interventions focused on the development of alternative green energy sources.

34. **Transportation:** The infrastructure development in the Tana Delta particularly the construction of the Malindi-Witu road is thought to have contributed to the modification of the flooding characteristics in the Tana Delta. The embankment on which the road has been constructed significantly blocks flood flow to the Delta, leading to changes in sediment deposition patterns in the flood plains. The embankment has also constrained the natural migration of the Tana river across the whole flood plain. This has subsequently affected flow downstream of Garsen into the Delta. Therefore, without proper land use planning (LUP), including proper planning for infrastructure development in the Tana Delta, the forest ecosystem and the biodiversity will continue to be degraded in the Tana Delta. The implementation of Tana Delta LUP will therefore contribute in ensuring that infrastructure development in the Delta takes on board the potential impacts on biodiversity.

35. **Poverty and inequality:** The communities living in the Tana River County in which 90% of the Tana Delta is found have low levels of education. The illiteracy levels are high since 39.3% of the population has not attended school and therefore cannot read and write. The lack of education has affected women more than men with 44.5% of females having never attended any school compared to 34.1% of males. The lack of education has negatively affected access to employment opportunities leading to high levels of poverty in the Delta. About 45.9% of the population in the area lives below poverty line<sup>34</sup>. The high poverty levels have increased inappropriate agricultural practices and over-reliance on the exploitation of natural resources from forests, riverine forests and wetlands. There is, in particular, high demand for forest and land resources and this has consequently accelerated their degradation. Without implementation of interventions focused on the alleviation of poverty through improvement of livelihood systems or introduction of alternative livelihood sources, the degradation of the Tana Delta forests and landscapes is bound to be accelerated with major impacts on biodiversity and the global benefits associated with the tropical forests found in the Delta.

36. **Climate Change:** Climate change is already impacting the Tana River Basin including the Tana Delta. Climate change has manifested itself through changes in rainfall and evapo-transpiration. The changes in rainfall patterns are characterized by reduced rainfall and increased frequency of droughts. Increased evaporation of surface water bodies leads to scarcity of water especially during extended periods of drought that are more becoming more frequent. Even without the damming of the river, the dry weather flows of the Tana river can reduce to as low 20m<sup>3</sup>/second during extended periods of drought<sup>35</sup>. The coastal areas of the Tana Delta are also experiencing the effects of sea level rise with disastrous impacts on shorelines and mangrove forests. Sea level rise is also leading to increased intrusion of salty sea water into the Delta. Currently, salt water intrudes into the first 10 to 30km of the delta<sup>36</sup>. The intrusion of brackish

<sup>32</sup>VandenBossche and Bernacsek (1990); Boboti (1996).

<sup>33</sup> Kithaka, J.U and K. M. Mavuti (2016): Tana Delta and Sabaki Estuaries of Kenya: Freshwater and Sediment Input, Upstream Threats and Management Challenges. In: Estuaries: A Lifeline of Ecosystem Services in the Western Indian Ocean. Springer International Publishing Switzerland 2016. Springer, p.89-111.

<sup>34</sup>Suri, T., Tschirley, D., Irungu, C., Gitau, R. and Kariuki, D.(2009). Rural Incomes, Inequality and Poverty Dynamics in Kenya. Tegemeo Institute of Agricultural Policy and Development, Nairobi

<sup>35</sup>Odhengo P. Matiku P., Nyangena J., Wahome K., Opaa B., Munguti S., Koyier G., Nelson P and Mnyamwezi E.,(2014a). Tana River Delta Strategic Environmental Assessment. Published by Tana River and Lamu County Governments.

<sup>36</sup> Kithaka J.U, Obiero M, Nthenge P (2005) River discharge, sediment transport and exchange in the Tana Estuary, Kenya. Estuar Coast Shelf Sci 63:455–468.

sea water into the delta is leading to contamination of freshwater sources and is making agriculture impossible in some areas such as Ozi village near Kipini. Therefore, without interventions that are aimed at increasing community resilience to the impacts of climate change, the existing sources of livelihoods will be overstretched forcing local community to increase the exploitation of forests and other natural resources in the Delta.

37. **Inadequate Governance:** The management of natural resources in the Tana Delta has been a complex affair due to factors including weak policy, legal and regulatory frameworks and multiple and competing institutions. The result is an uncoordinated approach to the management of natural resources. This is further complicated by overlapping and conflicting mandates of various institutions at national and county government levels. There are also inconsistencies and contradictions between various laws and policies that affect natural resources management in the Tana Delta. Thus, without development of the capacity of the national and county governments for the formulation of appropriate policy, legal and institutional frameworks for the restoration of existing landscapes and degraded forests, the degradation of the Tana Delta ecosystem will be accelerated with major impacts on biodiversity, livelihoods and global environmental benefits.

38. **Land Tenure System:** There are three categories of land ownership in the Tana Delta: private, communal and public land. The privately held land includes ranches, and there have been proposals for large scale allocation of private land in the Delta. The public land includes the gazetted forests, beach fronts and marine waters. The rest of the land is held under communal ownership with recognition of individual titles to cultivated land. The communal ownership of land does not encourage local and external investments including conservation of forests. The majority of local communities is squatters with no land ownership documents and therefore pays little attention to nature conservation. Large tracts of land are also owned by few people while the majority of people occupy ancestral land with unclear jurisdiction. Due to land tenure insecurity, local communities rarely practice sustainable farming and livestock grazing and forests have been degraded due to charcoal burning and cutting of trees for timber. This has resulted in vast degradation of forests and riverine forests in the Tana Delta. Without interventions that are focused on the improvement of processes for management of land and natural resources, the degradation of forests and other landscapes in the Tana Delta will continue to occur with major environmental and socio-economic impacts.

39. **Lack of adequate financial resources:** Tana River and Lamu Counties lack adequate financial resources to facilitate adoption and implementation of measures for integrated natural resource management, conservation of managed landscapes and landscape restoration in the Tana Delta. Most of the county institutions responsible for environmental management are limited by small budget allocation from the national government, partly due to lack of willingness and commitment by policy makers to address landscape restoration issues, which is ostensibly due to lack of knowledge on the importance of the Tana Delta ecosystem. Furthermore, the sustainable natural resources management and conservation of the Tana Delta ecosystem has not been afforded appropriate priority due to difficulties in demonstrating benefits to the policy makers. The consequences of the lack of financial resources have been weak enforcement of legislation/regulations, weak monitoring of development projects in the Tana Delta, lack of implementation of conservation interventions, and overall degradation of the state of the Tana Delta ecosystem. Therefore, without interventions that are aimed at increasing the financial resources of the national and county government departments, there will be less focus on the restoration of degraded forests and landscapes in the Tana Delta. Interventions that create awareness among policy makers on the value or benefits of restoring degraded landscapes and forests will increase the motivation for allocation of more financial resources for environmental management in the delta.

40. **Inadequate information and awareness:** The importance of the Tana Delta ecosystem, including its biodiversity, has not been quantified; and, there is a low level of awareness among the communities and policy makers on the true value of the Tana Delta's ecosystem goods and services. As a consequence, the contributions of the natural capital considered as a priority in national policy formulation and national

planning and budgetary processes are not taken into consideration. In addition, there is limited exchange of information or collaboration on conservation issues at county and national levels. Information on the status, extent and long-term trends of the Tana Delta is often limited or absent thus constraining decision-making processes and intervention planning. Provision of appropriately packaged information to the local communities, natural resource managers, and policy makers is important for effective conservation of the Tana Delta. Empowerment of local communities through information sharing is a key factor in the alleviation of poverty. This will allow the local communities to play a greater and more active role in restoration of the Tana Delta ecosystem. Communities in the Tana Delta lack knowledge on matters such as:

- i) Environmental impacts and socio-economic consequences of human activities that are affecting community livelihood.
- ii) Technologies, techniques and strategies to prevent or minimize the impact on the environment and the goods and services that it provides, such as improved technologies for fishing and agricultural practices.
- iii) Existing policies, legislation, regulations and institutional structures that provide ways of mitigating the impacts of landscape degradation on the environment and socio-economic well-being of the communities.

41. Information sharing and awareness rising with local communities and decision-makers in Tana River and Lamu Counties is essential for reversing of current trends in biodiversity loss and land degradation.

42. **Lack of alternative livelihoods:** Most of the local communities in the Tana Delta have limited livelihood alternatives, with over-dependency on a few alternatives being the direct consequence (See Annex 19-Tables 1-30). Most key sources of livelihood are directly or indirectly linked to the Tana Delta ecosystems. Most of the individual landuse activities are characterized by low income levels (Annex 7). Increasing populations and limited livelihood alternatives has led to over-exploitation of natural resources and the loss of valuable ecosystem functions. The development of other livelihood alternatives for the local communities is important to reduce pressure on the Delta's ecosystems. Without development of alternative livelihood systems, the pressure on the natural resources in the Delta will not end. The project will therefore work with the local communities to identify livelihood alternatives in the Tana Delta that can be developed and integrated into the communities.

43. **Poor land use planning and County Government Development Planning:** Poor land use planning has led to inappropriate land use practices in Tana River and Lamu counties and thus has subsequently led to the degradation of the Tana Delta forests and landscapes, both directly and indirectly. In the two counties, there has not been proper planning for the increased human and livestock population and poor planning for settlements and irrigation agriculture have impacted the forests and other critical habitats within the Tana Delta. The national and county governments lack capacity for effective planning and coordination of landscape and forest restoration efforts in the Tana Delta. There is also limited inter-county cooperation on matters related to the sustainable management of the Tana Delta. Without building the capacity for integrated natural resources management and planning, including the restoration of degraded landscapes and forest, at the county government level, sustainable development in the Tana Delta will be impossible, critical ecosystems will continue to be degraded and this will have major impacts on the global environmental benefits and livelihood systems of the local communities. There is therefore a need to build the capacity of the county governments and other national government institutions in order to enhance the restoration of degraded landscapes and forests in the Tana Delta. There is a need to develop the capacity for inter-county cooperation in matters related to the restoration of degraded landscapes and forests.

#### **Barriers**

44. There are several barriers that are constraining sustainable natural resources management and conservation of managed landscapes and deforested forests in the Tana Delta ecosystem. The barriers have

been synthesized from the 2014 Tana Delta SEA and LUP processes and therefore the project will seek to address them directly:

45. **Barrier 1: Responsible state institutions do not have the necessary capacities, policies, legislative and coordination frameworks to effectively promote integrated natural resources management and landscape restoration:** There are 14 national government institutions that are currently involved in the management of the Tana Delta natural resources and significant legislation and policies are in place at the national level to guide sectoral developments e.g. water, agriculture, forest, mineral resources policies. There are no specific national or county policies, legislation, regulations or strategies that are focused on sustainable land management or landscape restoration. Kenya also lacks policy and legislative frameworks for inter-sectoral coordination of land management and landscape restoration. With no coherent national and local framework for guiding strategic planning in the Delta, conflicts over the use of natural resources have arisen between local agriculturalists, pastoralists and large-scale agricultural schemes over water supply. Moreover, government institutions, civil society and the private sector have little constructive dialogue on the future of the Delta.

46. The key sectors and ministries of the County Governments of Lamu and Tana River also lack capacity for effective coordination of sustainable land management and landscape restoration initiatives. Lack of coordination has been occasioned by lack of knowledge on the benefits of adopting an integrated approach in land management, including also lack of awareness on the tools and approaches for landscape restoration and sustainable management of conservation areas. Lack of coordination among county government ministries often leads to duplication of effort and wastage of valuable resources on projects that have limited impacts in terms of restoration of the ecological integrity of the Tana Delta. Most of the county budgets do not include specific budgetary allocations for landscape restoration or sustainable land management. In addition, although the Tana Delta Conservation Network (composed of 38 User Groups) exists, there is insufficient inclusion of these groups and private sector into county decision making processes, due to poor coordination capacity. There is therefore a need to build capacity for integrated management and inter-sectoral coordination mechanisms at county and national Government levels that will ensure that the county and national governments' sectoral ministries allocate budgetary resources and work jointly towards the restoration of the Tana Delta ecological integrity. There is also a need to build capacity in the County and National Governments so that they can include all key sectors and stakeholder groups in policy and decision making processes on sustainable land management, forest and landscape restoration.

47. This project would address this barrier by focusing on building the capacity of the County Governments to enhance their ability for formulation and implementation of projects and programmes that promote integrated land and natural resource management including restoration of landscapes and forests in the Tana Delta. Additionally, capacity building trainings and materials will be provided to policy makers and other stakeholders to ensure that the benefits of landscape restoration and the importance of coordinated efforts is understood, aiding in developing realistic county and national budgets for landscape restoration initiatives that achieve multiple goals.

48. **Barrier 2: Absence of sustainable landscape management and restoration strategies and plans for the Tana Delta:** The national government is yet to formulate and implement sustainable land and natural resources management strategies, plans and programmes for the restoration of landscapes and degraded forests in the Tana Delta. The counties also lack integrated strategies and plans that can guide sustainable land and natural resource management. Although the National Land Policy, Vision 2030, the National Constitution, National Forest Programme, sector legislation and Tana Land Use Plan, provide some guidance for sustainable land management and landscape restoration, lack of plans and strategies in the County Governments of Tana River and Lamu Counties is constraining sustainable land management efforts in the Tana Delta. The national and county government institutions have limited capacity to develop and implement the sustainable land management plans. The result has been that most of the interventions in the Tana Delta by the County Governments have been haphazard with limited impacts in terms of reversing land and forest degradation.

49. Most of the national strategies and plans do not support the implementation of sustainable land management and landscape restoration interventions. The county strategies and action plans, where available, have also not mainstreamed sustainable land management and landscape restoration in the production process. Kenya also lacks a strategy of reaching the 5.1 million ha landscape restoration commitment to the Bonn Challenge and AFR100. As a result of the lack of strategies and plans on sustainable land management, there has been limited flow of resources for landscape restoration from diverse resources such as Payment for Ecosystem Service (PES), small credit schemes and voluntary carbon markets. The project will address this barrier by building the capacity for mainstreaming sustainable land management and landscape restoration into production sectors. The project will also support the development of a national landscape restoration strategy that will serve as a guide for implementation at the county level. This strategy will be used to inform county level landscape restoration targets and plans which will be integrated into County Integrated Development Plans (CIDPs). These plans will prioritize and guide landscape restoration interventions that ensure increases in ecosystem services and human livelihoods. The project will also address this barrier by building the capacity of the county governments to formulate and implement strategies and plans for the sustainable land management and landscape restoration.

50. **Barrier 3: Limited technical, institutional and financial capacities of key actors to implement sustainable land management and landscape restoration plans:** Kenya lacks innovative and sustainable financing mechanisms in order to increase private, public and local investment in large-scale sustainable land management and landscape restoration. County governments have also not established the basis for the business case for private sector involvement in sustainable land management and landscape restoration. The national and county governments have also not developed incentives that can motivate local and foreign investors to invest in sustainable land management and landscape restoration programmes in the Tana Delta. Most of the key actors consider investments in sustainable land management and landscape restoration as non-lucrative with limited economic returns. Therefore, there is very limited investments in sustainable land management and landscape restoration in Kenya. This, coupled with limited government investments, means that there are limited concerted efforts towards sustainable land management and landscape restoration in the Tana Delta.

51. There is also limited mobilization of financial resources for implementation of sustainable land management and landscape restoration projects in the Tana Delta. While there are many existing and potential sources of finance for sustainable land management and restoration of degraded and deforested lands, the county governments are largely unaware of these sources of finances and partnerships. As such, Kenya is yet to fully tap into the potential sources of finance for sustainable land management and landscape restoration such as Payment for Ecosystem Services (PES), small credit schemes, voluntary carbon market, among others.

52. There are many upcoming projects in the Tana Delta that have implication on land management and restoration of degraded landscapes and forests but opportunities to scale up these projects and achieve maximum impact are being missed due to insufficient technical support within counties as well as the lack of cross-county exchange of technical expertise and perspectives. In most cases, the sustainable land management and landscape restoration best practices at county level are not scaled up to enable men and women across sectors to implement suitable landscape restoration and sustainable landscape management approaches. The technical capacity and knowledge of stakeholders on landscape restoration and sustainable land management best practices and benefits is also limited in the counties. The use of communication tools to collect and share sustainable land management and landscape restoration best practices among key actors is limited, and there is little transfer of knowledge and lessons sharing within and outside the Tana Delta and Coastal and Western Kenya ecosystems where landscape restoration projects are being undertaken.

53. The project will address this barrier by establishing well coordinated funding mechanisms at the national, county and local level to enable implementation of sustainable land management and landscape restoration projects. The capacity of County government departments will be built to enable them to provide extension services in order to increase the uptake of landscape restoration and sustainable land management funds. The project will also promote private-public partnerships to provide business readiness support to



local entrepreneurs interested in investing in sustainable land management and landscape restoration projects in the Tana Delta. The project will also support the county and national governments to develop incentives that will encourage both local and foreign investments in sustainable land management and restoration of landscapes and degraded forests in the Tana Delta and other target counties in Kenya. The project will also build the capacity of County Governments to mobilize financial resources including provision of seed financing to kick start sustainable land management and landscape restoration activities until revenue flows of those projects materializes.

54. **Barrier 4: Insufficient awareness and involvement of local actors inhibits adoption of successful sustainable land management and landscape restoration practices:** There is very limited information among the policy makers, decision-makers and the local communities on the importance of sustainable land management and restoration of the degraded landscapes and forests in the Tana Delta. The economic value of environmental goods and services provided by well managed landscapes and ecosystems in Kenya is largely unknown. There is also limited dissemination and sharing of information and lessons on successful land management and landscape restoration projects in Kenya. This has constrained adoption of best practices with the result that new projects are being implemented without taking onboard lessons learnt in similar previous projects. The lack of awareness and involvement of key actors has led to limited prioritization of sustainable land management and landscape restoration in the Delta.

55. Community participation is critical in the sustainable land management and restoration of the ecological integrity of the Tana Delta. However, local communities in Tana River and Lamu Counties are generally characterized by low levels of education and limited awareness and understanding of the ecosystem costs and benefits and inter-linkages between various key elements of the Tana Delta ecosystem. As a result of limited awareness and knowledge, the local communities lack the ability to effectively participate in the sustainable land management and restoration of the key landscapes and degraded forests in the Tana Delta. The local communities also lack strategies and action plans that embrace sustainable land management and landscape restoration in agriculture and livestock production (See Annex 10). This has also led to limited public support for landscape restoration and sustainable land management at the county and local levels. Therefore, the proportion of land under sustainable land management and landscape restoration in the Tana Delta is very small with very limited impacts in terms of provision of expected ecosystem goods and services. Also, the number of community actors participating in sustainable land management and landscape restoration programmes in the delta is low.

56. Successful protection and enhancement of the ecological integrity of the Tana Delta requires that the capacity of the local community to participate in sustainable land management and landscape restoration projects is enhanced through training, development of income-generating activities and provision of resources to undertake restoration works (Annex 10 Tables 1- 5). These are key interventions that this project will focus on in order to enhance the involvement of local communities and other key actors in sustainable land management. This project will also support compilation and communication of best practices and lessons learnt in sustainable land management and landscape restoration projects implemented in other parts of Kenya and Africa. The project will facilitate cross-county benchmarking with the other TRI global child partner projects in Africa and Asia. The project will also create more awareness among policy makers, decision-makers and the local communities in order to enhance their capacity to advocate for the conservation and restoration of degraded landscapes and forests in the delta. This project will also directly address the barrier through improved dissemination of relevant information and guidelines that propose innovative solutions to local actors. The project will also increase the capacity of key actors to participate in sustainable land management and landscape restoration practices in the Tana Delta. The project will promote the development of methodologies and processes that will identify, reflect and implement land management interventions to address gender gaps and overcome historical gender biases in policies and interventions.

57. **Barrier 5: Insufficient employment opportunities and income for the local communities hamper sustainable land management and landscape restoration efforts:** The majority of the communities in the Tana Delta live in extreme poverty with limited income which is derived from three main sources namely, pastoralism, agriculture and fisheries (Annex 9-Tables 1-30). These sources of

income are generally characterized by relatively low returns. Also, employment opportunities for youth are very limited forcing them to focus on unsustainable practices in the exploitation of natural resources in the Delta. The improvement and or transformation of pastoralism, agriculture and fishing have the potential of delivering more employment opportunities and higher income to the local communities. The project will address this barrier through transformation of locally developed, small-scale, high value agriculture through introduction of better crop production methods (e.g. climate smart agriculture and agroforestry), processing facilities (e.g. abattoirs, milk processing plants, etc) and training of local communities in business skills. The project will also assist the communities to maximize on eco-tourism potential in the Tana Delta, in view of the Delta's closeness to major tourism centres along the Kenya coast and the presence of rich cultural diversity, wildlife and landscapes that are spectacular and that can represent potential gains to local communities and Kenyans at large. The project will also promote the diversification of income streams using local sustainable resources through provision of initial support and training to the communities.

58. The barrier that is extrinsic to the project and which the project will take note of is the failure to fully devolve resource management authority to local resource users, particularly the communities. The management of natural resources in Kenya is controlled either by the national or county government ministries and agencies and there is very limited devolution of management functions to the local communities. This has in the past constrained sustainable land management in the Tana Delta. While, the project will not address this barrier, the specific project activities that directly addresses various barriers mentioned in previous sections, will contribute in limiting the impact of lack of devolution of land and natural resources management to the local communities.

## **2.4. Institutional, sectoral and policy context**

### ***National Context***

59. The conservation and sustainable use of natural resources is enshrined in the new Constitution of Kenya Article 10 (2) (d) on sustainable development, Article 42 on the right to a clean and healthy environment and Chapter 5 on Land and Environment. The proposed project will assist the country to achieve the goals of its new constitution including long-term development vision as stipulated in Vision 2030. The project would assist the country to directly strengthen national efforts on the conservation of forests and biodiversity.

60. Kenya has a fairly long history of environmental management. Since attaining independence in 1963, the country has recognized the importance of conservation of natural resources including forests because these have important bearing on the economy, food security and livelihood of the people. In 1974, the Kenya government established the National Environment Secretariat (NES) under the Ministry of Environment and Natural Resources as the lead environment agency to coordinate and oversee environmental management activities in the country. Subsequently NES established the Inter-Ministerial Committee on Environment (IMCE) whose members were drawn from the government, private sector and NGOs. In the recent decades, there has been an increase in environmental awareness as evidenced by the phenomenal growth of relevant institutional and sectoral activities. In 1999, Kenya formulated the Environmental Management and Coordination Act (EMCA) of 1999 that provides the overall policy, legal and institutional frameworks for the conservation of the environment including forests and biodiversity conservation in the country. There are also many key players in environment, forest and biodiversity conservation management in the country. These include government departments, research institutions, parastatals, national and international NGOs, local authorities and communities. However, while there have been major improvements in natural resource management at the national level, there is still lack of involvement from some institutions that makes it difficult to coordinate efforts across sectors.

61. Kenya has also demonstrated commitment to the goals of the Convention on Biological Diversity (CBD). A multi-disciplinary and multisectoral Task Force was established in 1996 to develop the National Biodiversity Strategy and Action Plan (NBSAP) for addressing the national and international undertakings elaborated in Article 6 of the Convention on Biological Diversity (CBD). Kenya's NBSAP was formulated



to ensure that the rate of biodiversity loss was reversed, and that present levels of biological resources were maintained at sustainable levels for posterity. The National Biodiversity Strategy and Action Plan (NBSAP) also identified threats and constraints in biodiversity conservation and set out the necessary actions to address them. The major components of policy framework, legislations and action plans that drive the country in achieving the three objectives of CBD and which are relevant to this project include the Environmental Management and Coordination Act (EMCA) of 1999; The Forest Conservation and Management Act, 2016; The Forestry Master Plan (1995-2020); The National Forestry Programme (2016-2030); National Environment Policy (NEP); National Biodiversity Strategy and Action Plan (NBSAP) 2000 and National Action Plan on Climate Change (NAPCC).

62. The project responds directly to relevant sections of Kenya's NBSAP particularly the sections focused on the review of policies and legislation, integration of gender issues in biodiversity conservation, poverty reduction, among others. The Kenya's NBSAP identifies activities that will build national capacities for biodiversity conservation and appropriate use of new technologies. The project will also respond to Section 3.1 of NBSAP on habitat fragmentation, degradation and loss, and shrinking of genetic diversity which identifies the importance of efforts to conserve and maintain biodiversity on farm for its continued evolution and adaptation to changing conditions.

63. The road map for implementation of Kenya's National Biodiversity Strategy and Action Plan (NBSAP) to which this project would be contributing to, involves the Ministry of Environment and Natural Resources and various government ministries and departments that have been identified for achieving the National Biodiversity Targets (NBT). These include the State Forest Department and relevant departments of State Governments such as fisheries, water, agriculture, livestock and animal husbandry, mining and education. Local-level institutions such as Water Resource Users Associations (WRUA), among others are critical elements for implementation of the NBSAP. Thus, there is a strong institutional framework that can both support project implementation and assist with mainstreaming the results.

64. There are also a number of relevant policies in Kenya that are relevant to the restoration of degraded landscapes and forests including integration of biodiversity conservation into national economy. These include the National Forest Policy 2015; National Environment Policy 2014; National Land Reclamation Policy 2015; National Wildlife Conservation and Management Policy, Wetlands Policy and ICZM Policy among others. These policies are relevant to the protection of biodiversity including forests and landscapes in the country. Kenya is also committed to conservation and utilization of biodiversity and has improved opportunities for mainstreaming biodiversity conservation and sustainable use through the policies and collaborative actions of relevant Ministries and government departments, particularly the Ministry of Environment and Natural Resources. The Ministry and other relevant departments are specifically required to collaborate in the implementation of activities focused on the mainstreaming biodiversity through appropriate policies and action plans.

65. The Tana Delta project interventions are in line with the National Environment Policy (2015) that provides measures for conservation of ecosystems that are expected to be most severely impacted by climate change and other anthropogenic activities. The policy reiterates that Kenya's development path is based on its unique resource endowments, the overriding priority of economic and social development and poverty eradication, and its adherence to its civilizational legacy that places a high value on the environment and the maintenance of ecological balance. It envisions creating a prosperous and self-sustaining society that is conscious of its responsibilities to both the present and future generations.

66. The project is consistent with the goals of the National Forest Programme (NFP) 2016–2030 which is the first cross-sectoral and multi-stakeholder national framework for developing and coordinating forest development aimed at meeting the needs of Kenyans in the next 15 years. The programme builds on the constitutional values and principles of the Kenya Vision 2030, and advances forest development to 2030. In this way, forestry development values, principles and time targets are now consistent with national development goals. The national forest framework aims at sustainable forest management and has the overall goal: "To develop and sustainably manage, conserve, restore and utilise forests and allied resources for socio-economic growth and climate resilience." The strategic objectives are: i) Increase tree cover and

reverse forest degradation through sustainable forest management, ii) Enhance forest-based economic, social and environmental benefits including by improving the livelihoods of forest-dependent people, iii) Enhance capacity development, research and adoption of technologies to increase value adding to forest products, iv) Create an enabling environment for mobilizing resources and investment to spur forest development, and v) Inculcate good forest governance through integrating national values and principles of governance in forest development.

67. Kenya Government has demonstrated commitment to this project through formulation of the Strategic Environmental Assessment (SEA) and the Land Use Plan (LUP) for the Tana Delta. The County Governments of Tana River and Lamu have also expressed their commitments to the project in view of the fact they would be the primary beneficiaries of the project including the benefits that will accrue from the restoration of degraded landscapes and forests in Tana River Delta. The commitment of the National and County Governments is also demonstrated by the fact that both are providing substantial co-financing to the project.

68. The project will be integrated within the already existing institutional frameworks such as the Tana Planning Advisory Committee (TPAC) and the Inter-Ministerial Technical Committee (IMTC) that were established in 2011 to chart the way for sustainable development of the Tana River Delta. The Inter-Ministerial Technical Committee (IMTC) made up of 22 Kenya government ministries and agencies, played a key role in the development of a strategic framework to oversee landuse planning in the Tana River Delta. The IMTC has strong stakeholder support (including local communities) and has provided the lead in the formulation of the strategic plan for the Delta.

69. Kenya has established institutions that have mandates touching on environment and natural resources management including landscape restoration and biodiversity. The National Environment Management Authority (NEMA) exercises general supervision and coordination over all environmental matters in the country. The National Environment Council (NEC) is charged with policy formulation, setting national goals, objectives and priorities for protecting the environment and fostering stakeholder cooperation. There are also established County Environment Committees (CEC) for coordinating environment-related matters at county level.

70. There are a number of sectorial ministres and institutions that are relevant to environment and natural resources management including research in Kenya. These include the Ministry of Water and Irrigation, Ministry of Environment and Natural Resources, Ministry of Agriculture and Fisheries, Ministry of Lands, Ministry of Devolution and Planning, and the Ministry of Education, Science and Technology, National Treasury, Ministry of Energy, Ministry of Mining, and Ministry of Trade. All these Ministries deal with issues related to the management of environment and natural resources, and their representatives are members of the Tana Delta Advisory Committee.

71. The key institutions that are relevant to this project include Kenya Forest Service (KFS) for forest conservation and management; National Environment Management Authority (NEMA) for coordination of environmental management; Kenya Wildlife Service (KWS) for wildlife conservation and management; Water Resources Management Authority (WARMA) for conservation and management of water resources; Kenya Water Towers Agency (KWS) for protection of water catchment areas; Public Universities for training and research; Kenya Forest Research Institute (KEFRI) for forestry research; KMFRI for freshwater and coastal fisheries research; Coast Development Authority (CDA) for coastal regional development; and the National Museums of Kenya (NMK) for management of cultural and heritage sites. The County Governments and their sectoral Ministries responsible for the environment, water, forests, and land are also relevant key institutions in the country under the devolved system of governance.

### ***Global Context***

72. There are a number of international multi-lateral environmental agreements (MEAs) to which Kenya is signatory that are relevant to the restoration of degraded landscapes and deforested forests in the Tana Delta. The relevant conventions include: (i) Convention on Biological Diversity (CBD), (ii) United

Nations Framework Convention on Climate Change (UNFCCC) and (iii) International Plant Protection Convention. These conventions have specific mandates related to the restoration of degraded landscapes and forests.

73. The project addresses the Bonn Challenge which is a global effort to bring 150 million hectares of the world's forested and degraded land into restoration by 2020 and 350 million hectares by 2030, of which Kenya has committed to restore 5.1 million ha. Underlying the Bonn Challenge is the forest landscape restoration approach which aims to restore ecological integrity while improving human well-being through multifunctional landscapes. The restoration of deforested and degraded land in the Tana Delta and the replication of these lessons and experiences at scale in other parts of Kenya will result in net benefits. Landscape restoration will provide opportunities to rural communities both through economic as well as environmental, resulting from watershed protection, improved crop yields and forest products and contribute in carbon dioxide sequestering. While the project will contribute to the implementation of national priorities such as water and food security and rural development, it will also contribute to the achievement of international climate change, biodiversity and land degradation commitments.

74. The project will contribute to the achievement of CBD Aichi Target 15 that states that by 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks will have been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. The conservation, restoration and sustainable management of forests, soils in the Tana Delta ecosystems is cost-effective, safe and immediately-available to sequester carbon dioxide and prevent the loss of other greenhouse gases. The project will contribute to restoration activities, such as forest and landscape restoration that are already underway in many parts of the world. Consolidating policy processes and the wider application of these efforts will contribute significantly to the achievement of the objectives of the CBD Convention and generate significant synergies with the UNFCCC, the UNCCD and the United Nations Forum on Forests (UNFF).

75. The project is in line with the REDD+ objectives of reducing emissions from deforestation and forest degradation, and fostering of conservation, sustainable management of forests, and enhancement of forest carbon stocks. The REDD+ mechanism aim is to reduce deforestation and increase forest stock in order to increase sequestration of green-house gas emission. The project contributes to increase in vegetation and the reduction of deforestation and thus in accordance with the REDD+.

76. The project will also contribute to the Sustainable Development Goal Rio+20 on Zero Net Land Degradation to secure the continuing availability of productive land for present and future generations. In particular, the project will contribute to the realization of the goal on sustainable land use for all and by all (in agriculture, forestry, energy, urbanization). Target 1: Zero net land degradation by 2030, Target 2: Zero net forest degradation by 2030, Target 3: Drought policies and drought preparedness implemented in all drought prone regions/ countries by 2020. Achieving Zero Net Land Degradation by 2030 will require the commitment, the support and the active investment of all public and private sector actors, and all parts of the supply and value chain related to land use, as well as local and community stakeholders. Current and future generations in the Tana Delta will benefit from the return on investment in terms of gains in efficiency, resilience, and social inclusiveness.

77. The project is also relevant to the Ramsar Convention given that Tana Delta is now a designated Ramsar site. The Ramsar Convention aims at promoting the conservation and wise use of all wetlands through local and national actions and international cooperation as a contribution towards achieving sustainable development throughout the world. "Wise use of wetlands" is defined as "the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development". The project will also contribute to the fourth Strategic Plan of Ramsar Convention that guides the parties' actions to prevent, stop and reverse the degradation and loss of wetlands for their conservation and wise use for the period 2016–2024.

78. This project is also relevant to International Plant Protection Convention (IPPC) that was established to ensure cooperation among nations to protect global plant resources from the spread and introduction of pests of plants in order to preserve food security and biodiversity and to facilitate trade. Food and Agriculture Organisation (FAO), through the work of the International Plant Protection Convention (IPPC), provides an international plant health framework to stop the introduction of pests, weeds and pathogens of plants and pest outbreaks that negatively impacts loss of biodiversity and imbalances ecosystems. This is important given that Tana Delta is one of the key areas in Kenya that has been seriously affected by the invasive plant *Prosopis juliflora* which is threatening the indigenous ecosystems. The fact that the convention helps countries to protect ecosystems from the loss of viability and function as a result of exotic plant invasions, makes this convention relevant to the project.

79. The project will also be relevant to the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) that creates a multilateral system for a limited list of crops whereby countries agree to virtually pool and share plant genetic resources of 64 crops and forages for food and agriculture related purposes. Three mutually supportive targets are proposed to address the main objectives of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture, and this includes conservation, sustainable use and capacity development.

80. The project is also relevant to the United Nation's Convention on Sustainable Development (UNCSD, 2012) which in paragraph 122, underscores the role of various ecosystems such as wetlands in maintaining water quantity and quality and the need to support actions with respective national boundaries to protect and sustainably manage these important ecosystems. Wetlands such as the Tana Delta are a fundamental part of the local and global water cycles that facilitate global and national developmental goals including the Sustainable Development Goals (SDGs).

81. The project will also contribute towards the achievement of the Medium-Term Strategy (MTS) of the UN Environment and UN Environment's Vision 2030. Specifically, the project would make contributions to UN Environment MTS Priority Areas of climate change, healthy and productive ecosystems, environmental governance and resources efficiency. The climate change area of UN Environment MTS has a goal of enabling countries to transition to low-emission economic development and enhance their adaptation and resilience to climate change. The project contributes to the work of UN Environment vision which is organized around three results streams: climate change adaptation and resilience; mitigation and clean energy; and reducing emissions from deforestation and forest degradation in developing countries and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD-plus). The project will contribute towards the achievement of the Resilience to Disasters and Conflicts Outcome Map Objective: 2030 expected impacts listed below:

i) Healthy and Productive Ecosystems Outcome whose objective is to ensure that marine, freshwater and terrestrial ecosystems are increasingly managed through an integrated approach that enables them to maintain and restore biodiversity, ecosystems' long-term functioning and supply of ecosystem goods and services.

ii) Environmental Governance Outcome whose objective is to promote achievement of environmental goals in policy coherence and strong legal and institutional frameworks in the context of sustainable development and environmental issues are handled in an inclusive, sustainable and coherent manner, based on integrated policy and effective norms and institutions at all levels of governance (including global, regional, sub-regional, transboundary and national).

iii) Resource Efficiency Outcome whose objective is to ensure that countries transition to sustainable development through multiple pathways, including inclusive green economy and trade, and the adoption of sustainable consumption and production patterns, increasingly decoupling economic growth from unsustainable resource use and environmental impact while improving human well-being.

82. The project would also contribute to the achievement of the 2030 Agenda for Sustainable Development Goals (SDGs) agreed by 193 Member States, as well as global civil society, as contained in paragraph 54 United Nations Resolution A/RES/70/1 of 25 September 2015.

83. The United Nations Declaration on the Rights of Indigenous Peoples is also important to this project due to the fact that Article 26 of the Declaration states that indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired. Also, Article 29 of the Declaration states that indigenous peoples have the right to the conservation and protection of the environment and requires states to establish and implement assistance programmes for indigenous peoples for such conservation and protection. Indigenous peoples also have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources as per Article 32.

84. The project is also contributing to the Convention on Migratory Species (CMS). The Convention on Migratory Species includes different types of requirements for conservation, depending on the degree of threat to a particular species. In Articles I and II, Contracting parties generally acknowledge the importance of migratory species and the need to take action – individually or in cooperation – to improve the unfavourable conservation status of migratory species and to prevent them from becoming endangered. This is important given the importance of the Tana Delta in terms of the conservation of elephants, buffaloes, Colobus monkeys, Crested Mangabeys and other endangered species found in the Tana Delta. Pursuant to Article III.4, the Contracting parties are asked: (a) To conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction; (b) To prevent, remove, compensate for or minimize, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; (c) To the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species, including strictly controlling the introduction of, or controlling or eliminating, already introduced exotic species. The project will assist Kenya to integrate issues of the Convention on Migratory Species into post-2010 national biodiversity strategies and action plans.

85. The project is also relevant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The CITES Strategic Vision: 2008–2013, identified as a key component Goal Three that calls for the parties to contribute in significantly reducing the rate of biodiversity loss by ensuring that the Convention on International Trade in Endangered Species of Wild Fauna and Flora and other multilateral instruments and processes are coherent and mutually supportive. Kenya is required to ensure that policies and legislation are adopted to reduce biodiversity loss through management of the species and their habitats. The project is also relevant to the CITES Vision Statement that has a goal of conserving biodiversity and contributing to its sustainable use by ensuring that no species of wild fauna or flora becomes or remains subject to unsustainable exploitation through international trade, thereby contributing to the significant reduction of the rate of biodiversity loss.

86. The project is also relevant to World Heritage Convention (WHC) whose strategic objectives are to: (1) Strengthen the credibility of the World Heritage List; (2) Ensure the effective conservation of World Heritage properties; (3). Promote the development of effective capacity-building in state parties; (4) Increase public awareness, involvement and support for world heritage through communication; and (5) Enhance the role of communities in the implementation of the World Heritage Convention. Tana Delta is an important heritage site and therefore this convention is relevant to the project objectives.

### ***Regional level Context***

87. The project is consistent with the African Forest Landscape Restoration Initiative (AFR100) that is aimed at bringing 100 million hectares of deforested and degraded landscapes across Africa into restoration by 2030. This initiative connects political partners—participating African nations—with technical and financial support to scale up restoration on the ground and capture associated benefits for food security, climate change resilience, and poverty alleviation. AFR100 responds to the African Union mandate to bring 100 million hectares of degraded land into restoration by 2030. The initiative contributes to the achievement of domestic environment and development commitments, the Bonn Challenge, and Land Degradation Neutrality target-setting process among other targets. AFR100 contributes to the African Resilient Landscapes Initiative (ARLI), and complements the African Landscapes Action Plan (ALAP) and the broader Climate Change, Biodiversity and Land Degradation (LDBA) program of the African Union. AFR100 accelerates progress towards achieving the Sustainable Development Goals (SDGs) and the Paris



climate agreement. Kenya is among 21 African nations that have signed onto AFR100 and the country has committed a combined 63.3 million hectares of land to be restored.

88. The project will be undertaken in an area that is considered to be within the coastal zone and hence is relevant to a number of regional and global priorities identified under Agenda 21 (Chapters 17 and 18), the Arusha Resolution on Integrated Coastal Zone Management (ICZM) in Eastern Africa including the Island States (April, 1993) and Seychelles Conference Statement on ICZM (October, 1996). The project will also complement the commitments identified within the Environmental Component of the New Partnership for Africa's Development (NEPAD) and in the process improve the capacity of county and national institutions in Kenya.

89. A number of Regional Economic Integration Agreements (REIAs) in the Eastern African region also provide relevant policy and institutional context for the project. The activities of the Project support many of the goals of the main REIAs in the region such as the Common Market for Eastern and Southern Africa (COMESA) and the East Africa Community (EAC), particularly the objectives of coordination, harmonisation, and rationalisation of policies and strategies for sustainable development in all areas of human endeavour including cooperation in the areas of natural resources and the environment. COMESA has a forest management strategy that outlines key investments in the forestry sector such as payments for environmental services, combating illegal trade and capturing the full value of forestry sectors in national economies.

90. The African Union (AU) and its African Ministerial Council on Water (AMCOW) and African Ministerial Council on the Environment (AMCEN) also provide an important policy and institutional context for the project. The project will contribute in reinforcing the regional institutional linkages between these bodies. The UN Environment Regional Office for Africa (ROA) acts as the Secretariat for both AMCOW and AMCEN.

91. The project is also consistent with the objectives of the Nairobi Convention on the protection of the coastal and marine environment in Eastern Africa. Kenya is a contracting party to the Nairobi Convention and its protocols<sup>37</sup>. The Nairobi Convention through the land-based sources and activities (LBSA) Protocol provides the overarching legal, institutional and policy framework that can benefit the project. The Convention will also be implementing UN Environment-GEF funded project on the implementation of the Strategic Action Programme (SAP) for the protection of the coastal and marine environment from land-based sources and activities, that has a component on environmental flow assessments of which the Tana River basin was selected as a priority site<sup>38</sup>.

92. The African Charter on Human and Peoples' Rights, which is a regional treaty is also relevant to the project since the treaty has specific provisions on the right to a healthy environment in its Article 16. The inclusion of an environmental right in participating countries' constitutions sets in place the overall environmental governance framework for individual countries.

## **2.5 Stakeholder mapping and analysis**

93. During the Project's design (PPG) phase, guidelines were developed describing the types of stakeholders and actors that the Project should ideally engage. Based on this guidance, the executing agency, together with national partners and international experts for the WRI, undertook extensive site visits, stakeholder consultations with potential partners and related institutions to explore roles and inputs and ways of creating added value and synergies. A detailed description of the major institutions identified

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<sup>37</sup>Protocol on Protected Areas and Wild Fauna and Flora (PAWF) and the Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities, the latter adopted in Nairobi, Kenya on 31 March 2010.

<sup>38</sup>UNEP/Nairobi Convention Secretariat, WIOMSA (2009): Transboundary Diagnostic Analysis of Land Based Sources and Activities Affecting the Western Indian Ocean Coastal and Marine Environment, UNEP, Nairobi Kenya, 378p.

for the implementation of various project activities can be found in Section 4 of this Project document that elaborates the institutional framework.

94. The main stakeholders of the project will be the National Government and the County Governments of Tana River and Lamu Counties (Table 1). The National Government has key Ministries, Departments and Agencies that have mandate which are relevant to natural resources management and landscape restoration in the Tana Delta. The County Governments of Tana River and Lamu Counties also have their own Ministries and Departments that are central to the natural resources management and landscape restoration in the Tana Delta. The project being a partnership initiative will present a collaborative effort among the National Government, County Governments, Non-Governmental Organisations and local Community Based Organisations.

95. There are also several non-governmental organisations and local community based organisations in both Tana River and Lamu Counties that are already engaged in specific environmental management and conservation activities that are considered to be important stakeholders in the implementation of this project (see Annex 9 Tables 1-28). The project would identify these project and engage them in the implementation of activities as may be appropriate.

96. The project will adopt a participatory approach involving participation of a wide range of partners who are already active in the Tana Delta addressing relevant and complimentary environmental issues aimed at the protection and management of development in the Tana Delta. The project will also promote various partnerships established within the auspices of the Inter-Ministerial Technical Committee (IMTC) that was convened in 2011 to formulate strategic plan for the Tana Delta. The representatives from key Kenya government Ministries and agencies together with the local community representatives and NGOs participated in the initial process of charting the way forward with regard to the sustainable future for the Tana Delta.

97. The details the present status of stakeholders, their potential roles and contributions including their participation in management and coordination at the national and global level are described in Table 1 below.

**Table 1: Major stakeholders and their participation in the project**

<i>Stakeholders</i>	<i>Type of Involvement</i>
<b>National Government Ministries</b>	
<ul style="list-style-type: none"> <li>Ministry of Environment and Natural Resources</li> <li>Ministry of Agriculture, Livestock and Fisheries</li> <li>Ministry of Water and Irrigation</li> </ul>	<p>Representatives of the different National Government Ministries will take part in project consultations, workshops and seminars.</p> <p>They will also provide advice and suggestions for the project management and implementation of landscape restoration initiatives at national level.</p> <p>They will also participate in policy and awareness related campaigns for mainstreaming landscape restoration and sustainable production at national level.</p> <p>Representatives of the different National Government Ministries will also contribute in the following roles:</p> <ul style="list-style-type: none"> <li>Coordination of landscape restoration and sustainable land management efforts at national level.</li> <li>Development of National Guidelines for restoration of critical habitats including engagement of communities in the formulation of Management Plans</li> <li>Development of alternative livelihood systems including Climate Smart Agriculture.</li> </ul>



<i>Stakeholders</i>	<i>Type of Involvement</i>
	<ul style="list-style-type: none"> <li>Mainstream landscape restoration into production sectors.</li> </ul>
<b>County Government Ministries</b>	
<ul style="list-style-type: none"> <li>Ministry of Lands, Livestock and Fisheries, Tana River County.</li> <li>Ministry of Health, Water and Environment (Tana River County)</li> <li>Ministry of Environment, Wildlife and Natural Resources (Tana River County)</li> <li>Ministry of Land and Water (Lamu County)</li> <li>Ministry of Agriculture and Irrigation (Lamu County)</li> <li>Ministry of Health and Environment (Lamu County)</li> </ul>	<p>Representatives of the different County Government Ministries will take part in project consultations, workshops and seminars.</p> <p>They will also provide advice and suggestions for the project management and implementation of landscape restoration initiatives.</p> <p>They will also participate in policy and awareness related campaigns for mainstreaming landscape restoration and sustainable production.</p> <p>Representatives of the different County Government Ministries will also contribute in the following roles:</p> <ul style="list-style-type: none"> <li>Coordination of landscape restoration and sustainable land management efforts at county level.</li> <li>Development and implementation of landscape restoration and sustainable landscape management plans/programmes.</li> <li>Development and implementation of spatial planning.</li> <li>Enforcement of regulations on spatial plans.</li> <li>Support Local initiatives and provide co-financing.</li> <li>Local awareness rising on restoration.</li> </ul>
<b>National Government Departments</b>	
<ul style="list-style-type: none"> <li>State Department of Natural Resources</li> </ul>	<p>Representatives of the State Department of Natural Resources will take part in project consultations, workshops and seminars.</p> <p>They will also provide advice and suggestions for the project management and implementation of landscape restoration initiatives at national level.</p> <p>They will also participate in policy and awareness related campaigns for mainstreaming landscape restoration and sustainable production at national level.</p> <p>They will also contribute in the development of National Guidelines for restoration of critical habitats including engagement of communities in the formulation of Management Plans.</p>
<b>State Government Agencies</b>	
<ul style="list-style-type: none"> <li>Kenya Forest Service (KFS)</li> <li>Kenya Wildlife Service (KWS)</li> <li>Kenya Water Towers Agency (KWTa)</li> <li>National Museums of Kenya</li> <li>National Environment Management Authority (NEMA)</li> <li>Water Resources Management Authority (WARMA)</li> <li>Tana and Athi Rivers Development Authority (TARDA)</li> </ul>	<p>Participate in implementation of project activities at local level alongside communities; assist in mainstreaming landscape and forest restoration based on project findings; support developing village level landscape restoration projects and marketing initiatives.</p> <p>In addition, they will also participate in the following roles:</p> <ul style="list-style-type: none"> <li>Coordination of landscape restoration and sustainable land management efforts at county level.</li> <li>Development and implementation of landscape restoration and sustainable landscape management plans/programmes.</li> <li>Development and implementation of spatial planning.</li> <li>Enforcement of regulations on spatial plans.</li> <li>Support Local initiatives and provide co-financing.</li> <li>Local awareness rising on restoration.</li> </ul>
<b>Scientific communities (Research Institutes)</b>	
<ul style="list-style-type: none"> <li>Kenya Forest Research Institute (KEFRI)</li> <li>Kenya Marine and Fisheries Research Institute (KMFRI)</li> </ul>	<p>These institutions will participate in the project through the following ways:</p>

<i>Stakeholders</i>	<i>Type of Involvement</i>
<ul style="list-style-type: none"> <li>Kenya Agricultural and Livestock Organisation (KALRO)</li> </ul>	<ul style="list-style-type: none"> <li>Support the project by providing scientific and technical backstopping as well as collaboration in research and in the development of suitable methods and approaches.</li> <li>Conduct carbon offsetting analysis and monitor project progress.</li> <li>Participate in project consultations, seminars, conferences and workshops and will also take part in farmers' field days.</li> <li>Support provision of additional diversity to project sites where needed.</li> <li>Collaborate in the development of public awareness materials for mainstreaming of landscape restoration and the dissemination and up-scaling of project outputs through peer-reviewed scientific publications.</li> <li>Contribute to the identification of major knowledge gaps and through the development of research proposals.</li> <li>Organize training programmes for the project partners and also participate in public awareness and policy dialogues.</li> <li>Monitoring and evaluation of project activities and upscaling of lessons and best practices</li> <li>Translation of scientific information into policy and management advice.</li> <li>Conduct research into effectiveness of landscape restoration interventions including improvement of water flows.</li> </ul>
<b>Multilateral Agencies</b>	
<ul style="list-style-type: none"> <li>UN Environment</li> </ul>	<p>UN Environment is the implementing agency for this project, providing quality assurance, oversight, and support. It may also facilitate linkages to other relevant programs and projects, access to data and specialized technical advisory services. UN Environment will also be responsible for the project's GEF specific M&amp;E function, including evaluation services according to its UN Environment-GEF procedures, as well as compliance with GEF requirements. In addition, UN Environment-Science Division will be involved in monitoring the SDGs delivery in the project. For this project, and with a mandate provided by project's countries in their respective endorsement letters, UN Environment assigned project execution responsibilities to IUCN, which had conceived the project in its idea stage.</p>
<ul style="list-style-type: none"> <li>World Resources Institute (WRI)</li> </ul>	<p>Will be involved in planning and execution and monitoring of progress of project interventions and facilitating collaboration with partners.</p> <p>Will provide assistance in development and delivery of training, sharing their substantial tools and resources in relevant components.</p>
<ul style="list-style-type: none"> <li>Food and Agriculture Organization</li> <li>World Wildlife Fund (WWF)</li> <li>International Union for Conservation of Nature (IUCN)</li> <li>DANIDA</li> </ul>	<p>These organizations will play the following roles:</p> <ul style="list-style-type: none"> <li>Be responsible for project monitoring and evaluation of the project activities at various levels.</li> <li>Participate in planning and execution of project interventions and facilitating collaboration with other partners.</li> </ul>

<i>Stakeholders</i>	<i>Type of Involvement</i>
	<ul style="list-style-type: none"> <li>• Provide assistance in development and delivery of training activities, sharing of their substantial tools and resources in relevant components.</li> <li>• Provide support in the implementation of project activities at county level.</li> <li>• Facilitate regional and international dialogue and networking.</li> </ul>
<b>Non-Governmental Organizations</b>	
<ul style="list-style-type: none"> <li>• Nature Kenya</li> </ul>	Will be responsible for project execution and overall monitoring and hosting of the PMU; will be involved in planning and execution and monitoring of progress of project interventions and facilitating collaboration with partners.
<ul style="list-style-type: none"> <li>• World Resources Institute (WRI)</li> </ul>	<p>Will be involved in planning and execution and monitoring of progress of project interventions and facilitating collaboration with partners.</p> <p>Will provide assistance in development and delivery of training, sharing their substantial tools and resources in relevant components.</p>
<ul style="list-style-type: none"> <li>• East Africa Natural History Society (EANHS)/Nature Kenya</li> <li>• German Agro Action</li> <li>• Action Aid</li> <li>• Team and Team</li> <li>• Royal Society for the Protection of Birds (RSPB)</li> <li>• Birdlife International</li> </ul>	<p>These NGOs will undertake the following roles:</p> <ul style="list-style-type: none"> <li>• Works with farmers and communities to facilitate consultation and collaboration with communities across project sites and assist in mobilizing participatory action research.</li> <li>• Take part in project consultation and meetings and disseminate extensively outreach materials at the grass root level.</li> <li>• Provide support on farm field trials, organization of field days, diversity fairs, farmers' exchange visits and mobilization of relevant traditional knowledge.</li> </ul>
<b>Local communities*</b>	
<p><b>Community-based organizations</b></p> <ul style="list-style-type: none"> <li>• Tana Delta Conservation Network</li> <li>• Maridhiano CBO</li> <li>• Tana River and Lamu Community Forest Association (CFAs)</li> <li>• Kipini Beach Management Unit (BMUs)</li> </ul> <p><b>Farmers' Organizations</b></p> <ul style="list-style-type: none"> <li>• Golbanti Farmers Association</li> <li>• Hewani Farmers Group</li> <li>• Wema Cooperative Society</li> </ul> <p><b>Women's Groups</b></p> <ul style="list-style-type: none"> <li>• Maendeleo ya Wanawake</li> </ul> <p><b>Youth Groups</b></p> <ul style="list-style-type: none"> <li>• Tana Delta Youth Groups</li> <li>• Tana River Youth Groups</li> <li>• Lamu Youth Groups</li> </ul>	<p>The local communities including farmers organizations and youth groups will play the following roles in the project:</p> <ul style="list-style-type: none"> <li>• Participate in land use/spatial planning processes</li> <li>• Development of alternative livelihood systems including restoration of degraded landscapes and forests.</li> <li>• Formulation of management plans</li> <li>• Development of alternative livelihood systems including restoration of degraded landscapes and forests.</li> <li>• Be involved in participatory appraisals and community based activities to map biodiversity and sustainable practices and to mobilize relevant biodiversity-based interventions (practices and materials).</li> <li>• Will be involved in undertaking farmers' field trials for proper evaluation of genetic diversity for climate change adaptation.</li> <li>• Will have access to training and capacity building and other benefits arising through the project.</li> <li>• Will assist in the documentation of information and the maintenance and use of traditional knowledge.</li> <li>• Will be involved in activities pertaining to conservation and sustainable management and use of local biodiversity.</li> <li>• Will be involved in the establishment of community seed banks and their maintenance.</li> </ul>

<i>Stakeholders</i>	<i>Type of Involvement</i>
	<ul style="list-style-type: none"> <li>• Will be involved in the organization of farmers' field days and seed diversity fairs.</li> <li>• Will be involved in the organization of farmers exchange visits.</li> <li>• Will be involved in the formation of self-help groups (SHG) and training of SHG members in value added products.</li> </ul>

### **Beneficiaries of the project**

98. The Project will benefit and impact many different people and organizations, which will benefit from the specific outcomes of the project and involvement in the implementation of various project activities. The key beneficiaries of the project are described in the following sections:

99. **Policy makers at national and county levels:** The project activities, outputs and outcomes will be of great benefit to the policy makers in various National Government Ministries, particularly the Ministry of Environment and Natural Resources where forest and landscape restoration activities are anchored. The policy makers – particularly the senior Ministry officials such as the Cabinet Secretary – will gain important knowledge that will be critical in the formulation of policy, legal and institutional framework for the restoration of degraded landscapes and forests in Kenya. The project will also benefit senior County Government officials such as the County Governors, Executive Committee Members and Chief Officers thus increasing their knowledge and skills for implementation of landscape and forests restoration measures in their areas of jurisdiction. The policy makers will also benefit from the formulation of Ecosystem Management Plans (EMPs) and the National Forest Landscape Restoration (FLR) system. The project outcomes will also inform the relevant Committees of the National and County Assemblies.

100. **Decision Makers at national and county levels:** The project activities, outputs and outcomes will be invaluable to the senior government officials who are key advisers to the policy makers. These includes the Principal Secretary and Directors of various Departments in the Ministry of Environment and Natural Resources Management. The project would increase their capacity to provide appropriate support in the formulation of policies and guidelines for the restoration of degraded landscapes and forests in Kenya, including the formulation of Ecosystem Management Plans (EMPs), Participatory Forest Management Plans (PFMPs), among others.

101. **Government Officials at National and County level:** The project activities, outputs and outcomes will benefit officers working with various national government ministries such as the Ministry of Environment and Natural Resources; Ministry of Agriculture, Livestock and Fisheries; Ministry of Water and Irrigation and national institutions such as the Kenya Forest Service (KFS), Kenya Wildlife Service (KWS), Water Resources Management Authority (WARMA), among others. Staff of county and national ministries and departments in Kenya will benefit from the specific training on how to implement degraded landscape and deforested forests restoration activities using well tested approaches. This will in turn be used to develop policies, legal frameworks, incentives and guidelines for the restoration of degraded landscapes and forests at the Ministry of Environment and Natural Resources. They will also benefit through the formulation of Ecosystem Management Plans (EMPs), Participatory Forest Management Plans (PFMPs), among others.

102. **Research and academic institutions:** The project activities, outputs and outcomes will also be invaluable to research scientists in various research institutions that will be involved in the implementation of selected specific activities of the project. These institutions include the Kenya Forest Research Institute (KEFRI) and the Kenya Marine and Fisheries Research Institute (KMFRI), and Kenya Agricultural and Livestock Research Organisation (KALRO) who will be involved in the monitoring of the effectiveness of various degraded landscapes and forest interventions, identification of alternative livelihood systems including SMART agriculture and aquaculture, among others. They will also gain important skills and

knowledge in the application of Landscape Restoration Opportunity Assessment Methodology (ROAM), development of bio-enterprise services and products, generation of knowledge on non-timber products and services, among others. Selected universities will also benefit from the project outputs and outcomes, thus upgrading knowledge and skills for the restoration of degraded landscapes and forests in Kenya.

103. **Community Based Organisations (CBOs):** The project activities, outputs and outcomes will also be of great benefit to the members of various Community Based Organisations (CBOs) that will be involved in various training programmes and in the formulation of Community Action Plans (CAPs). The CBOs will benefit from new skills and knowledge that will be gained in various training activities focused on the restoration of degraded landscapes and forests, initiation of SMART agriculture projects for communities, management of Community Forest Areas (CFAs), among others. CBOs will also benefit from the development of bio-enterprise services and products including non-timber products and services, among others.

104. **Non-Governmental Organisations (NGOs):** The project activities, outputs and outcomes will also be of great benefit to the members of various Non-Governmental Organisations (NGOs) that will be involved in collaborative activities and partnerships that will be built with local, regional and national experts and other relevant organizations through the implementation of this project. The NGOs will benefit from new skills and knowledge that will be gained in various training activities focussed on the restoration of degraded landscapes and forests, initiation of SMART agriculture projects for communities, management of Community Forest Areas (CFAs), forest habitat monitoring, among others. NGOs will also benefit from the development of bio-enterprise services and products including non-timber products and services, among others.

105. **Farmers:** Individual farmers in the Tana Delta will benefit from the specific project activities, outputs and outcomes. The crop husbandry farmers will benefit from SMART agriculture projects enabling them to maximise on crop production and marketing this increasing their incomes levels. The livestock farmers will also benefit from the implementation of Livestock Grazing Plans and through lessons on the marketing of their livestock. Farmers will also benefit from the bio-enterprise services and products including non-timber products and services, among others. Farmers will also be supported through active partnership with research institutions, universities, extension workers and local development organizations

106. **Indigenous peoples:** The indigenous communities living in the Tana Delta include the Pokomo, Orma, Wardei and Sanye who are among the most marginalised communities in Kenya. The indigenous people will benefit from the implementation of this project, particularly through implementation of Community Action Plans (CAPs), Livestock Grazing Plans (LGPs), Participatory Forest Management Plans (PFMPs), among others. The restoration of degraded landscapes and forests in the Tana Delta will mean that the livelihood systems that supports these communities are sustained on long term basis, thus reducing or alleviating poverty. This will also ensure the conservation of their way of life and cultural identity. Indigenous community groups will be active participants in the project to keep the focus on their interests.

107. **Women:** Women will be involved in the implementation of the project as researchers, managers, technicians and farm level workers. The project will create more training opportunities for them and this will help achieve gender balance and equity. National and county level landscape restoration strategies will also ensure that proposed interventions take into account gender roles and imbalances so that resulting initiatives have a positive impact on women in these communities.

108. **Private sector:** These will be partners in the development of diversity rich practices, which will include activities and public awareness campaigns to change consumer preferences, norms and behaviours to support landscape and forest restoration including also implementation of SMART agriculture by providing investment opportunities and markets to farmers.

## 2.6. Baseline analysis and gaps

109. In the analysis of the baseline conditions, this section examines the current status of the Tana Delta ecosystem including the status of natural resources (e.g. land, forest, water resources), the current status with regard to the use of natural resources and the various interventions that have been undertaken by the National and County Governments in the Delta. The analysis of the baseline and gaps on the restoration of degraded landscapes and forests in the Tana Delta was partly based on studies done by Nature Kenya in the last nine years in the Tana Delta. These studies formed the basis for the preparation of the Strategic Environmental Assessment (SEA) for the Tana Delta in 2011. During the PPG phase of the project, most of the activities focused on stakeholder analysis, problem analysis, the analysis of barriers and their solutions and the analysis of livelihood alternatives for the local communities in the Tana Delta. Most of the work that was carried out during PPG was undertaken mainly through stakeholders workshops.

110. The Tana River Delta Land Use Plan (LUP) was formulated in 2014, involving participation of various stakeholders at national, local and international levels. The LUP was informed by in-depth analysis of existing socio-economic and environmental conditions in the Delta. The LUP has been endorsed by the County Governments of Tana River and Lamu Counties, at County Assembly levels, but implementation is yet to take place. This project is intended to contribute in the implementation of the LUP.

111. There are various land use classes in the Tana Delta as shown in Tables 2 and 3. Various categories of forests occupy a total area of 594 km<sup>2</sup> which is equivalent to 26% of the total land area in the delta. The land under various categories of farming is 524 km<sup>2</sup> which is equivalent to 23.3% of the total land area in the Delta.

**Table 2. Areas occupied by various land use classes in the Tana Delta**

Land Use Class	Area (Km <sup>2</sup> )	Percentage (%)
Forest	271	12.0
Riverine Forest	323	14.4
Thicket and Scrub	400	17.8
Mangrove forest	84	3.7
Water Areas	18	0.8
Salt Ponds	5	0.2
Dunes	103	4.6
Dryland Farming	370	16.4
Commercial Farming	31	1.4
Urban Areas	14	0.6
Floodplain Grasslands	508	22.6
Wetland Farming	123	5.5
<b>TOTAL</b>	<b>2250</b>	<b>100.0</b>

Source: Tana Delta Land Use Plan (2014)

**Table 3. Primary habitats making up the core of the Tana Delta**

Habitat	Area (Km <sup>2</sup> )
Forest	271
Riverine Forest	323
Water	18
Flood Plain Grassland	508
Mangrove Forest	84
Dunes	103
Migratory Corridors through thicket	100
Total	1,036



Source: Tana Delta Land Use Plan and SEA (2014)

112. The major economic activities in the Tana Delta are shown in Table 4 below. The main economic activities in the Delta include livestock grazing, farming and harvesting of natural resources. Livestock grazing is the most important economic activity. Other important activities including natural products, charcoal production and firewood and harvesting of Non-Timber Forest Products (NTFPs).

**Table 4. Economic Activity in the Tana Delta as per SEA)**

Economic Activity	Number of Jobs or livelihoods	Value (Annual Income) Kshs
Livestock-Open grazing		5.73 billion (Kshs @ 12,000/head)
Livestock -Ranches		5.7 million kshs
Farming	12,409	62 million kshs
Fishing	450-700	53.14 million kshs
Bee keeping		29.29 million kshs
Natural Products	10,000-12,000	333-416 million kshs
Harvested NTFP		80 million kshs
Materials for construction and repair of houses		100 million kshs
Charcoal and firewood		153-236 million kshs
Trade commerce and financial services	3,488	74-114 million kshs
Tourism		28,000 USD
Industry and mining	50	

Source: Tana Delta Land Use Plan and SEA (2014)

113. The Tana River Delta is an important wild life area with various species of wildlife. Table 5 based on data obtained from Kenya Wildlife Service (KWS) shows the different species of wild animals that are found in the Delta. Wildlife in the Delta is under threat from poaching, encroachment by pastoralists and human-wildlife conflicts.

**Table 5. Wildlife Population in the Tana Delta**

Species	Years		
	1993	1996	2002
Buffalo	8,644	1,884	1,518
Eland	736	78	-
Elephant	122	255	239
Grants Gazelle	2,325	3,846	3,537
Gerenuk	2,345	3,022	4,356
Giraffe	3,799	1,315	1,218
Hunter's Hartebeest	407	19	-
Lesser Kudu	1,259	883	2,098
Oryx	1,802	2,178	1,019
Ostrich	1,414	1,044	419
Topi	5,679	255	-
Warthog	1,666	2,590	2,677
Waterbuck	1,201	608	139
Plains Zebra	2,461	2,355	1,538
Grevy's Zebra	38	37	-

Source: Kenya Wildlife Service (KWS)

114. There are various community based groups in Tana River and Lamu Counties that have interests in the sustainable land management and development of the Tana River Delta. Each of the main villages in the Tana Delta has a number of community based groups that can play an important role in the



implementation of various specific activities of the project (see Annex 9 Tables 6, 11, 15, 19, 23 and 27). Through a process led by Nature Kenya, the community based groups in the Tana Delta have identified the main challenges and future trends in the main income generating activities particularly livestock keeping, fishing, small-scale agriculture and tourism (Annex 10-Tables 1 -4). However, the effectiveness of community based groups in the Delta in influencing sustainable development, including adoption of sustainable land management practices, has been limited due to lack of education and awareness. The community-based groups involved in environmental advocacy are also limited by lack of understanding of interlinkages between various issues and cumulative impacts of development projects. The involvement of communities in sustainable land management and landscape restoration has mainly been focused on limited restoration of degraded mangrove areas along the coast.

115. There is little in terms of implementation of landscape restoration works in the Tana River Delta. Most of the landscape restoration initiatives that have so far been undertaken have led to other serious adverse effects. Good example is in case of *Prosopis juliflora* that has had major adverse effects on irrigation canals, fields and roads. In addition, landscape restoration projects focussed on mangrove forests have been very limited in scale with no major impacts in terms of generation of viable environmental goods and services. The Government also regularly undertakes tree planting campaigns in the Delta but these have also not been successful due to destruction of planted seedlings by grazing livestock.

116. At both National and County Government levels, there is limited capacity to undertake integrated natural resources management and implement landscape restoration works in the Tana River Delta. This limitation is in terms of technical, financial and human resources required for effective implementation of landscape intervention programmes. There is also limited capacity at the County Government level for the formulation and implementation of landscape restoration projects including implementation of water conservation and Climate Smart Agriculture which is an approach that helps in guiding action need to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. Climate Smart Agriculture has the objectives of sustainably increasing agricultural productivity, building resilience to climate change and reducing or removing green house emissions. The ecosystem-based management approach is also not used in the management of the Tana River Delta ecosystem and associated landscapes, with the result that interdependence between various ecosystems in the Delta, including interlinkages between upstream and downstream activities, are not taken into consideration in development projects in the delta.

117. A number of studies have been undertaken in the Tana River Delta including the congruent Tana River Basin. These studies have established the impacts due to damming in the Upper Tana Basin. These studies have established that major modifications of streamflow, both minimum and high flood floods have occurred in the Tana Delta, with serious consequences to riverine forests, and livelihood system such as livestock grazing and flood recession agriculture<sup>39</sup>. The duration of overbank floods has been reduced from eight days to five days. The frequency of occurrence of high floods has also been considerably reduced with the exception of periods of exceptionally high rainfall. The river discharge at Garsen currently varies from 60 to 730 m<sup>3</sup>/s with a mean discharge of 230m<sup>3</sup>/s. The flood flows are usually of the order 1000 m<sup>3</sup>/s. The mean annual freshwater discharge is 4,700 x 10<sup>6</sup> m<sup>3</sup> per annum. The Tana river water is relatively turbid with total suspended sediment concentration (TSSC) varying from 0.53 to 1.5 g/l<sup>40</sup>. The sediment load is currently 6.8 million tonnes per year<sup>41</sup>. The degree of meandering of the river has considerably reduced following the construction of hydro-electric dams upstream.

<sup>39</sup>UNEP/Nairobi Convention Secretariat (2010): An assessment of hydrological and land use characteristics affecting river-coast interactions in the Western Indian Ocean region. UNEP-GEF WIO-LaB Project Report, Nairobi, Kenya, 46p.

<sup>40</sup>Kitheka, J.U and Mavuti K.M (2016):*Tana Delta and Sabaki Estuaries of Kenya: freshwater and sediment input, upstream threats and management challenges*. In: S. Diop et al. (eds.), *Estuaries: A Lifeline of Ecosystem Services in the Western Indian Ocean*, Estuaries of the World, Springer International Publishing Switzerland 2016, DOI 10.1007/978-3-319-25370-1\_6.

<sup>41</sup>Kitheka, J.U (2014): *Assessment of modification of the Tana River runoff due to developments in the Upper Tana Basin*. In: The Proceedings of the 2<sup>nd</sup> Hydrological Society of Kenya (HSK) Workshop: “Hydrology in Water Cooperation and Security for Sustainable Economic Development”. Sub-Theme: Hydrology and Sustainable Development. 29-30<sup>th</sup> April 2014, Nairobi, Kenya.p.178-191.

118. Tana Delta experiences low and unreliable rainfall that in most cases falls as short, high intensity rainfall storms that produce considerable runoff and soil erosion in degraded lands. The mean annual rainfall ranging between 300 and 900 mm per annum is generally considered low to support crop production.

119. As a response, several irrigation schemes have been established in the Tana River Delta. These include the Tana Delta Irrigation project (200 acres) and Lower Tana Village Irrigation Projects at Wema and Hewani (135 acres) that focussed on production of rice (297.5 and 200.8 million tonnes, respectively). Upstream of the Delta there are two large irrigation schemes namely Bura and Hola Irrigation and Settlement Schemes. The irrigation schemes have suffered from repeated damage and erosion from floods, inappropriate application of inputs and mismanagement and most of them have been affected by shifting patterns of the main Tana River channel rendering pumping of irrigation water impossible. Hola and Tana Delta Irrigation schemes were abandoned in 1998 following massive destruction of irrigation infrastructure by El Nino floods. Bura Irrigation scheme ceased operations in 1999 as a result of corruption, mismanagement and difficulties of pumping water from the Tana river.

120. Livestock rearing by pastoral communities in the Tana Delta is one of the main economic activities that provides jobs and incomes to the local communities (Annexes 4, 8 and 10-Table 1). The rearing of cattle, sheep, goats and camels takes place in open grasslands, scrubland, thickets and riverine forest margins. Trading in cattle is estimated to generate between Kshs 228 million to 1.26 billion. Trading in sheep and goats brings in between Kshs 20 to 30 million per year. The milk production is estimated to be 27,795 litres which generates a total income of Kshs 834,000. The SEA analysis indicated that during wet season, the total number of livestock in the Delta is 220,000 and this increases to 735,000 during dry seasons when migratory pastoralists bring livestock from other areas into the delta due to availability of dry season grazing grounds. The only area that receives limited or no grazing is estimated to vary between 5 to 10% in the Delta. The total grazing land is estimated to range between 70,000 and 100,000 ha. In the dry season, the level of livestock grazing is usually way above the carrying capacity of the Delta leading to overgrazing and subsequent destruction of vegetation. Farming areas receives low levels of livestock grazing particularly during wet seasons.

121. Farming practice in the Delta includes permanent cultivated and fruit growing areas around villages, small-irrigated areas, temporary slash-and-burn areas, and flood recession farms on the flood plains. The area under cultivation is estimated to be 89,300 ha which is equivalent to 40% of the total land area in the Delta. The average size of cultivated land is 0.6 ha (1.5 acres). The local communities in the Delta are not self sufficient in food production with the implication that the Government provides food to the people through its Relief and Recovery programme.

122. Artisanal fishing is also practised in the Delta with an estimated production of about 613 tonnes per year<sup>42</sup>. While the Tana Delta could support bee-keeping and ecotourism, very few people are engaged in these activities due to a lack of technical know-how, investments and underdeveloped markets. There is also significant cutting of trees from riverine forests and mangrove forests for production of timber, building poles, charcoal production and wood fuel. Tourism is not well developed in the Delta, although there is a wide diversity of wildlife such as rare Colobus and Managabey monkeys in the Tana River Primate National Reserve including vast flocks of waterbirds in the flooded grasslands, hippos and crocodiles in the river, and a variety of savannah wildlife ranches, including the 76 km beaches along the coast. Industrial and mining activities are absent in the Delta.

123. The poverty levels are high in the Tana River Delta and 95% of the population is dependent on subsistence farming, livestock rearing and exploitation of natural resources for their survival. This is already exerting huge pressure on the Delta ecosystem. Charcoal burning and logging is threatening to wipe out indigenous riverine forests and mangroves with major implications on biodiversity. Unsustainable human activities associated with poverty are threatening the fragile ecosystems in the Delta.

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<sup>42</sup> Fisheries Department, Tana River, 2007

124. The crop farming on 14,890 ha is estimated to generate a gross income of Kshs 62 million in 2001. Income from artisanal fishing was estimated in 2007 to generate a gross income of Kshs 53 million<sup>43</sup>. Trading activities are generally low in the Tana Delta with significant activities being concentrated in main towns such as Garsen, Kipini, Ngao, Witu and Tarasaa. There were about 489 businesses in 2008<sup>44</sup>. The gross trading level in the Tana Delta has been estimated to range between Kshs 74 and 114 million. Infrastructure is generally poorly developed in the Delta with poorly maintained roads, lack of electricity and piped water supply. Most of the villages are only accessible by footpaths. General health service provision is also poor due to inadequate health facilities, poor road network and shortage of staff. The education levels are also very low with about 39.3% of the population having not attended school. 44.5% of women have never attended school compared to 34.1% of the males<sup>45</sup>.

125. Conflicts are common in the Tana River Delta. There are various types of conflicts ranging from inter-ethnic conflicts to human-wildlife conflicts. There have also been conflicts between communities and development projects in the Delta. The inter-ethnic conflicts between the pastoralists (Orma & Wardei) and farmers (Pokomo) have occasionally led to deaths in the two communities. The resource use conflicts are mainly due to increased pressure on natural resources as a result of rapid population increase, climate change, land use conversions and insecurity of land tenure. Human-wildlife conflicts in the delta are as a result of encroachment of wildlife migration corridors. The conflicts often lead to loss of human life, livestock and destruction of property.

126. Gender issues in the Tana River Delta are mainly related to the culture, religion and traditions of the local pastoral and farming communities. Among the pastoralists, men are responsible for herding cattle while women are responsible for domestic chores and gathering fuelwood and fetching water. The representation of women in various income generation activities varies from one village to another as shown in Annex 9 –Tables 8, 13, 17, 25, 29. Among the agriculturists, both men and women participate in farming activities but men control the family resources. The major gender issues include: heavy workload for women, exclusion of women in accessing economic assets and participation in decision-making processes due to traditional and cultural practices. There are also cases of early marriages of girls and limited access to education among the girls. Literacy level is low among women compared to men. In general, women in the Tana Delta are disadvantaged with regard to access to employment opportunities and participation in productive economic activities.

127. The conception of this project has involved participation of various key stakeholders in the conservation of the Tana Delta ecosystem in Kenya. The stakeholder consultation process started back in 2011 when the Government of Kenya established an Inter-Ministerial Technical Committee (IMTC) to chart the way forward for sustainable development in the Tana Delta. The Inter-Ministerial Technical Committee (IMTC) membership included the Office of the Prime Minister, National Environment Management Authority (NEMA), Kenya Wildlife Service (KWS), Kenya Forest Service (KFS), Ministry for Planning, National Development and Vision 2030 (MNPD & V2030), Ministry of Lands (MOL), Ministry of Agriculture (MOA), Ministry of Water and Irrigation (MOW&I), Nature Kenya (NK) and IMARISHA Naivasha Board. The IMTC developed a strategic framework to oversee planning for the Tana Delta. This strategy provided a roadmap and governance structure for guiding the Kenya Deltas Initiative to undertake General Management Planning that use participatory approaches to identify actions, define strategies, timelines and milestones to achieve sustainable framework for Kenya's deltas.

128. In September 2011, IMTC convened a high level meeting in Malindi to inform stakeholders and discuss the need for a strategic plan for the Tana River Delta. Sixty five stakeholders took part in the meeting that was hosted by the Office of the Prime Minister with Nature Kenya and NEMA providing a joint secretariat. The Malindi stakeholders workshop was also attended by representatives from key government ministries and agencies together with representatives of the local communities, NGOs, media

<sup>43</sup>Odhengo P. Matiku P., Nyangena J., Wahome K., Opaa B., Munguti S., Koyier G., Nelson P and Mnyamwezi E.,(2014a). Tana River Delta Strategic Environmental Assessment. Published by Tana River and Lamu County Governments.

<sup>44</sup> Tana River District Development Plan-2008-2012

<sup>45</sup> Government of Kenya (2010): 2009 Kenya Population and Housing Census. Vol. 1A. Kenya National Bureau of Statistics, Nairobi, Kenya.

and international experts in the field of land use and delta planning and Strategic Environmental Assessment (SEA). The workshop also included a visit into the Tana Delta where stakeholders were provided with an opportunity to consult with the local community and understand issues at hand.

129. Tana Delta Planning Advisory Committee (TPAC) composed of 21 members was subsequently established late in 2011 to coordinate action on the ground within the Tana Delta. TPAC membership included District Development Officer, District Livestock Officer, District Agriculture Officer, District Commissioner, pastoralists, fisherfolk, farmers, women groups, development oriented NGOs, marine fishermen, people with disabilities, among others. TPAC was chaired by a representative of the County Governments. TPAC provided important feedback on the contents of the Strategic Environmental Assessment (SEA) and Land Use Plan (LUP) for the Tana Delta that were prepared with the support of the Department for International Development –United Kingdom Aid (DFID-UKAid). SEA and LUP provided the basis for this project.

### **Baseline initiatives**

130. The project will build on lessons learned and establish close synergies with the ongoing engagement and investment in forest landscape restoration that are occurring in Kenya. Several projects and programmes linked to landscape restoration (either addressing the causes of degradation or setting up the basis for restoration) are being implemented in the country which provide a baseline for the proposed project. These include:

131. **Empowering the poor to achieve local control and sustainable management of the natural resources of Tana River Delta.** Implemented between 2011 and 2015, this project was executed by Nature Kenya. The total project cost is £650,626.24 with £496,596.99 provided by DFID-UK through the Civil Societies Challenge Fund (CSCF) and £154,029.25.25 provided by other partners including Royal Society for the Protection of Birds (RSPB) and Nature Kenya. The project partners included: Wild Living Resources – Marketing and Packaging; Kenya Red Cross –rebuilding and peace building; Kenya Wildlife Service – activities related to Ramsar listing and wildlife management; National Environment Management Authority – drafting wetland management plan, Ministry of Agriculture, Livestock and Fisheries – providing agricultural extension services and advising fishermen, pastoral activities and beekeeping; Ministry of Lands – leading LUP process; Ministry of Planning – leading SEA and IMTC process (17 ministries and 4 NGOs overseeing SEA and LUP at the national level and TPAC bringing together partners on the ground). The main results achieved by the project include: *a) Development of the Strategic Environmental Assessment (SEA) that guided the development of the Land Use Plan (LUP) endorsed and signed off by Tana River Delta County Governments.*

132. **Balancing water services for development and biodiversity conservation in the Tana-Delta.** The project is funded by the Darwin Initiative with the budget of US\$ 514,000. The implementation started in April 2017 and it is expected that the project will be completed by March 2021. In line with the recent government and community approved strategic Land Use Plan (LUP), within the framework of this project Nature Kenya is supporting two County governments, Lamu and Tana River and local communities to establish a 95,200 ha multiple use, (biodiversity, fishing, livestock, crops) Community Conservation Area (CCA) encompassing the two main river channels of the Delta, a biodiversity hotspot.

133. **Integrating Livelihoods and Conservation: People Partner with Nature for Sustainable Living Program 2015-2018:** This Danida-CISU funded programme is coordinated by the Denmark Ornithological Foundation (DOF). Phase I of the programme has a budget of 15 million DKK, and will end in March 2018. Nature Kenya is responsible for 5 million DKK for activities in Kilifi and Taita-Taveta County. Phase II has been approved for development and is anticipated to be implemented from April to 2018. The long term objective of the Program is to improve and qualify the management of natural resources, especially forested important biodiversity areas (IBAs), on which local livelihoods depend for food, fuel and critical ecosystem services, such as water, soil conservation and reduced vulnerability to natural disasters and climate changes. It builds on the assumption that participatory forest management that is based on the

genuine involvement of local women and men, duty bearers and other key stakeholders will contribute to improved livelihoods and poverty reduction of local communities by securing access to natural resources and ecosystem services.

134. The Kenyan government has acknowledged the landscape degradation taking place in Kenya and, with a EUR 31,000,000 grant funded by the European Union (EU), and has begun implementing the **Water Towers Protection and Climate Change Mitigation and Adaptation programme**, launched in 2016. This programme supports the eradication of poverty through enhancing the productivity of ecosystem services in two of Kenya's five water towers – Mount Elgon and Cherangany Hills, together with its ecosystems covering eleven counties. The proposed Tana Delta landscape restoration project will build on this ongoing initiative and strong national and county leadership on landscape restoration in the region and apply important methods and lessons learned there to the Tana Delta. Some activities such as landscape restoration opportunity mapping and monitoring, which are ongoing in the Western Kenya counties, will be applied to the Tana Delta. Additionally, activities and strategies such as the development of county policies, plans, and conservation areas will be piloted in the Tana Delta and later transferred to the Western Kenya counties. While the two landscapes are different, many of the challenges are the same, and the project anticipates that lessons learned from one landscape will be applicable to the other. The primary land use in the Western Kenya counties is cropland surrounding important, intact forest blocks. This is representative of most of the land surrounding Kenya's other main water towers. Successful practices here will be highly relevant for scaling up in other agricultural landscapes in the country.

135. Kenya is also implementing several projects on the payment for ecosystem services (PES) that have been piloted in Sasumua dam in Nyandarua, Malewa river in Naivasha, Kapingazi in Embu and in Nyando and Yala river basins in Western Kenya. The main institutions that have spearheaded the PES research are World Agroforestry Center working closely with Jomo Kenyatta University of Agriculture and Technology (JKUAT), WWF working closely with CARE Kenya and the recently concluded Mt. Kenya East Pilot Project (MKEPP) project. The ongoing Upper Tana Natural Resource Management Project (UTaNRMP) builds on the work of MKEPP on PES issues. The Ministry of Environment and Natural Resources is also implementing an activity for piloting PES in Sasumua dam. These Payments for Environmental Services (PES) projects are offering incentives to communities, farmers or landowners in exchange for managing their land and resources for providing environmental services. The programs are voluntary and mutually beneficial contracts between consumers of environmental services and the suppliers of these services. Some of the important lessons learnt in the PES projects in Kenya is that sustainable provision of ecosystem services can be achieved through changes in land-use practices, incentives to farmers, enhancing livelihoods and strong stakeholder partnership leads to more successful implementation. The Tana Delta INRM and landscape restoration project will draw lessons and best practices from these PES Projects.

## **2.7. Linkages with other GEF and non-GEF interventions**

136. A number of relevant national and international GEF and non-GEF interventions have been identified, which the project will take full account of and/or with which it will develop appropriate links. This will ensure that the Project benefits from collaboration with other relevant initiatives and builds on lessons learnt in other projects. It also ensures that the project can provide a platform for bringing together a wide range of different initiatives and partners in Kenya around a common sustainable land management and landscape restoration agenda. Some of the most relevant initiatives are described in the next paragraphs.

137. This Project is part of The Restoration Initiative (TRI) GEF Program which has been developed to make a significant global contribution to restoring ecosystem functioning and improving livelihoods through the restoration of priority degraded and deforested landscapes, in support of the Bonn Challenge. The TRI program consists of 11 national Child projects in 10 countries of Africa and Asia, and it is supported by a Global Learning, Financing, and Partnerships project (GCP) to develop and disseminate best-practices and tools, catalyze investment in restoration, expand the scope of countries and actors engaged in forest and landscape restoration, and realize benefits at scale. The Tana Delta project is one of the 11 national child projects under the Global Restoration Initiative (TRI).



138. The second TRI Child project in Kenya that is being developed by the Kenya Forest Research Institute (KEFRI) with implementation support from FAO will focus on the Mukogodo forest and Makuria ranches in Northern Kenya. This project has similar objectives as the Tana Delta Project and therefore linkages between the two Kenya TRI Child projects will be established in order to seek full complementarity and avoid duplication. The key areas for potential collaboration include; (i) application of similar restoration opportunity assessment methodologies (ROAM), (ii) sharing of lessons/best practices in the formulation of Forest Management Plans (FMPs), Community Action Plans (CAPs), Participatory Forest Management Plans (PFMPs) and Livestock Grazing Plans (LGPs), (iii) Joint Training Programmes, (iv) Development of the National Forest Landscape Restoration System (FLR), and (v) Formulation or enhancement of national policies and regulations on forest landscape restoration. To facilitate these linkages and collaboration between the two TRI Child Projects in Kenya, the Project Coordinators/Managers of the two projects should be members of the Steering Committees of either of two projects.

139. There are also a number of projects focusing on land degradation, forests, biodiversity and climate change adaptation that are funded by the Global Environment Facility (GEF) in Kenya in which the project will establish linkages. These include:

140. The World Bank project entitled '*Tana River National Primate Reserve Conservation Project*' that focused on the development and implementation of a management plan for the Tana River National Primate Reserve, which contains the last remaining contiguous area of indigenous riverine forest along the Tana River.

141. The UNDP project entitled '*Improved Conservation and Governance for Kenya Coastal Forest Protected Area System*'. This project addressed the sustainable conservation and management of one specific sub-set of the Protected Area system of Kenya: the coastal forests. The project focused on institutional support and capacity development for the stakeholders involved in the Coastal Forest Eco-Region, one of the world's most threatened biodiversity global hotspots. The project worked at landscape level, and brought together the varied institutional players (Government through wildlife, forestry, agriculture and community sectors, as well as private sector, civil society and communities themselves). The project's outcomes included the piloting of conservation processes in the Kwale District Forest Landscape around the Shimba Hills and dissemination of findings from the pilot activity more broadly within the forest sector of Kenya.

142. The UNEnvironment project entitled '*Dryland Livestock Wildlife Environment Interface Project (DLWEIP)*'. The overall goal of the project was to mainstream biodiversity and livestock resources at the interface between mixed production ecosystems and protected areas through the promotion and support of sustainable land use management systems for improved community livelihoods, biodiversity conservation and reduction of land degradation.

143. The International Fund for Agricultural Development (IFAD) project entitled '*Mount Kenya East Pilot Project for Natural Resource Management (MKEPP)*'. The goal of this project was to ensure equitable and sustainable use of nature resources for sustainable poverty reduction. The specific objective of the project was to improve conservation, management and sustainable use of biological resources in the protected areas of Mt. Kenya National Park and Forest Reserve while at the same time ensuring equitable and sustainable use of natural resources by farmers in the agricultural areas. The project involved stakeholders in improving biodiversity conservation and enhancing land management through: (a) support for community-based water resource management along ecological boundaries, (b) implementation of measures to address land degradation on community trust lands and farm plots; (c) improvement of sustainable on-farm food production and promotion of on- and off-farm income-generating activities together with protection from wildlife.

144. The World Bank *Strategic Investment Programme (SIP) for Sustainable Land Management (SLM) in Sub-Saharan Africa (SSA)*. The project aimed at optimizing natural resource use at the landscape level in SSA countries by integrating and implementing SLM across sectors, assisted by the knowledge, analytical, and policy support of the World Bank (in association with TerrAfrica partners) and a programmatic envelope of well-informed, sequenced investments.

145. The World Bank project entitled '*Western Kenya Integrated Ecosystem Management Project*'. The project aimed at enhancing the potential to sequester additional above- and below-ground carbon in the project area, and develop scientifically sound and cost-effective procedures and protocols to measure, monitor and validate above- and below-ground carbon sinks in different land-use systems. The project also promoted agroforestry and other improved land management activities in upland areas to rehabilitate degraded lands, improve erosion and sediment control, and reduce nutrient delivery to Lake Victoria from agricultural activities.

146. The UN Environment project on '*Sharing Knowledge on the Use of Biochar for Sustainable Land Management*' that focused on demonstrating and promoting the adoption of Sustainable Land Management (SLM) practices involving the use of innovative organic amendments, based on biochar, that improve the capture and efficient use of nutrients, and enhance productivity, improve climate resilience, support rural livelihoods, and contribute to watershed management.

147. The Global UN Environment project "*Building the Foundation for Forest Landscape Restoration at Scale*". This project which is executed by World Resources Institute (WRI) is aimed at contributing to the Wider Sustainable Landscape Goal and its Interaction with the Complementary Strategies of Avoided Deforestation and Climate Smart Agriculture. One of the major outputs of this project relevant to Kenya has been the development of landscape restoration opportunity and priority maps for the country which are of important relevance to the proposed project. The project is now working at the country level in Bungoma and Trans-Nzoia counties, developing landscape restoration opportunity maps as well as identifying a monitoring framework for the water towers.

148. The project would also establish links with the Kenya Forest Service project entitled "*Capacity, policy and financial Incentives for participatory forest management in Kirisia forest and integrated rangelands management*" whose objective is to improve livelihoods of communities from dryland forest-based products and services. The project aims to deliver multiple biodiversity, climate change and livelihood benefits from 91,452 ha of Kirisia Forest under participatory forest management and 50,000 ha of rangelands under Holistic Natural Resources Management respectively. Lessons learned through this project in the semi-arid and arid rangelands will be used to inform activities in the Tana Delta where the terraces are a similar landscape. Capacity, policy and financial incentives developed here will be relevant to the Tana Delta and will be considered.

149. The UNDP project entitled '*Mainstreaming Sustainable Land Management in Agropastoral Production Systems of Kenya*'. The objective of the project is to provide land users and managers with the enabling policy environment, institutional, financial incentives and capacity for effective adoption of Sustainable Land Management (SLM) in four Agropastoral districts in Kenya.

150. The UN Environment project on the '*Strategic Action Programme for the Protection of the Western Indian Ocean from Land-based Sources and Activities (WIO-SAP)*'. This project will be implemented in the period between 2017 and 2022 and the goal is to reduce impacts from Land-Based Sources and Activities and sustainably manage critical coastal-riverine ecosystems through the implementation of the WIO-SAP Priorities with the support of partnerships at national and regional levels. This project has a component on sustainable management of river flows that aims at promoting wise management of river basins in the Western Indian Ocean region through implementation of a suite of activities aimed at building the capacity for environmental flows assessment and application in river basins of the region. The Tana

River basin was identified as one of the priority areas for the implementation of activities on environmental flow assessments.

151. The IFAD GEF project entitled “*Establishment of the Upper Tana-Nairobi Water Fund (UTNWF)*”. The project is implemented as part of the GEF 6 Integrated Approach Pilot “*Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa*”. The objective of this project is: A well-conserved Upper Tana River basin with improved water quality and quantity for downstream users (public and private); maintaining regular flows of water throughout the year; enhancing ecosystem services, specifically food security, freshwater and terrestrial biodiversity; and improving human well-being and quality of life for upstream local communities. The proposed Tana River Delta project will implement its activities in close coordination with the UTNWF project.

152. The project will draw on the experiences and lessons learnt in the World Bank *Kenya Coastal Development Project (KDCP)* which implemented a variety of community based interventions that are relevant to the Tana Delta project. Some of the projects implemented include those focusing on development of alternative livelihood systems, restoration of mangrove forests, terrestrial forests and eco-tourism, among others. The project will benefit from the lessons learnt in the KDCP projects and ensure that best practices are scaled up in the rest of the Tana Delta. The Tana Delta project will build on lessons learnt in this project, particularly on livelihood projects that were initiated.

153. The project will establish direct links with the Wetlands International *Integrated Tana Delta Management Programme*. Under this programme an integrated analysis of the biophysical processes across the delta has been conducted to provide knowledge on ecosystem values and how these can be sustained. This is important for promoting maintenance of valuable habitats and species, while guiding sustainable development of agriculture and aquaculture sectors and related existing and planned infrastructures. Wetlands International has also made important strides in strengthening of Community-based Organisations in the Tana Delta focusing on natural resource management, advocacy, entrepreneurship, business planning, resources development, supply chain development and value chain analysis. They have also conducted an assessment of CBOs in the Tana Delta and their natural resource bases and supported the development of sustainable land use business models for the sustainable use of natural resources, with tangible and reliable environmental and socio-economic benefits.

#### **Non-GEF Projects and Programmes:**

154. The proposed project builds on the findings of the UN Environment report *The Economics of Ecosystem Services of the Tana River Basin* which looks at how to strike the right balance between development and conservation in the basin, analysing development scenarios planned for the basin and their benefits and trade-offs for human wellbeing. The report values the ecosystem services of mangroves in the Tana River Delta – which provide services such as fish, firewood and flood protection – at US\$2.5 million. Already 38 per cent of the mangroves in the delta have been lost. The report is the result of collaboration between Kenya’s Water Resources Management Authority, the National Museums of Kenya, Wetlands International, UN Environment, the Netherlands Ministry of Economic Affairs, the Universities of Amsterdam and Nairobi, and the Institute for Environmental Studies.

155. The project will establish direct links with the *African Forest Landscape Restoration Initiative (AFR100)* that has a goal of bringing 100 million hectares of deforested and degraded landscapes across Africa into restoration by 2030. The initiative provides technical and financial support to participating African partners to scale up landscape restoration works on the ground and therefore enhance associated benefits for food security, climate change resilience and poverty alleviation. The initiative is important for the achievement of domestic environmental and development commitments, the Bonn Challenge and Land Degradation Neutrality target-setting process among other targets. As a founding member of AFR100, Kenya has made a commitment to restore 5.1 million ha of land. To help achieve this, the AFR100 platform will mobilize financial and technical partners to help scale up successes already taking place in other parts

of the country, particularly in Western Kenya counties of Trans Nzoia and Bungoma. The project on the Tana Delta will contribute to the achievements of the aims of AFR100.

156. The project will establish direct links with the *The African Resilient Landscapes Initiative (ARLI)*, contributes to the implementation of *African Landscapes Action Plan (ALAP)* and the broader Climate Change, Biodiversity and Land Degradation (LDBA) programme of the African Union. The ARL is also intended to accelerate progress towards achievement of the Sustainable Development Goals (SDGs) and the Paris climate agreement.

157. The project will also draw lessons from the Kenya Government project entitled '*Water Towers Protection and Climate Change Mitigation and Adaptation Programme*' in 11 Counties in Western Kenya with funding from the European Union (EU). The goal of this project is consistent with that of the Tana Delta project. World Resources Institute (WRI) is also already involved in this project, implementing activities in Trans Nzoia and Bungoma Counties. The proposed Project would establish linkages with this project to continue with the implementation of activities being undertaken in Trans Nzoia and Bungoma Counties once funding from EU ends in 2018.

158. **Capacity Development Project for Sustainable Forest Management in Kenya (CADEP-SFM).** This 5-years project is funded by JICA and aims at strengthening the national capacity at national and county levels for sustainable forest management. It is implemented by the MENR, KFS, KEFRI and the County Governments. It covers the following five components:

- Policy support implemented by the MENR: enhanced implementing and monitoring capacities of forest –related policies; prepare policy briefs based on the results of monitoring.
- Pilot implementation through County Government and Private sector (implemented by KFS): Assist two pilot Counties to promote sustainable forest management; design and implement a scheme to work with private sector to promote the use of improved seedlings.
- REDD+ Readiness Support implemented by KFS: Develop NFMS (National Forest Monitoring System); develop and evaluate FRL (Forest Reference Level); create 2020 Land Cover/Land Use map.
- Tree Breeding implemented by KEFRI: Improve seed orchards and seed stands; support to establish seed orchards in the pilot Counties.
- Regional Cooperation implemented by KEFRI: Collect and share good practice information for strengthening the resilience to climate change; hold regional cooperation meetings and forum.

159. Through Nature Kenya, the project will work with the Royal Society for the Protection of Birds (RSPB) -Nature Kenya Project supporting wildlife conservation in Kenya. The Project will provide support in the implementation of some of the landscape restoration activities, including activities aimed at building the capacity of the County Governments of Lamu and Tana River Counties.

## SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

### 3.1. Project rationale, policy conformity and expected global environmental benefits

160. Kenya seeks to build on the momentum currently surrounding landscape restoration in the country by learning and expanding lessons generated by Nature Kenya in the Tana Delta and WRI's national restoration efforts. WRI is working closely with the Kenya National government and other stakeholders to catalyse support for a national restoration movement. Much of this is focused at the national scale, building support among ministries and non-governmental stakeholders, and identifying the potential areas and benefits of landscape restoration. Nature Kenya has been on the front lines of the landscape restoration and conservation movement, working directly with local community groups and governments to conserve and restore the Tana Delta and other critical habitats throughout Kenya. Kenya aims to leverage this unique expertise to mainstream integrated natural resource management (INRM) as a means of landscape restoration into the policies and plans of the national and county governments in Kenya.

161. The global restoration movement has also benefited from its linkages with INRM, Climate Smart Agriculture (CSA), evergreen agriculture, and the need for increased food production to feed a growing world population. This is particularly relevant in Africa, where unsustainable land use has resulted in the degradation of countless millions of hectares of productive agriculture and grazing lands. INRM is described by ICRAF as a conscious process of incorporating multiple aspects of natural resource use into a system of sustainable management to meet the explicit goals of resource users, managers and other stakeholders. This means integrating across: disciplines, scales, stakeholders and components. Climate Smart Agriculture (CSA) aims to increase production, enhance resilience and reduce emissions. This involves integrating the three dimensions of sustainable development (economic, social and environmental) by jointly addressing food security and climate challenges.

162. Evergreen Agriculture is the integration of particular tree species into annual food crop systems (Garrity et al. (2010)). Such integration results in a perennial or evergreen cover of vegetation on the land during the year to maintain a protective soil cover and bolster supplies of soil nutrients through nitrogen fixation and nutrient cycling, while replenishing and generating increased quantities of organic matter in the soil. The project will be inspired by these concepts: INRM, CSA and Evergreen Agriculture to catalyse production that aims at reducing emissions while at the same time enhancing resilience to climate change. A basic principal will be to increase the number of on-farm trees to increase benefits to farmers and to restore ecosystem functions across a mosaic of agricultural and forested landscapes.

163. The project will not use novel technologies. Decades of learning and experimentation in the areas of sustainable forest management, INRM, sustainable agricultural intensification, and recently, CSA have yielded promising, scalable solutions. Examples to learn from include community-based restoration initiatives in Tigray, Ethiopia, as well as large country led initiatives in South Korea and in China. In all these places, restoration has been touted to increase food production, reduce emissions and enhance resilience to climate change. The challenge is how to design and test adequate strategies to expand the scale of existing restoration successes and lesson sharing.

164. Sixty-three per-cent of the Kenyan population lives in rural areas and derive their livelihood directly or indirectly from agriculture and relying on natural resources<sup>46</sup>. Due to challenges such as climate change, increases in population, poverty, and unsustainable land management practices, many of the landscapes on which these people rely are becoming degraded and unproductive. In addition, Kenya is one of the most biodiverse countries in the world with over 9,000 species of plants and animals, many of which are endangered, endemic, or of global significance<sup>47</sup>. As landscapes and habitats degrade, they affect not only the human populations that live there, but also the important flora and fauna which help keep the

<sup>46</sup> Strategic Plan for Agricultural and Rural Statistics 2015-2022

<sup>47</sup> "Countries with the Highest Biological Diversity" [https://rainforests.mongabay.com/03highest\\_biodiversity.htm](https://rainforests.mongabay.com/03highest_biodiversity.htm)

Sources: Plant data from the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC), 2004. Species Data. Fish: Fishbase; Birds: Birdlife International; Amphibians: AmphibiaWeb; Mammals: IUCN; Reptiles: the Reptile Database.



ecosystem in check. As part of a global and regional effort to address the rise in degraded landscapes (Bonn Challenge and AFR100 respectively), the Kenya government in September 2016 made a pledge to restore 5.1 million hectares of forests and landscapes by the year 2030. This initiative will help provide much needed habitat for important wildlife, improve soil productivity for agricultural production, rehabilitate overgrazed rangelands, and restore hydrological cycles among many other objectives. This project intends to help Kenya make true on its commitment, and begin the process of scaling up small and disparate projects to landscape scale movements through the mainstreaming and adoption of integrated natural resource management and landscape restoration best practices.

165. This project will be implemented in the Tana Delta which falls between Tana River and Lamu Counties (Figure 3). These counties have been selected because of the excellent opportunity that exists to build on the momentum of the development of the Tana Delta Land Use Plan informed by the Strategic Environmental Assessment. The Tana Delta is a Vision 2030 site for Kenya to produce food through irrigation initiatives. Tana Delta is a biodiversity hotspot that has no legal protection except a recent declaration as a RAMSAR site. The national and county Governments and local communities agree that sustainable land management in the Tana Delta is dependent upon mutual implementation of the Land Use Plan. This project is therefore designed to implement elements of the Land Use Plan, restore degraded landscapes for improved productivity, and generate lessons learned that will be applied to a subset of other counties in Western Kenya and along the coast.

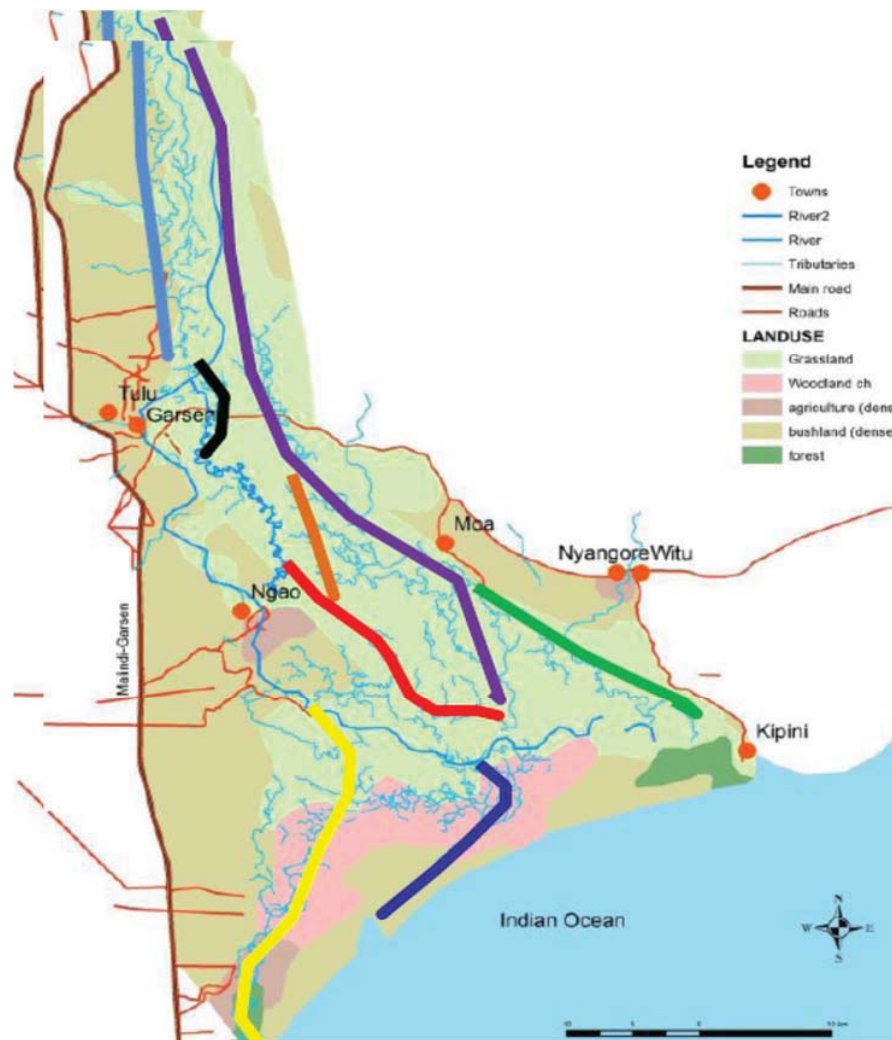
166. The choice of project implementation sites is based on: ecological opportunities for restoration, presence of enabling conditions to allow restoration at scale, political interest from key stakeholders, Nature Kenya and WRI presence or strength of partners, and population and poverty demographics.

167. The Tana Delta, located on Kenya's Indian coast and straddling Lamu and Tana River Counties, is one such landscape where human and environmental factors are resulting in wide spread landscape degradation and socio-economic stress. A mix of agricultural, pastoral, and fishing communities live within the boundaries of the Tana Delta ecosystem, and the livelihoods of each of these groups are under threat. An increasing permanent population, caused mainly by an influx of people moving into the Delta from surrounding areas, is putting pressure on the landscape's resources, and many of the Delta's natural habitats are being degraded and its natural resources are being depleted.

168. The Tana Delta is one of the most important areas in Africa in terms of biodiversity conservation due to its range of habits. The Delta is an Important Bird Area, a RAMSAR site, Key Biodiversity Area and a Global Biodiversity Hotspot and is also part of the Coastal Forests of Eastern Africa Hotspot. The Delta's diverse biophysical features provides habitat for rare and endangered species such as the Red Colobus and Crested Mangabey monkeys, as well as a wide range of other globally important wildlife that both live in and migrate through the Delta. These characteristics make the Tana Delta a prime location for addressing many of the Convention on Biological Diversity's Aichi Biodiversity Targets.

169. The Tana Delta ecosystem also provides valuable ecosystem goods and services, including carbon sequestration and storage which is key in tackling global climate change. The Delta is highly important to the local communities through the provision of food, water, energy and livelihoods. Many of the Delta's residents make their living off the land and water resources, and the permanent population continues to grow year after year. As the population in the Delta rises, the need for sustainable management of current resources and the restoration of degraded lands becomes more pronounced. In addition to this, the diverse, critical habitats and biodiversity in the Delta support the local, county and national economies in Kenya. However, as described under section 2.3 of this Project document in recent decades, the Tana Delta has been facing significant development-related pressures that are threatening the sustainability of the ecosystem. These challenges include: (i) influx of large scale investors to the Delta, (ii) changes in the hydrology and river discharge, (iii) alteration and degradation of the ecosystems and habitats, (iv) resource use conflicts, (v) increasing human-wildlife conflicts, (vi) unfair decision-making processes, (vii) evolving upstream activities, (viii) population dynamics, (ix) climate change and variability, (x) proposed developments on the coast, and (xi) socio-cultural influences. There is consensus at the local, county and

national level that these challenges need to be addressed in an integrated way in order to save the Tana



Delta ecosystem from further degradation and restore what has been degraded so that it can once again be productive.

**Figure 3.** The map of the Tana Delta showing the main towns, drainage, landuse and vegetation types.

170. To address these challenges, the Kenya government has developed the Tana Delta Land Use Plan (LUP) which has now been accepted by the governments of Tana River and Lamu counties, and will serve as the road map for sustainable land management and development for the Delta. The National Government has also established an Inter-Ministerial Technical Committee (IMTC) on Deltas which will set national strategies for sustainable management of Kenya's deltaic ecosystems. This project will work with the IMTC on deltas to ensure best practices and experiences from the Tana Delta are included in national policies and strategies.

171. Selection of the Tana Delta aligns strategically with the goals of this project, as strong support from the national and county governments, and local stakeholders will ensure that integrated natural resources management is adopted at scale in order to restore degraded landscapes and enhance livelihoods.

Additionally, the Delta's diverse mosaic of land uses, both natural and productive, allow the strategies, regulations, and policies developed here to be applied to a wide range of other regions within Kenya.

172. The project rationale is based on the premise that much of the land degradation that is occurring in Kenya is due to unsustainable management of resources and the ever-increasing demand for these resources by communities. This has resulted in the degradation of not only productive landscapes but also natural ecosystems as well. In order to break this cycle of improper management and continued degradation, sustainable management of natural resources needs to be mainstreamed across resources users and policy makers. Through INRM, communities will be able to meet their resource needs while restoring their land and reducing pressure on the surrounding natural ecosystem. This approach will allow Kenya to meet its human development needs at the same time as it addresses CBD, Bonn Challenge, and AFR100 objectives.

173. To ensure that INRM is widely adopted, the project interventions will be implemented at three distinct scales: national, county, and local. Work at the National level will focus primarily on addressing key gaps to put in place key enabling conditions such as policy, regulations, strategies, and national budget allocations and sustainable finance through private sector engagement and bankable projects. It will be important to build public support for INRM and landscape restoration to ensure that government officials integrate these concepts into policies and strategies, and that they are reflected in budget allocations. These national policies, governance frameworks, and strategies will serve as guides for sub-national plans and implementation.

174. At the county level, the project will work with government officials to develop sub-national restoration commitments that feed into the national target of 5.1 million hectares, making clear linkages between INRM, landscape restoration and development priorities. The various land sectors will be aligned through county policies and strategies which will encourage a coordinated effort to restore degraded landscapes and improve productivity on the ground. At the local level, the project will support communities and land users to adopt and implement landscape restoration practices. Awareness building, knowledge sharing, and technical capacity building will serve as the core activities at this scale. To support this, the project will leverage the AFR100 and Bonn Challenge platforms to identify and borrow examples from other countries and apply them to Kenya.

175. To move these policies and commitments into action, the project will work closely with local institutions and community groups to provide information and materials on the benefits and applications of landscape restoration and INRM. Assessments will be conducted on the potential economic and social benefits of these practices, as well as the value and benefits of the ecosystem itself. This will help make the case to land users and political officials that landscape restoration can be used as a tool for addressing root challenges affecting these communities. Innovative land tenure and gazettal models will be piloted as well in an effort to create officially protected lands that allow for sustainable use by local communities, something that is missing in the country. Access to sustainable finance and value chains for local entrepreneurs investing in restoration enterprises has been a limiting factor for the adoption of landscape restoration best practices in Kenya. By building local entrepreneurial capacity, and encouraging private investment in the Tana Delta, the project anticipates more restoration enterprises will take hold, restoring degraded landscapes. Lessons learned from these strategies will be collected and the relevant ones applied to Western Kenya.

176. In the late 1960's and early 1970's, Kenya's Agriculture Department provided extension services to farmers, giving them the information they needed to implement sustainable land use and agricultural practices. During this time, agroforestry and Ever Green agricultural practices were much more prevalent, resulting in healthy, tree covered production landscapes. Following the implementation of the Structural Adjustment Programme (SAP) in the 1980s, these extension services were reduced, and in the years after that, the adoption of sustainable land use practices has been in decline. Extension services have been identified as an important catalyst for change among farmers and other resource users, and the project intends to build this capacity at the county level in order to drive change at scale. Similarly, the project will collect and document land management best practices that encourage restoration and conservation of natural resources. These best practices will be shared throughout the Tana Delta, as well as with other

regions of the country. Exchange visits will also be used to inspire and teach land users and government officials about how INRM can be used to restore landscapes. These lessons will be relevant to other regions in Kenya, as well as across the other TRI child project countries.

177. One important factor for landscape restoration initiatives to be successful at scaling is a thorough monitoring system that can be used for reporting as well as adapting management and implementation strategies. In the past, monitoring techniques and practices were primarily done by hand, and remote sensing technology had limitations, especially for drier climates. Today, a number of advancements have been made in monitoring tools and techniques, making it easier and cheaper to conduct long-term monitoring of land use practices. The project will apply concepts and experiences from WRI's global work on restoration monitoring to the various project sites in order to develop a multiple objective monitoring system to track progress and impacts from INRM and landscape restoration activities.

178. By focusing on these activities, the project has the potential to make a significant change in the rate at which landscape restoration, INRM, CSA, ever green agriculture, and other sustainable land management practices are adopted in Kenya. This will have a myriad of impacts, both socio-economic and environmental. The region selected represent a wide range of landscapes from which the project will be able to identify practical strategies for scaling up success to other parts of the country. Additional details on the project outcomes, outputs, and activities are described below under Section 3.3.

### Expected Global Environmental Benefits

179. Through implementation of this project, INRM and landscape restoration are expected to be mainstreamed and scaled up across other landscapes in Kenya, not only within the timeframe of this project, but also in the future once the capacity building efforts materialize. The restoration of landscapes and adoption of INRM and other sustainable land use practices is expected to result in a myriad of benefits and improvements in ecosystem services at the local, national, and global levels. Biodiversity conservation (GEF BD-4), climate change mitigation (GEF CCM-2), increases in forest landscapes (GEF LD-2), restoration of production landscapes (GEF LD-3), and sustainable management of forests (GEF SFM), and diversification and enhancement of livelihoods are all expected to arise during the project. Table 6 below details the specific benefits the project expects to achieve regarding the GEF6 strategic objectives.

**Table 6. GEF6 strategic objectives and anticipated benefits**

GEF-6 Corporate Results and GEF6 Strategic Objective	Project Target	Anticipated Benefits
<p>Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society</p> <p><i>Biodiversity SO4:</i> Mainstreaming Biodiversity Conservation and Sustainable Use in Production Landscapes/ Seascapes and Sectors</p> <p><i>Program 9:</i> Managing the Human- interface (landscapeapproach)</p>	<p>95,000 ha indigenous community conservation areas (ICCAs) in the Tana Delta are being managed for multiple-use to benefit globally-important biodiversity and aligned with restoration targets</p>	<p><i>Global:</i></p> <ul style="list-style-type: none"> <li>Increased and enhanced important habitat within target landscapes (local, national, and global)</li> <li>Increased biodiversity within production landscapes (local, national, and global)</li> <li>Improved resilience within production landscapes</li> </ul> <p><i>Local:</i></p> <ul style="list-style-type: none"> <li>Improved coordination among government actors across sectors and levels to scale up biodiversity conservation and sustainable use</li> <li>Enhanced community understanding and appreciation of biodiversity conservation and sustainable land use practices</li> </ul>

GEF-6 Corporate Results and GEF6 Strategic Objective	Project Target	Anticipated Benefits
<p>Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)</p> <p><i>Land Degradation SO2:</i> Forest Landscapes <i>Program 3:</i> Landscape Management and Restoration – community and livelihood-based options for increasing forest and tree cover</p> <p><i>Land Degradation SO3:</i> Integrated Landscapes <i>Program 4:</i> Scaling-up SLM – moving appropriate interventions to scale for crop and rangeland productivity</p>	<p>At least 130,000 ha of land is under sustainable livestock, fish and crop management, and 10,000 ha of degraded landscapes are in the process of restoration</p>	<ul style="list-style-type: none"> <li>• Increased adoption of agroforestry and silviculture practices</li> <li>• Increased adoption of non-timber forest product livelihoods</li> <li>• Enhanced community knowledge on best practices of using trees within production systems</li> <li>• Enhanced and diversified livelihoods</li> <li>• Diversification of crops, techniques, and livelihoods resulting in more resilient production systems</li> <li>• Enhanced knowledge and understanding of benefits of SLM best practices</li> <li>• Improved communication and dissemination of information on SLM to a wide audience</li> <li>• Increased investment in SLM by both public and private sectors</li> <li>• Improved coordination among local, county, and national governments</li> <li>• Improved monitoring of SLM impacts and extent</li> </ul>
<p>Support to transformational shifts towards a low-emission and resilient development path</p> <p><i>Climate Change Mitigation 2:</i> Demonstrate systemic impacts of mitigation options <i>Program 4:</i> Forests and other land use, and climate smart agriculture</p>	<p>42,630,872 <i>tCO<sub>2</sub>e<sub>q</sub></i> mitigated (includes both direct and indirect)</p>	<ul style="list-style-type: none"> <li>• Increased adoption of climate smart agriculture, EverGreen agriculture, and INRM</li> <li>• Increased carbon sequestration in natural and production landscapes (national and global)</li> </ul>
<p>Reverse the loss of ecosystem services within degraded forest landscapes.</p> <p><i>Sustainable Forest Management 3:</i> <i>Restored Forest Ecosystems</i></p>		<ul style="list-style-type: none"> <li>• Increase public and private sector investment in landscape restoration</li> <li>• Restoration of riverine forest habitat</li> <li>• Restoration of montane forest habitat</li> <li>• Restoration of mangrove forest habitat</li> <li>• Restoration of rangeland/open woodlands</li> <li>• Improved coordination among local, county, and national governments</li> <li>• Improved sharing of lessons learned and technical landscape restoration practices</li> <li>• Improved monitoring of landscape restoration</li> </ul>



180. In addition to these benefits, the project will also contribute towards Kenya's commitments to the Convention for Biological Diversity Aichi Declaration Targets (Table 7), by restoring habitats and conserving globally significant biodiversity.

**Table 7. Project Contribution to Aichi Targets**

<b>CBD Aichi 2020 Targets which the project will contribute to</b>	<b>How the project will support achievement of targets</b>
<b>Target 1:</b> Awareness	The value and potential benefits from biodiversity conservation and sustainable use of resources will be communicated to resources users as well as local, county, and national level government officials. The project will collect information on sustainable land management and landscape restoration best practices and share these with a broad group of stakeholders. This awareness building is key to changing land use practices in Kenya.
<b>Target 2:</b> Integration into development strategies	By working with all levels of government, this project aims to align INRM and landscape restoration initiatives with development and livelihood enhancement plans. Much of the rural population in Kenya lives below the poverty line, and any changes in land use practices need to have a positive impact on livelihoods in order for it to be adopted at scale. This project team realizes this, and plans to clearly demonstrate how INRM and landscape restoration can improve livelihoods through economic studies and pilot restoration enterprises.
<b>Target 5:</b> Decrease rate of loss of natural habitats and forests	The creation of ICCAs within the Tana Delta will contribute towards slowing the rate at which natural habitats and forests are being degraded in Kenya. Adoption of INRM, agroforestry, and silviculture practices will also reduce the need for local communities to continue expanding into natural habitats for their resources. The application of these practices will also restore degraded landscapes and improve connectivity.
<b>Target 6:</b> Management of fisheries and aquatic plants	Within the Tana Delta ecosystem, one of the major community groups are the Pokomo who are traditionally fisher folk and rely on the Delta's aquatic flora and fauna for their livelihoods. Over-fishing and unsustainable use of riverine areas and flood plains within the Delta have degraded the aquatic ecosystems. The project intends to develop sustainable livelihoods for the communities living within the boundaries of the Delta, including the fishing communities. This will include improved management of fishing practices and terrestrial agricultural and livestock practices. The Ungwana Bay, Kenya's most productive fishery due to the discharge of freshwater from the Tana River, is at risk of degradation from unsustainable development upstream in the Tana Delta. The Ungwana Bay harbours migratory fish species such as Tuna and other marine fish species that are essential for sustaining the economies of Kenya and other countries in the Western Indian Ocean region. Adoption and scaling of INRM and landscape restoration upstream in the terrestrial landscapes in the Delta will help reduce the rapid decline in fish resources.
<b>Target 7:</b> Sustainable management of agriculture, aquaculture, and forestry	Agricultural land represents the second-largest opportunity for landscape restoration in Kenya, covering more than 7.5 million hectares of land. The sites targeted in this project are composed of agricultural, pastoral, and forested landscapes. The project will focus on scaling up INRM, agroforestry, silviculture, and other landscape restoration practices in order to restore productivity and biodiversity. These best practices will be captured and shared within Kenya as well as with other TRI countries in an effort to increase their adoption and improve management practices
<b>Target 10:</b> Minimize anthropogenic pressures	Mangrove forests are particularly susceptible to climate change as changes in sea level rise and more severe storm have the potential to damage them. If sea level rises too quickly, mangrove forests can become locally extinct. The mouth of the Tana Delta is currently buffered by

	mangrove forests. These forests play an important role as nursery habitat for aquatic animals and also help buffer the interior of the Delta, mainly its freshwater systems, from salt water and storm encroachment. These forests are being unsustainably harvested and degraded by local communities. This project intends to increase awareness and develop alternative livelihoods for these communities to reduce the pressures that these forests already face. The project also aims to restore these important forests in an effort to improve their resiliency to global climate change.
<b>Target 11:</b> Conservation of terrestrial and coastal water areas	The Tana Delta is a significantly important ecosystem as it is composed of both fresh water and salt water systems, providing habitat to a host of important flora and fauna. While the Tana Delta is such a valuable resource, it has no formal protection of conservation areas with its boundaries. This project intends to develop ICCAs within the Delta to protect the vulnerable ecosystems while also providing equitable use of the landscape. These ICCAs will be strategically situated so as to maximize conservation of important biodiversity and enhance connectivity within the Delta.
<b>Target 14:</b> Ecosystem services	This project will focus specifically on the restoration of degraded landscapes within the Tan Delta including setting up of Community Conservation Areas for multiple use and biodiversity conservation. This will contribute to increase in protected area coverage y and for indigenous communities. All other target counties in the Coast and Western Kenya counties biodiversity conservation will be enhanced. . The project will focus its restoration efforts on techniques that have been proven to improve productivity and provision of ecosystem services while also contributing to livelihoods. In the Tana Delta, the indigenous communities living within the delta ecosystem will be empowered to take steps towards restoring their lands in order to develop livelihood alternatives and address food security, while also enhancing ecosystem services.
<b>Target 15:</b> Ecosystem resilience and carbon stocks	The restoration techniques this project intends to pilot and scale up will also contribute significantly to the sequestration of carbon in both natural and production landscapes. CSA, INRM, agroforestry, silvopastoralism, and other landscape restoration practices primarily focus on the integration of trees or perennial plants into production systems in order to improve climate resilience and improved productivity over time. These trees help conserve water, decrease evaporation, increase soil nutrients, reduce soil erosion, and in some cases, provide food and other products. The trees and perennial plants store significant levels of carbon in their bodies and root systems, and over time, add carbon into the soil itself. Regeneration of natural ecosystems and forests will also increase tree cover, resulting in an increase in carbon sequestration.

181. The project will also support the implementation of Kenya's Nationally Determined Contribution (NDC) towards the Paris climate agreement<sup>48</sup>. Kenya's NDC focuses on the reduction of emissions from land use and land use change. The adoption of sustainable land management practices and the scaling up of landscape restoration directly contribute towards this goal by reducing emissions of land use change while also sequestering carbon in more perennial, tree- based landscapes.

182. Finally, awareness creation and capacity building activities regarding innovative landscape restoration approaches carried out in this project are also expected to influence the policy formulation processes at county, national, regional (East Africa Community (EAC) and African Union (AU)), and global levels (UN Environment General Assembly and global environmental conventions).

<sup>48</sup>AFR100 Overview prepared by the World Resources Institute (WRI), New Partnership for Africa's Development (NEPAD), and German Federal Ministry for Economic Cooperation and Development (BMZ) and the World Bank

### **3.2. Project goal and objective**

183. The goal of this project is to strengthen integrated natural resource management and restoration of degraded landscapes in the Tana Delta, and systemically scale up best practices and lessons learned to other priority landscapes in Kenya.

184. Integrated Natural Resource Management and various landscape restoration practices have the potential of successfully reducing land degradation, enhancing the provision of ecosystem services, and developing livelihoods in Kenya. The examples of success in Kenya have however tended to be small and site specific, and these have not reached the scope needed to reverse current trends in biodiversity loss and land degradation. This project will strengthen integrated natural resource management and restoration of degraded landscapes in the Tana Delta, and systemically scale up best practices and lessons learned to other priority landscapes in Kenya. By achieving this objective, the project will contribute directly to The Restoration Initiative (TRI), a GEF funded programme aligned with the Bonn Challenge seeking to restore and maintain critical landscapes in order to provide global environmental benefits, livelihoods, and enhanced resilient economic development.

185. The project will provide expertise and support to ensure that county governments in the Tana Delta have the capacity and plans they need in order to mainstream INRM and landscape restoration principles. The project will also target communities, developing alternative livelihoods and income generating activities that take advantage of the benefits that tree-based production systems and natural ecosystems can offer without further degrading the landscape. It is expected that these activities will reverse current trends in land degradation in the delta.

186. While the linkages between INRM, landscape restoration, and sustainable human development are well documented, they have not always been clearly communicated. This project seeks to bridge this gap and clearly demonstrate how landscape restoration through INRM will allow the government to meet international and national environmental targets, while also meeting human development needs. Through improved support at the national, county and local level, the project will seek to develop enabling regulations and encourage the provision of adequate budgets in order to see an increase in the adoption of sustainable land management practices and allow for the restoration of degraded lands in the delta.

187. The private sector will also be engaged through the project, developing clear guidelines on how to invest in restoration enterprises that provide sustainable jobs while recovering degraded and critical landscapes. In addition, better communication, knowledge sharing, and monitoring will play an important role in ensuring best practices are identified and shared across landscapes so that communities with similar characteristics can learn from one another and build on successes.

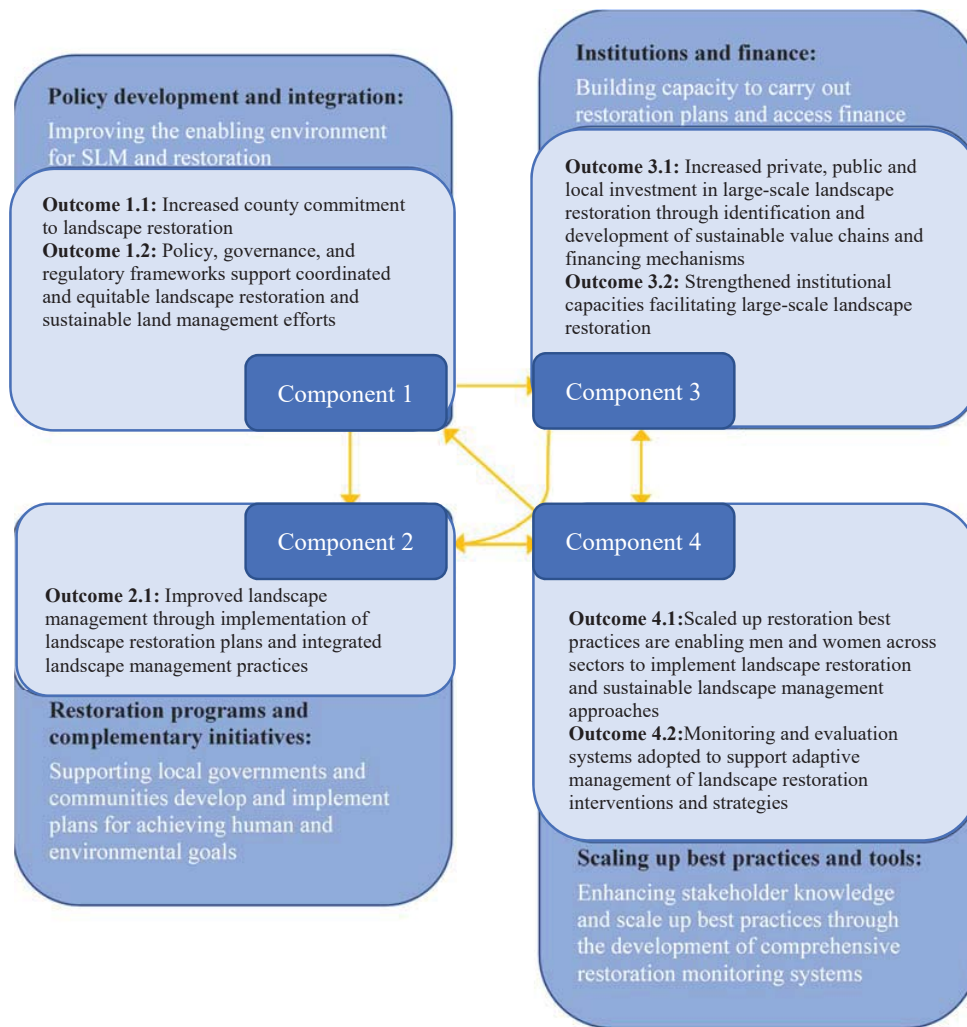
### **3.3. Project components and expected results**

188. The project objectives will be achieved by implementing a four-part strategy which will develop a suitable enabling environment for landscape restoration, support the implementation of restoration plans and scale up best practices to ensure long-term sustainability of ecosystems. The strategy includes:

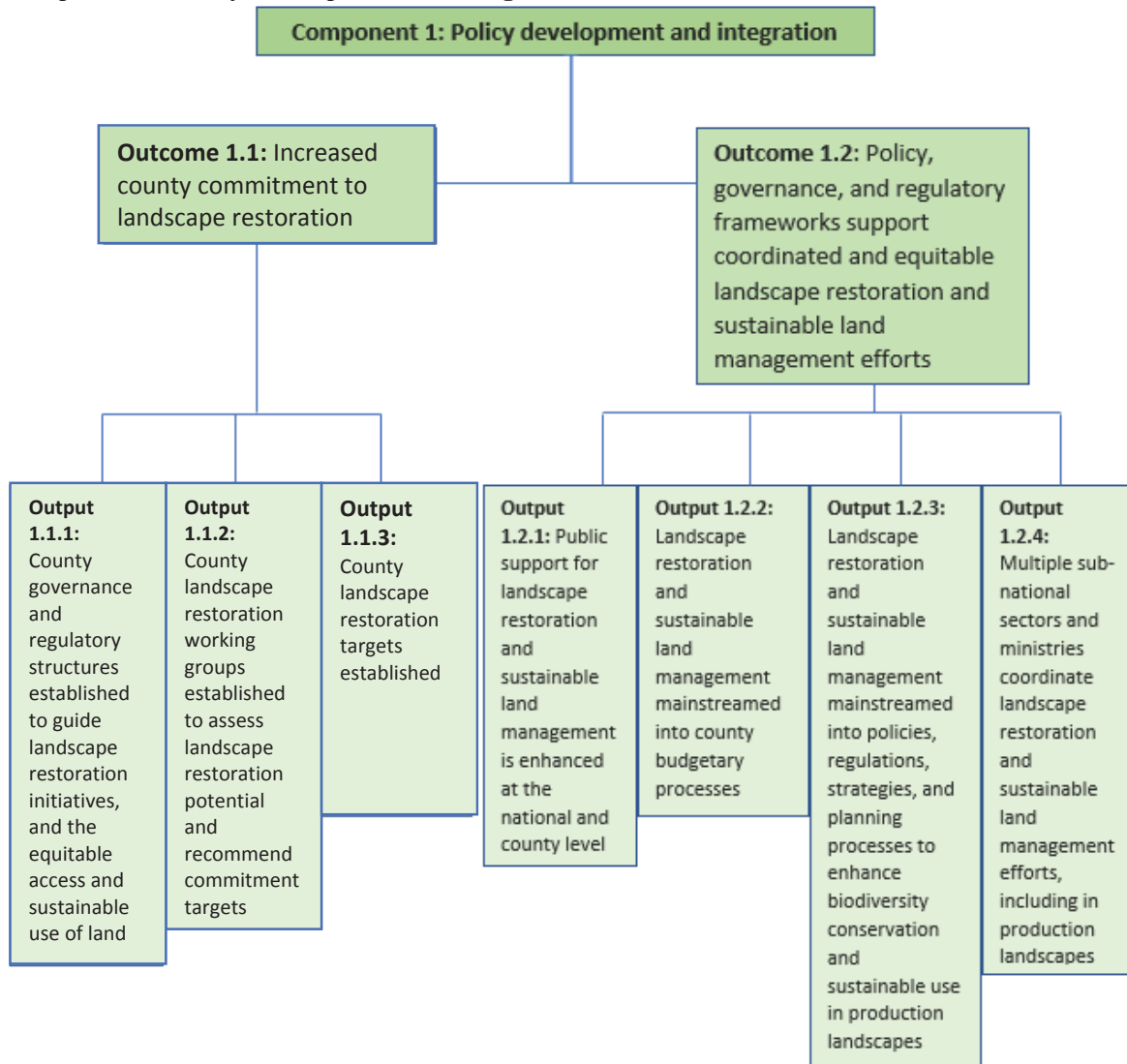
- Improving the enabling environment for sustainable land management and restoration.
- Supporting local governments and communities to develop and implement plans for achieving human and environmental goals.
- Building capacity of these actors to carry out restoration plans and access finance.
- Enhancing stakeholder knowledge and scale up best practices through the development of comprehensive restoration monitoring systems.

189. The relationship between the project's four components is presented in Figure 4 below. The corresponding activities that fall under each of these components will therefore complement each other. A detailed logical frame work and project workplan can be found in Appendices 4 and 5 respectively.

**Figure 4. Relationship between project components**



## Component 1: Policy Development and Integration



190. Component 1 focuses on improving the enabling environment so that sustainable land management and landscape restoration can take place at scale. In order to realize this, county governments need to increase support for landscape restoration and recognize that restoring degraded landscapes can also contribute towards other development priorities such as poverty reduction, job creation, and food security. In addition, national and county level policies and regulations need to be developed or amended in order to ensure that they do not block landscape restoration or sustainable land management practices from being adopted or implemented. Emphasis will be on bringing a wide range of stakeholder voices into the policy planning process, including women and minority groups. This mainstreaming of sustainable land management and landscape restoration into policies and government planning agendas is critical for these practices to be adopted more quickly and at larger scales than is happening currently. The project plans to accomplish this through achieving two outcomes:

**Outcome 1.1:** *Increased county commitment to landscape restoration*

**Outcome 1.2:** *Policy, governance, and regulatory frameworks support coordinated and equitable landscape restoration and sustainable land management efforts*



### ***Outcome 1.1: Increased county commitment to landscape restoration***

191. In September 2016, the Kenyan Ministry of Environment and Natural Resources publicly announced that Kenya had committed to restore 5.1 million hectares of land by 2030 as part of its contribution to the Bonn Challenge and AFR100 initiatives. Since this commitment has been made, the National Government has been eager to begin scaling up successful examples of INRM and landscape restoration. Most action on the ground takes place at the county level, and therefore county government support is important for activities to take place. This project intends to build support for INRM and landscape restoration in the Tana Delta and translate this support into county landscape restoration targets that directly contribute towards the national target of 5.1 million hectares. The landscape restoration targets will be determined based on a number of factors such as landscape restoration potential, county capacity, county size, population, and types of land use, amongst others.

192. Outcome 1.1 is broken down into three outputs which will lead to the development of landscape restoration targets for at least two target counties with wider lesson sharing.

*Output 1.1.1: County governance and regulatory structures established to guide landscape restoration initiatives development of landscape restoration protocols, address land restoration targets in CIDPs to ensure equitable access and sustainable use of land*

*Output 1.1.2: County landscape restoration working groups established to assess landscape restoration potential and recommend commitment targets*

*Output 1.1.3: County landscape restoration targets established*

***Output 1.1.1: County governance and regulatory structures established to guide landscape restoration initiatives, and the equitable access and sustainable use of land***

193. Within the Tana Delta, there is need for the coordination of development efforts to ensure all initiatives contribute towards the sustainable development and restoration of the region's resources. Currently, governance and regulatory structures are largely inadequate to facilitate landscape restoration interventions. Although some level of governance exists in the form of Tana Planning Advisory Committee and County Assembly Committees, there are no county landscape restoration specific governance and regulatory structures. At the County level, the project will establish a governance body, the Tana Delta Sustainable Development Board (TSDB). The TSDB will advise county governments on the development of sector policies, ensuring that landscape restoration and sustainable land management are incorporated. Access and allocation of land within the Delta has also been a barrier to the adoption of sustainable land use practices. The TSDB will play a coordinating role in developing an open and transparent land access and allocation process. At the local level, the project will establish resource user institutions, Village Land Use Committees and Community Conservation Areas Management Committees, among others. Through capacity building, these governance structures will be able to ensure that land users can manage their land while restoring degraded sites, and coordinate land use planning efforts to ensure sustainable and equitable practices are included. By the end of the project, it is expected that a sub-national landscape restoration governance and regulatory structure will be established, guiding the restoration process among stakeholders.

194. The Delta's most important resource is water, and the sustainable use of water throughout the entire Tana Delta basin is key for sustaining development in the region. The project team will work with county officials to develop an inter-county protocol that will lay out a shared vision for sustainable management of the basin's water resources and its restoration. This regulatory structure will be the first of its kind in Kenya and will help ensure the long-term availability of water to the Tana Delta ecosystem.

195. The project will build the capacity of the county landscape restoration governance and regulatory structures so that they can effectively guide landscape restoration initiatives, and the equitable access and sustainable use of land in the Tana Delta. The project will support the development of land restoration and assessment protocols and address land restoration targets set in the County Integrated Development Plans

(CIDP). In addition, the project will also build awareness and capacity for a number of different stakeholders within the Tana Delta, including the newly formed TSDB, on sustainable land management practices and how these can be used for community development. Compelling evidence will be produced that demonstrates how sustainable land management can contribute towards community and livelihood development while also achieving biodiversity and landscape restoration objectives. Materials will be developed that guide stakeholders on how to vet private investor development proposals to ensure that they will contribute towards the sustainable development goals of the Tana Delta.

***Output 1.1.2: County landscape restoration working groups established to assess landscape restoration potential and recommend commitment targets***

196. Building on the work done at the national level to map and identify landscape restoration potential across Kenya, the project will support the assessment of landscape restoration opportunities in the Tana Delta and at least one other county (to be determined during project implementation). In coordination with the Tana Planning Advisory Committee and the newly formed TSDB and other local planning bodies, the project will establish landscape restoration technical working groups. These groups will conduct detailed assessments of landscape restoration potential and identify priority areas within the counties where efforts should be focused. From these assessments, the technical working groups will provide recommendations to their respective county governments on landscape restoration targets that each county would commit toward the national target of 5.1 million hectares. In order to ensure the process developed and followed in this project can be replicated in other areas of the country where the project is not working, the project team will develop a detailed guide based on the Restoration Opportunity Assessment Methodology (ROAM) that explains the steps taken to establish a landscape restoration technical working group and conduct an assessment of landscape restoration potential. This activity will build on the Tana Delta LUP and SEA that were developed in 2014.

***Output 1.1.3: County landscape restoration targets established***

197. Once landscape restoration assessments are conducted and the landscape restoration technical working groups have identified recommended targets for each county, both the assessments and targets will be presented to the respective county assemblies for their consideration. Documentation and evidence will be provided to the county assemblies that clearly state the linkages between landscape restoration and sustainable development. The project will work with county officials to ensure that these county landscape restoration targets are clearly included in the County Integrated Development Plans (CIDPs). CIDPs set the medium-term objectives for development in the county. The integration of landscape restoration and sustainable land management into the CIDP will ensure initiatives across all sectors have clear guidance on how to proceed with development activities that are sustainable and restorative. In the Tana Delta, landscape restoration will start with implementation of elements of the Land Use Plan, especially those linked to livestock, farming and fishery production systems. Production areas targeted for landscape restoration will be mainstreamed into the countywide landscape restoration targets once the ROAM assessment is completed and county level landscape restoration are set up.

***Outcome 1.2: Policy, governance, and regulatory frameworks support coordinated and equitable landscape restoration and sustainable land management efforts at County and National levels***

198. As landscapes across Kenya continue to be over-used and resources become scarcer, the need for sustainable land management becomes ever more crucial. There are many pockets across Kenya where communities have taken it upon themselves to adopt these practices, but in other places, there will need to be clear government guidance in order for management styles to change. The project will build public support for sustainable land management and landscape restoration in an effort to encourage national and county governments to integrate sustainable land use principles into their plans, policies, and budgets. The project also recognizes that often government sectors do not coordinate with one another, leading to contradicting or redundant interventions. In order to ensure there is better coordination of efforts, the project will work with national and county governments, as well as civil society and private sector stakeholders to establish governance structures that will play a leading role in aligning objectives and interventions (at the

county level, this will be the newly formed TSDB.) Once mechanisms are in place in Tana Delta for sectors to coordinate efforts, and policies and budgets reflect and enable landscape restoration and sustainable land management, adoption and implementation of these practices at scale is expected.

199. Outcome 1.2 contains four outputs, each contributing to the achievement of the outcome. The outputs are:

- Output 1.2.1: Public support for landscape restoration and sustainable land management is enhanced at the national and county level*
- Output 1.2.2: Landscape restoration and sustainable land management mainstreamed into county budgetary processes*
- Output 1.2.3: Landscape restoration and sustainable land management mainstreamed into policies, regulations, strategies, and planning processes to enhance biodiversity conservation and sustainable use in production landscapes*
- Output 1.2.4: Multiple sub-national sectors and ministries coordinate landscape restoration and sustainable land management efforts, including in production landscapes.*

***Output 1.2.1: Public support for landscape restoration and sustainable land management is enhanced at the national and county level***

200. Before landscape restoration and sustainable land management can be mainstreamed into county plans, policies, and budgets, public awareness and support for these practices needs to be increased. The project will develop a number of different materials that are easily accessible to policy makers as well as community groups, such as Community Forest Associations (CFAs) and Site Support Groups (SSGs), and private sector enterprises. Highlighting evidence, the materials will describe the benefits, opportunities and best practices of landscape restoration and sustainable land management. These materials will be distributed to these groups at public forums at both the national and county level. These forums will function as opportunities to share experiences, learn about best practices, and voice concerns, all in an effort to build awareness and support. The project will also support the creation of national and county networks of CFAs that will be able to support each other as they adopt new sustainable practices. By the end of the project, at least 70,000 people will have been reached in Tana River and Lamu counties with these messages, building a local level landscape restoration movement and model county process that can be applied to other counties.

201. This project will also leverage the reach and influence of media outlets. The materials mentioned above will be broken into short, concise, easily digestible pieces of information that the media can use when developing articles and stories. There has been little engagement with the media on the issues of sustainable land management and landscape restoration. The project expects that through this cooperation, the message on the benefits, opportunities and best practices will reach a wide range of stakeholders across the country.

***Output 1.2.2: Landscape restoration and sustainable land management mainstreamed into county budgetary processes***

202. At both national and county levels, budgets allocated to landscape restoration are limited, generally only covering targeting tree planting just before the rainy seasons. The limited budgets have meant that tree planting events have had limited success in terms of landscape restoration, and very little if any of the budget is allocated to promoting sustainable land management, such as extension services. In light of this, this output aims to increase the number of county budgetary allocations so that programs are funded to encourage landscape restoration and sustainable land management. The project will begin by developing mechanisms for natural capital accounting within the county budgetary process in Lamu and Tana River Counties. This will include consultations with relevant county stakeholders and committees to ensure that all sectors are in agreement. At the same time, officials in the counties comprising the Tana Delta will begin developing budgets to support the creation of county extension services. These extension services, which used to be common and widespread across the country, are either absent or insufficient within the Delta.

Reinstating extension services that target production systems will help spread sustainable land management and landscape restoration practices to communities.

203. The project will also work with community groups, such as Community Forest Associations (CFAs) and Water Resources User Associations (WRUAs), building their capacity so that they can effectively engage in county budgetary processes. This pressure from local level groups will help mainstream these important land use principles into the budget allocation process.

204. Lastly, at the national level, the project will work with relevant government ministries to enhance awareness for the implementation of the National Forest Programme. The aim here will be for other sectors of the economy to begin to develop mechanisms for allocating financial resources according to the existence and adoption of landscape restoration and INRM plans. Likewise, counties will be catalysed to develop their own mechanism for mainstreaming landscape restoration into their CIDPs, in order to access limited national budgets. The project expects this process to extend beyond the target sites, as all 47 counties will be eligible to take advantage of this program. By the end of the project, it is expected that at least four counties will have included allocations for INRM and landscape restoration in their budgets, filling an important gap that is currently hindering the scale at which these practices are being adopted.

***Output 1.2.3: Landscape restoration and sustainable land management mainstreamed into policies, regulations, strategies, and planning processes to enhance biodiversity conservation and sustainable use in production landscapes***

205. To date, the integration of landscape restoration and sustainable management into policies, regulations, strategies and planning processes at both national and county levels has been limited. Although Kenya has formulated the National Land Policy, Vision 2030 development blueprint, the National Constitution, National Forest Programme, sector legislations and Tana Land Use Plan among other documents, these have still not been effective in guiding landscape restoration and sustainable land management. Although Kenya recently developed and launched the National Forest Programme in 2017, there is still a lack of a specific national strategy for landscape restoration which would guide efforts across sectors. County governments are in a similar situation as no county has developed a landscape restoration plan to guide interventions. This output, therefore, aims to support the national government and counties to integrate landscape restoration and sustainable management in their policies and strategies.

206. The development of a national landscape restoration strategy will be key for coordinating actions across sectors to ensure Kenya meets its AFR100 and Bonn Challenge target of 5.1 million hectares. Building on its experience in developing national landscape restoration strategies, having recently supported the Government of Malawi, WRI has been working with the Kenya Forest Service and Ministry of Environment and Natural Resources to begin the process of developing a national strategy. The project will build upon these efforts, establishing a multi-stakeholder taskforce, led by the Ministry of Environment, to develop a strategy which is relevant for all land use sectors. The taskforce will be comprised of three working groups representing the major land use sectors in Kenya: rangelands, croplands, and forests. Each of these working groups will include members of government, academia, NGOs, and civil society organizations active in that sector, and will be led by the respective national agency or department. The working groups will identify best practices for sustainable land management and landscape restoration that have been adopted throughout the country and develop clear guidelines for scaling these practices up. Each of these sectoral strategies will then be combined to form an overarching national strategy, ensuring that activities and proposed interventions are harmonized and build on one another. This strategy will be the first of its kind and will serve as a road map for cross-sector cooperation to achieve shared landscape restoration objectives at both the national and county levels.

207. Once the national landscape restoration strategy is developed in support of the National Forest Programme implementation, the project will convene cross-sector stakeholder forums at national and county levels to share the strategy and inform how it should be integrated into operational plans including the National Biodiversity Strategy and Action Plan (NBSAP). Ensuring socialization of the strategy will be key for its adoption and implementation. It will also be important for county government stakeholders

to use this strategy as a guide for mainstreaming landscape restoration and sustainable land management practices into their County Integrated Development Plans (CIDPs) and regional plans.

208. In addition, the project will coordinate with national level institutions to make the case for a land use law which will guide the use of and access to land, and catalyse the institutions to formulate legislation. The law will help realize the rights that are granted under the Kenyan Constitution. Building on the assessment done by the landscape restoration technical working group in Output 1.1.2, the project will work to the extent possible, with county assemblies to have their landscape restoration targets approved and integrated into landscape restoration and sustainable land management plans. In the Tana Delta, these plans will be aligned with the Land Use Plan (LUP) that has been adopted by Tana River and Lamu Counties. These plans will guide the implementation of landscape restoration interventions with clear operational procedures that will ensure that all land use sectors are contributing towards county and national targets. During this process, the project will convene stakeholder consultations to ensure these plans are harmonized with any plans that already exist to improve their effectiveness.

209. Working with national and county level CFA networks developed in Output 1.2.1, the project will help develop the mandatory participatory forest management plans (PFMPs), informed by CIDPs and the national landscape restoration strategy, that focus on restoring degraded forest areas in the Tana Delta. The plans will encourage the use of tree plantings as well as assisted natural regeneration (ANR) to re-establish native vegetation in degraded natural forests. These forests play an important role in regulating ecosystem services for human use and serve as habitat for globally significant wildlife species. The lessons and experiences from the Tana Delta will be shared with other CFAs and Site Support Groups through appropriate national fora.

210. Many of the inhabitants of the Tana Delta are members of indigenous communities with specific knowledge of the landscape. In order to preserve this knowledge and ensure that communities continue to benefit from the landscape while conserving and restoring it, Indigenous Community Conservation Areas will be developed (details provided below in Output 2.1.2). The ICCAs will allow for the sustainable use of resources while conserving ecological integrity within the Delta. The project will ensure that appropriate governance structures and management plans are in place so that long-term sustainability of these ICCAs can be realized. The project will also support producer groups to develop sector based plans that provide specific guidance on how to incorporate sustainable land management into their production cycles. The restoration of the Tana Delta and other degraded landscapes in Kenya will require that all production landscapes adopt integrated natural resource management practices in order to continue to sustain the communities that rely on them.

***Output 1.2.4: Multiple sub-national sectors and ministries coordinate landscape restoration and sustainable land management efforts, including in production landscapes***

211. Unsustainable land use practices and the land degradation that follows are issues that cut across all sectors of the economy. Their corresponding impacts have implications on biodiversity, ecosystem services, economic development, food production, and livelihoods. As is the case in many countries around the world, the responsibility for addressing landscape restoration tends to fall with one or two ministries. In Kenya, the Ministry of Environment and Natural Resources is tasked with halting degradation and restoring landscapes that have already been mismanaged. In order to address these issues, however, a coordinated effort from all sectors will be required, as no single sector alone will be able to reverse these trends. Through this project, the team will support the development of cross-sector taskforces and other structures (the TSDB in the Tana Delta) that will begin to coordinate efforts across different ministries at the national and county levels.

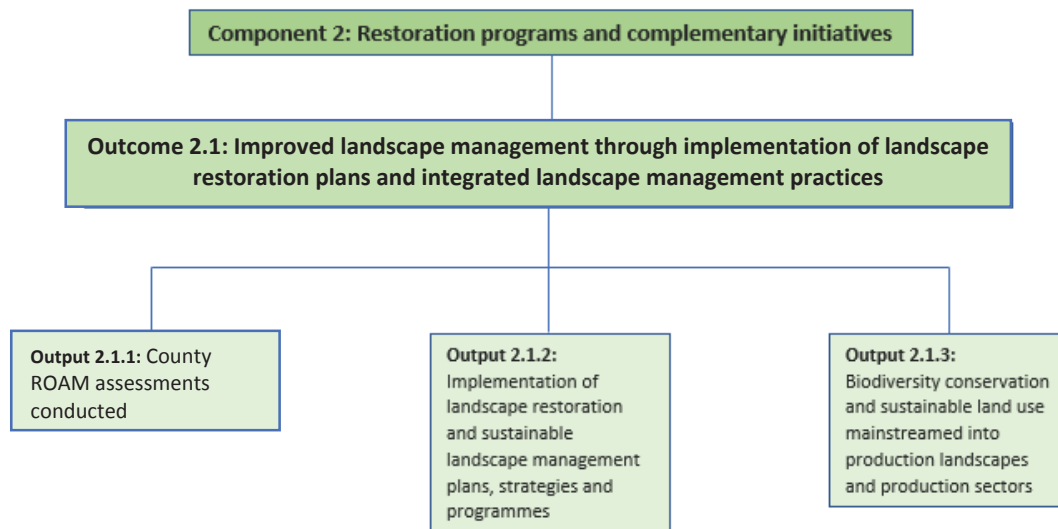
212. Using the national landscape restoration strategy developed in Output 1.2.3, the project will work with non-governmental community groups, such as Community Forest Associations, Water Resource User Associations, and Site Support Groups, to ensure that their plans and activities are aligned with the strategy. These groups often have overlapping territories, but do not always coordinate efforts with one another. These groups are directly linked with what is happening on the ground and can have significant



influence on community land use practices. Through socialization of the national strategy and development of coordinating governance structures between these groups, the project intends to harmonize their efforts at the landscape level, increasing the use of landscape restoration practices.

213. Through the execution of these activities, the project will be able to ensure that strong mechanisms for coordination exist at the national and county levels. This coordination is necessary for Kenya to achieve its institutional objectives and meet the needs of the communities living within degraded landscapes. This output will ensure that implementation of landscape restoration and sustainable land management interventions detailed in Outcome 2 below are as effective as possible.

## Component 2: Implementation of Restoration Programs and Complementary Initiatives



214. The enabling environment that has been established through the development of policies, strategies, coordination structures, and county restoration targets will continuously inform implementation of landscape restoration targets. In the Tana Delta, nearly 130,000 hectares of land are currently under unsustainable land management practices. To address this, Component 2 will focus on moving landscape restoration and complementary sustainable land management initiatives forward, including climate smart agriculture, improved cook stoves, community forestry, and development of ecotourism, in the target counties in order to restore degraded landscapes, conserve biodiversity, and enhance the livelihoods of communities. The project will support government, private sector, and local community stakeholders identify opportunities and priorities for implementation. The project team will use the Restoration Opportunity Assessment Methodology (ROAM) developed by IUCN and WRI, and other global tools, to assess potential opportunities and benefits that stand to be gained from restoring degraded landscapes and adopting sustainable land management practices. In conjunction with the national landscape restoration strategy, these assessments will guide activities on the ground, identify priority areas of focus, and provide evidence for making the business case for landscape restoration. Landscape restoration and biodiversity conservation within the Tana Delta and other target landscapes will rely heavily on the participation of communities and production landscapes. As such, the project will work closely with these stakeholders to share best practices, build capacity, and enhance entrepreneurial skills so that a new generation of landscape restoration enterprises can lead the way to sustainable development. These practices will not only restore degraded landscapes, but provide livelihoods and products to communities, reducing the need to convert more natural ecosystems and forests.

215. Component 2 has the following outcomes:

***Outcome 2.1: Improved landscape management through implementation of landscape restoration plans and integrated landscape management practices***

This outcome will be achieved through the delivery of the following three outputs:

*Output 2.1.1: County ROAM assessments conducted*

*Output 2.1.2: Implementation of landscape restoration and sustainable landscape management plans, strategies and programmes*

*Output 2.1.3: Biodiversity conservation and sustainable land use mainstreamed into production landscapes and production sectors through enhanced involvement of private sector organisations in the development of energy saving technologies, biodiversity monitoring and establishment of nature based enterprises;*

*Output 2.1.4: Sustainable monitoring of carbon stocks including the assessment of non-timber forest products and establishment of community groups*

***Output 2.1.1: County ROAM assessments conducted***

216. The implementation of landscape restoration initiatives will be guided by assessments of the target landscapes conducted to inform priorities and activities on the ground. The ROAM is a strategic tool that provides a step wise approach to identifying opportunities for the implementation of landscape restoration activities. The ROAM process relies heavily on stakeholder participation, especially those most familiar with the landscape in question. The project will use the ROAM to identify geographic areas where landscapes are degraded as well as where specific types of landscape restoration activities, such as agroforestry and climate smart agriculture, could potentially be used to restore productivity. This assessment will be conducted in the Tana Delta ecosystem as well as in at least one of the other two counties in Western Kenya (to be determined during implementation of the project based on social and political opportunities).

217. The project will also at this time assess the quantity and value of ecosystem services being provided by the Tana Delta and its natural habitats following the Toolkit for Ecosystem Service Site-based Assessment (TESSA) tool developed by Birdlife International and partners. A carbon stock analysis will also be conducted for the Delta, identifying key areas where carbon is being stored and sequestered. The assessment will focus on forest ecosystems as well as non-forest production landscapes where practices such as climate smart agriculture and agroforestry are being practiced. The project will also carry out an assessment of non-timber forest products in the Delta that can potentially provide alternative livelihoods to communities. These assessments will play a major role in developing business cases for adopting landscape restoration and sustainable land management practices in the Delta.

***Output 2.1.2: Implementation of landscape restoration and sustainable landscape management plans, strategies and programmes***

218. Output 2.1.2 will focus on the implementation of the national and county landscape restoration strategies that will be developed in Output 1.2.3 and Output 1.2.4. The project will support a number of different interventions in order to ensure that the appropriate stakeholders have access to the information and capacity they need in order to implement these strategies on the ground.

219. CFAs, WRUAs, and village natural resource committees (VNRCs) are important community governance structures throughout Kenya for the management of natural resources. Within the Tana Delta, the project will work with existing and newly established community groups to assess their capacity for protecting and restoring forest habitats. Based on these assessments, the project will develop materials and

trainings that address these capacity gaps. Through these organizations and with their new capacity, the project aims to protect 55,000 hectares of forest habitat in the Tana Delta, including mangroves.

220. The second class of landscapes that the project will target in the Tana Delta are the production landscapes that are scattered throughout the ecosystem. These croplands, rangelands, and fishing areas are the lifeblood for the Delta's residents, and represent some of the most degraded landscapes. In order to restore these landscapes while continuing to use them productively, the project will support the adoption of successful techniques being used throughout Kenya, such as livestock enclosures, half-moon bunds, agroforestry, and riparian buffer planting. An in-depth stocktaking of successful practices will be conducted in Output 4.1.2, ensuring these best practices are well documented and can be replicated. The project will convene forums for county and local producer groups, CFAs, WRUAs, and others to learn about the plans and strategies developed at the national and county level and discuss how these strategies will be implemented within their production systems, ensuring that gender equality is a guiding principle in these efforts. Learnings from these forums will inform the development of materials in the local language that will guide how to successfully integrate these plans into community activities. Techniques such as climate smart and EverGreen agriculture, agroforestry and silvopastoral systems, and farmer managed natural regeneration (FMNR) will also play key roles in the restoration of the Tana Delta. The project will pilot some of these techniques with communities to demonstrate how they can be used as a tactic for restoring landscapes, enhancing livelihoods, and increasing climate resilience and adaptation. Capacity building events and extension services (information on the development of extension services is detailed in Output 3.2.1) will be held to ensure farmers and other land users have the tools and knowledge they need to use these techniques on their own. Extension services have historically played an important role in the adoption of sustainable farming practices in Kenya, and will do the same for scaling up landscape restoration.

221. These interventions will also be guided by the Tana Delta LUP to ensure that activities are aligned with the priorities identified by the stakeholders across the entire Delta. The interventions will be well documented and practical steps will be developed that will catalyse their adoption at scale.

***Output 2.1.3: Biodiversity conservation and sustainable land use mainstreamed into production landscapes and production sectors***

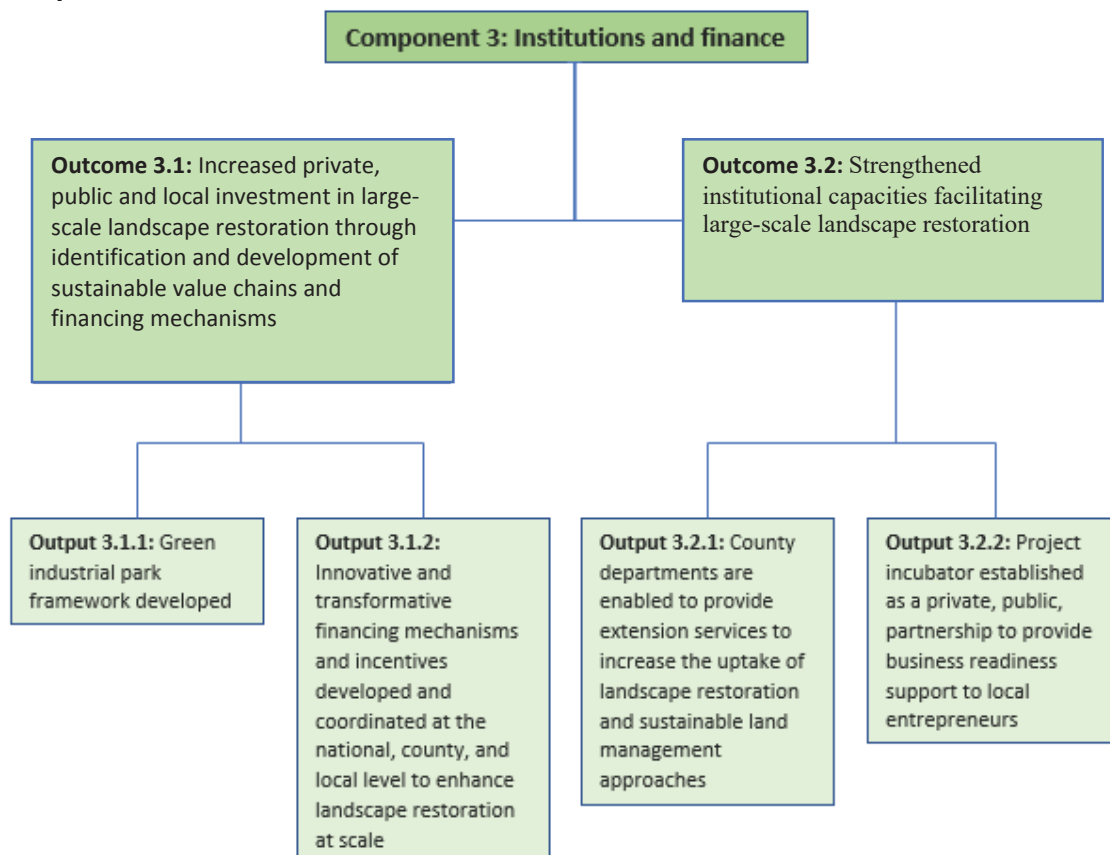
222. One of the focus areas in the Tana Delta for landscape restoration and conservation are areas of high biodiversity and carbon value. These areas tend to be natural forest ecosystems that additionally provide important ecosystem services to the Delta. They are also some of the most at-risk areas due to expanding population pressure and the need for wood fuel for cooking. To help conserve and reduce the pressure on these areas, the project will conduct a detailed assessment of their many threats and develop mitigation strategies in conjunction with local level stakeholders. The project will also develop alternatives to wood fuels and promote the adoption of energy saving technologies, such as solar or high-efficiency stoves, in order to address unsustainable wood demand. The current county land gazettement system does not allow for land to be officially set aside as provisional forests or ICCAs. The project will work with and advise county and community stakeholders on the development of an alternative system that would allow for such a category of gazettement to exist. These areas will be managed by local indigenous groups in order to restore and conserve ecosystems and important habitat. Providing rights and tenure to these groups to manage these lands will provide incentives for communities to invest in the medium and long-term interventions needed to restore the landscape.

223. Once the legal process has been established allowing for official recognition and establishment of ICCAs, the project will work with local governments and communities to set up at least one ICCA within the Tana Delta. The ICCAs and provisional forests which fall within them will serve as areas within the Tana Delta that are protected by law but also allow for sustainable multiple-use by communities. Currently, the gazettement of land as forests assigns a strict level of protection, excluding people from use of the forest in a sustainable manner. The creation of productive conservation areas will be an innovative approach to addressing both biodiversity conservation and community livelihood development. The creation of ICCAs will also enhance carbon stocks in the forests, thus contributing directly to climate change mitigation efforts.

224. The ICCAs will be managed by ICCA management committees composed of both government and community stakeholders. The project will assess the capacity of the committees for managing the resources and biodiversity within the ICCAs as well as their capacity to conduct biodiversity monitoring. Based on this assessment, the project will develop the materials needed to fill these capacity gaps, and conduct capacity building workshops and trainings to ensure that ICCA management committees are enabled to sustainably manage multiple-use within their ICCAs. An important part of achieving sustainability within these newly established ICCAs will be the establishment of nature based enterprises such as honey production, fishing, fruit growing, and ecotourism. These activities will be guided by the roadmaps for mainstreaming biodiversity into production landscapes that will be developed in Output 1.2.3. By the end of the project, it is expected that 95,000 hectares of ICCAs will be actively managed for sustainable, multiple use within the Tana Delta. Best practices for establishing and managing ICCAs will be well documented and shared with stakeholders in other target counties so that they can be replicated across the country.

225. In order to encourage the adoption of income generating activities that help restore and conserve ecosystem services, the project will build capacity and entrepreneurship among resource users within the target landscapes. Pilot sites will be used to demonstrate the application of sustainable production practices and how they might be adopted to generate incomes. Assessments of the entrepreneurial capacity of local stakeholders will also be carried out in order to inform the development of materials and trainings needed to allow local communities to engage in sustainable businesses. To assist this process, the project will also distribute information on sustainable income generating business plans and value chains within the target landscapes. These business plans and value chains will be developed and identified as part of Output 3.1.2.

### Component 3: Institutions and Finance



226. Component 3 will focus on strengthening the capacity and effectiveness of institutions essential to the successful implementation of landscape restoration and sustainable land management initiatives, and

increasing the flow of sustainable finance, both public and private, into these initiatives. The project will focus on financing efforts that include a strong focus on structures and products that promote engagement with the private sector. The project will provide support in the following two ways:

227. *Mobilizing domestic and external funding:* The project will focus on both harnessing existing domestic public financing structures and accessing risk reduction products that are underutilized at present in landscape restoration activities. Bankable models with proven successes for landscape restoration from across the county will be mined for approaches that can be applied to the target counties. The project will use the forthcoming Enabling Investments Rapid Diagnostic to determine the state of investment in the target landscapes and identify priority enabling conditions which need to be addressed in order to unlock investment. Private sector investment in landscape restoration enterprises and income generating activities will be enhanced through the development of the Tana Delta Green Industrial Park. The Green Industrial Park will serve as a business centre for numerous income generating activities and landscape restoration enterprises. Facilities needed to turn raw materials into goods that can be packaged and sold to consumers, such as honey packaging, meat processing, and vegetable collection and distribution, will be built in order to take advantage of sustainably produced materials. The project will work with the Tana Sustainable Development Board (TSDB) to identify and reach out to potential private investors who can invest in these enterprises. Guidance documents and local policies will be developed to ensure that private investment in the Delta is participatory and sustainable. In many cases, the link between investors and land users is weak. The project aims to establish forums through which private, government, and local community sectors can engage with one another to guide and encourage investment in sustainable practices that benefit the environment as well as local livelihoods.

228. *Institutional strengthening and capacity building:* The project will strengthen and enable a range of institutions across sectors and at different scales in order to effectively coordinate and engage in landscape restoration and sustainable land management. Extension services, in particular, will play a key role in the adoption and application of landscape restoration best practices in the target counties and across the country. Where extension services are lacking, the project will train institutions on sustainable land management and landscape restoration best practices and the appropriate methods for enabling land managers to implement them. The project will also develop materials that can be used by extension officers to communicate best practices and management techniques in effective ways. Additionally, local producer groups and cooperatives across Kenya tend to have limited capacity on business development and handling finances. This poses a significant barrier to investment by the private sector, and has resulted in low investment in landscape restoration enterprises. A project incubator will be established in the Tana Delta, what will provide business readiness support to local entrepreneurs. The project will develop materials targeted at local producer groups and cooperatives that will facilitate the negotiation of terms for contracts, ensuring that communities are not taken advantage of. Bringing together private investors and local entrepreneurs with landscape restoration business ideas will help bridge the gap between projects and financing, increasing the number of successful investments in landscape restoration.

229. The two outcomes that will be achieved as part of Component 3 are the following:

**Outcome 3.1:** *Increased private, public and local investment in large-scale landscape restoration through identification and development of sustainable value chains and financing mechanisms.*

**Outcome 3.2:** *Strengthened institutional capacities facilitating large-scale landscape restoration.*

**Outcome 3.1: Increased private, public and local investment in large-scale landscape restoration through identification and development of sustainable value chains and financing mechanisms.**

230. Outcome 3.1 will be achieved through the delivery of the following outputs:

**Output 3.1.1:** *Green industrial park framework developed*

**Output 3.1.2:** *Innovative and transformative financing mechanisms and incentives developed and coordinated at the national, county, and local level to enhance landscape restoration at scale*



*Output 3.1.3: The development of pilot sites for demonstrations of best practices, development of assessments for entrepreneurial capacity at local level, business plans, establishment of forums, preparation of reports.*

***Output 3.1.1: Green industrial park framework developed***

231. At present, the engagement of private, public and local investors in the Tana Delta is uncoordinated, and disconnect between national and county levels has contributed to unsustainable development and land degradation. In the past, inappropriate projects have been sanctioned by the national government without input from the county governments or local communities, leading to projects that damaged the Tana Delta ecosystem and hurt local producer groups. The primary aim of this output is to ensure that investment in the Tana Delta has buy in from local and county actors to encourage appropriate and sustainable projects that contribute towards the restoration of landscapes. Local and county stakeholders will develop criteria for selecting private sector companies that would like to invest in the Delta, ensuring that projects are aligned with the LUP and other planning documents.

232. The New Restoration Economy, a WRI program, has been working to determine companies and value chains that support landscape restoration. This national assessment will feed into the development of sustainable business cases and value chains in the Tana Delta, in order to attract investors interested in landscape restoration enterprises. The project will also support the development of the Tana Delta Green Industrial Park, which will allow local producers to organize into cooperatives for non-timber forest product, livestock, crop, and fish production. The Green Industrial Park will serve as a central depot for the collection and distribution of goods, as well as processing and packaging. This infrastructure is currently missing in the Delta, and has limited the extent to which local producer groups can generate income from sustainable production. In coordination with the TSDB, the project will identify and work with private and county stakeholders to invest in the Green Industrial Park and create value chains for sustainably produced goods. In addition, the project will also identify opportunities for private sector engagement in eco-tourism as a way to provide environmentally friendly livelihoods. The development of these value chains and the Green Industrial Park will be well documented to ensure that lessons learned can be applied to other areas in the country in order to replicate successes.

***Output 3.1.2: Innovative and transformative financing mechanisms and incentives developed and coordinated at the national, county, and local level to enhance landscape restoration at scale***

233. In order for landscape restoration and sustainable land management to reach the scale needed to have large impact and achieve national targets, innovative funding mechanisms, institutions, and legal and regulatory frameworks will need to be developed and strengthened, resulting in increased financing and investment in these activities. Current sources of financing for these initiatives has mostly come from national government and foreign development aid, with little coming from county, private sector, or local sources. Currently, very few financing mechanisms exist within Kenya that are providing resources and investing in landscape restoration, and within the target counties, no mechanisms exist.

234. One model that has been successful in the central part of the country has been Payment for Ecosystem Services (PES) schemes, which have been particularly useful for managing water resources. In the Tana Delta, an ecosystem assessment (conducted as part of Output 2.1.1) will be used to develop business cases for sustainable production systems and link these to PES schemes in the Tana Delta as part of the Green Industrial Park with private sector investment. The project will promote these business cases among private sector actors and local producer groups in order to develop tailored PES schemes that will support sustainable livelihoods and landscape restoration activities while generating returns that attract investment. The project will engage with private sector companies to identify opportunities for using PES schemes within their supply chains. It will also support producer groups in developing PES schemes that will enable them to reinvest profits into their production system through sustainable land management or landscape restoration interventions.

235. Another approach to encourage additional investment into landscape restoration is through improved county capacity, policies and regulatory frameworks that promote and incentivize investment. In

the target landscapes, county government capacity to meet the needs of private companies interested in engaging with local producer groups or investing in their own sustainable businesses has been low. The project will convene private sector actors to discuss barriers and challenges to investment in the target landscapes. Based on these discussions, capacity building materials and trainings will be provided to county government officials to ensure that the enabling environment for investment in these landscapes is suitable to attract companies. The project will also support the development of policies and other legal frameworks that will incentivize investment in landscape restoration enterprises.

236. At the government level, most of the current investment in landscape restoration has been limited to minimal tree planting, largely as a public relations effort with no significant impact in terms of restoration of degraded landscapes. In order to improve the coordination and allocation of government resources to realize significant impacts, mechanisms will be developed for coordinating between national, county, and local governments. These mechanisms will allow local level stakeholder objectives to be clearly communicated to county and national levels so that resources can be allocated to appropriate initiatives.

237. To guide these mechanisms and the resulting negotiations among the different levels of government, the project will develop a report that clarifies the links between landscape restoration and livelihood enhancement. Forums will also be convened to coordinate sustainable land management and landscape restoration efforts across private sector, government and local community actors. These meetings will also act as a safeguard for communities to ensure that private sector investment in the target landscapes is aligned with government and local priorities.

238. By the end of the project, it is expected that mechanisms will be established that facilitate and coordinate financing and investment in landscape restoration across the private sector and all levels of government. There will also be functioning incentive programs in place that encourage investment in the Tana Delta, and these incentives will be piloted in at least one of the other target counties. The project will also have worked with at least one private sector company to secure investment in a landscape restoration enterprise and develop mechanisms for supporting sustainable land management as a standard practice within business operations.

***Outcome 3.2: Strengthened institutional capacities facilitating large-scale landscape restoration.***

239. Outcome 3.1 will be achieved through the delivery of the following outputs:

*Output 3.2.1: County departments are enabled to provide extension services to increase the uptake of landscape restoration and sustainable land management approaches*

*Output 3.2.2: Project incubator established as a private, public partnership to provide business readiness support to local entrepreneurs*

***Output 3.2.1: County departments are enabled to provide extension services to increase the uptake of landscape restoration and sustainable land management approaches***

240. Landscape restoration interventions in Kenya will largely be carried out by farmers and communities on their own land. Historically, extension services were prolific, providing these land users with the skills and strategies they need in order to overcome challenges and develop sustainable land management practices. The provision of extension services is currently very limited and in some counties, there has been a near total collapse of farmer field extension services. This has led to rampant land degradation and loss of production value, due mostly to the lack of knowledge on alternative land management practices. The primary aim of Output 3.2.1 is to build the capacity of county government institutions to be able to facilitate implementation of effective large-scale landscape restoration programmes through the provision of extension services to communities.

241. The project will support counties to establish extension service programmes through the development of training materials, capacity building events, and communication materials for farmers in their local language. The project will also work with local community groups to establish landscape restoration hubs which will serve as go-to information centres for land users looking for sustainable

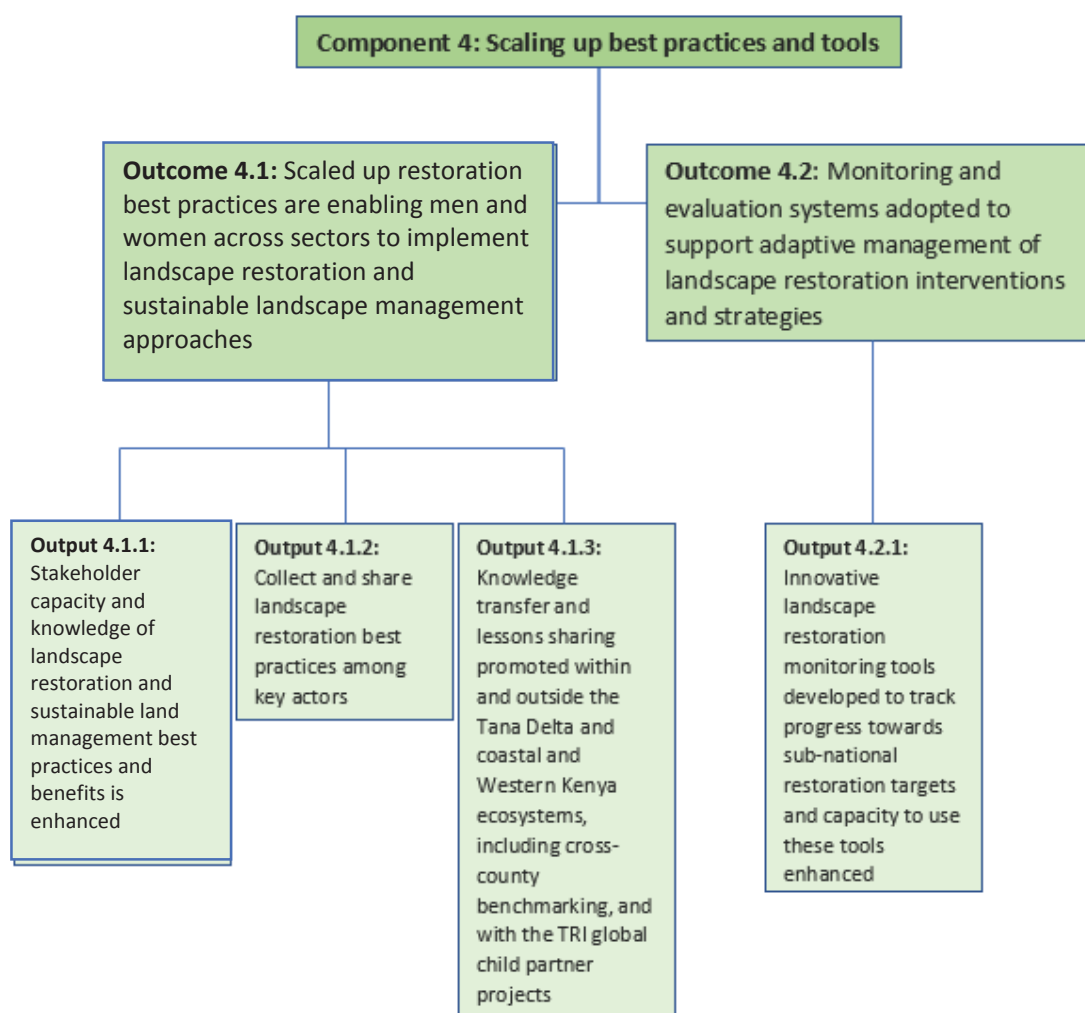
management guidance. The National Government will also be trained on sustainable land management and landscape restoration best practices in order for the government to better enable the development of county and local extension programmes. By the end of the project, it is expected that at least two counties will have developed and implemented an effective system for farmer field schools, resulting in the adoption of sustainable production and landscape restoration practices by producer groups. These programmes will be mainstreamed into county operations and budgets to ensure long-term sustainability.

***Output 3.2.2: Project incubator established as a private, public partnership to provide business readiness support to local entrepreneurs***

242. In addition to a favourable environment, private sector investors need a supply of bankable projects in order for investments to begin flowing to landscape restoration. At present, the capacity of local entrepreneurs is limited and no bankable sustainable land management or landscape restoration projects have been implemented in the target counties. In order to address this, the project will work with private companies, investors, and government officials to establish a project incubator that will provide business readiness support to local entrepreneurs. The training and materials that this incubator will provide will allow farmers and entrepreneurs to develop business plans that support landscape restoration and sustainable land management.

243. Once capacity has been built, and project proposals are developed, the project will convene a series of investor roundtables to showcase these investment-ready business ideas and create direct links with potential investors. The project will also develop and distribute materials that guide local producer groups and entrepreneurs on how to negotiate equitable terms of engagement and supply contracts with private investors to ensure that local communities are not taken advantage of. A website will be established to host information on businesses and investors in the Tana Delta and act as a hub for business development. Once this model has been refined and is resulting in investment in local businesses, the project plans to share best practices with other target counties so that similar programmes can be established.

## Component 4: Scaling Up Best Practices and Tools



244. While the principles behind landscape restoration and sustainable land management are not new, their large-scale adoption has not occurred as quickly as needed to stop the current trends in land degradation. One of the biggest contributors to this has been the lack of quality documentation and dissemination of best practices in a format that reaches a wide range of stakeholders and that can be understood and interpreted by farmers and land managers on the ground. Another key factor that has been missing from landscape restoration initiatives around the world, is a high-quality monitoring system that can track not only vegetative regrowth, but also the impacts, both environmental and socio-economic, that result from implementation. The primary objectives of Component 4 therefore, are to scale-up best practices identified through implementation in the target landscapes, and establish a system for monitoring the success and impacts of implementation on the ground. These activities will help create synergies, enhance learning among actors in Kenya, as well as across the other TRI Child Projects. The Global Learning, Finance, and Partnerships project, prepared by IUCN, will also play a lead role in performing activities under this component. The outcomes and outputs generated through this component will support the work in all three of the previous components. This strategy is reflected in the following outcomes that make up Component 4:

**Outcome 4.1:** *Scaled up restoration best practices are enabling men and women across sectors to implement landscape restoration and sustainable landscape management approaches.*

**Outcome 4.2:** *Monitoring and evaluation systems adopted to support adaptive management of landscape restoration interventions and strategies.*

**Outcome 4.1:** *Scaled up restoration best practices are enabling men and women across sectors to implement landscape restoration and sustainable landscape management approaches.*

245. Many examples of successful and innovative landscape restoration approaches exist across Kenya, Africa, and the world. This project intends to scale the use of these practices through the improvement and increase in easily digestible knowledge products and resource, tailored trainings for farmers and other land managers, as well as through direct exchanges between communities so that they can see first-hand what other farmers and land managers are doing to overcome the challenges of land degradation. This will help improve the effectiveness of land manager interventions and result in large-scale changes in landscapes across Kenya and throughout Africa. The project aims to generate the following outputs as key building blocks towards realizing this outcome:

*Output 4.1.1: Stakeholder capacity and knowledge of landscape restoration and sustainable land management best practices and benefits is enhanced*

*Output 4.1.2: Collect and share landscape restoration best practices among key actors*

*Output 4.1.3: Knowledge transfer and lessons sharing promoted within and outside the Tana Delta and coastal and Western Kenya ecosystems, including cross-county benchmarking, and with the TRI global child partner projects*

*Output 4.1.4: Landscape restoration tools and monitoring framework to be implemented.*

**Output 4.1.1:** *Stakeholder capacity and knowledge of landscape restoration and sustainable land management best practices and benefits is enhanced*

246. Kenya has adopted a system where community groups can be formed to manage resources. The most common are CFAs, WRUAs, and SSGs. Although these resource user groups exist, their capacity to undertake landscape restoration initiatives is limited. There is also very little capacity among farmers, pastoralists, and fisher folk on sustainable land management and landscape restoration. In the past, this lack of awareness and knowledge has limited adoption of sustainable and appropriate land use practices. In order to enhance the capacity and knowledge of landscape restoration best practices among land managers, the project will target community resource user groups as they are in direct contact with larger numbers of community members and have a significant influence over land use practices. To begin, the project will develop a guidance document which will describe best practices and tools for implementing landscape restoration initiatives. The project will coordinate with IUCN's Global Learning, Finance, and Partnerships project to ensure that reports are in line with global frameworks on landscape restoration and community engagement. The document will be targeted at CFAs, WRUAs, and other resource user groups, addressing the needs that they are most concerned about. This document will be relevant for all the counties in Kenya as well as the other countries in which TRI is implementing projects. Training events will also be conducted, at the national and county levels, so that CFAs across the country are knowledgeable about landscape restoration, its potential benefits, and its uses as a resource management tool. By the end of the project, at least 1,000 individuals from various land use sectors and both men and women will have received training on landscape restoration and sustainable land management practices. The project will additionally convene an annual national resource user group forum to bring together leaders within communities to share lessons and experiences and catalyse a cultural shift in how these groups function. This will help increase the adoption of landscape restoration techniques across a diverse set of landscapes.

247. Output 4.1.1 will also provide support to CFAs in the Tana Delta and other target landscapes to better link with government agencies at multiple levels so that they have the knowledge and resources they need to implement landscape restoration projects. This process and all other strategies piloted in the Tana Delta will be recorded so that the model can be replicated in other landscapes. A detailed report and other



corresponding communication materials will be developed so that the projects key lessons and strategies are clearly communicated and easily understood. The trainings and materials generated in this output will be used to guide and inform stakeholders so that activities in Output 2.1.2 and 2.1.3 can be implemented successfully.

***Output 4.1.2: Collect and share landscape restoration best practices among key actors***

248. Output 4.1.2 aims to document landscape restoration best practices, develop communication tools to share these techniques, and work directly with key actors to ensure this information is understood so that they can be integrated into land use policy and practice. Currently, there are few resources or tools that specifically target landscape restoration, and even fewer are present in Kenya. The project will document and disseminate various working papers and reports throughout the life project. These knowledge products will help build Kenya-specific evidence on the benefits and potential impacts of landscape restoration. Extensive stocktaking will be conducted, looking for proven successful examples of landscape restoration in Kenya across land uses. Costs and benefits if these practices to individuals and society will be examined as well, with the aim of producing a Kenyan landscape restoration typology that land managers can refer to when planning their activities, and that national landscape restoration technical working group members can refer to when developing the national landscape restoration strategy in Output 1.2.4. All of the knowledge products that are generated through this project will be stored online on the AFR100 website. The website currently acts as a information hub for all of the AFR100 members. Storing this information here will allow users to access information on best practices, reports, training materials, and organizations, institutions and companies engaged in landscape restoration in Kenya. This will also allow other stakeholders across Africa to access this information and apply relevant materials to their countries context. The project will work closely with the FAO Child Project in Kenya to ensure that knowledge products generated in that project will also be made available through the website. The project intends to coordinate with the Global Learning, Finance, and Partnerships project to make this information available to other TRI Child Projects as well as other countries in the region.

249. It will also be important to build and maintain support for landscape restoration among private and public actors in order to achieve results at scale. Communication and awareness campaigns will be undertaken with relevant partners, in order to popularizing the opportunities and challenges related to landscape restoration. The project intends to promote landscape restoration understanding among key public stakeholders, such as the Lamu and Tana River County House Committees and Members of County Assemblies (MCAs); and local community structures, such as the Tana Delta Conservation Network (TDCN), Tana Planning Advisory Committee (TPAC) and other county and local community institutions, so that they can implement landscape restoration practices and regulations more effectively. When project products are launched and at public events, senior officials will be engaged to encourage and inform the public about the importance of landscape restoration and its role in addressing the land use challenges that many Kenyan face. The project will also engage with private sector actors to increase awareness and understanding of landscape restoration so that they can integrate sustainable and restorative practices in their operations and supply chains. Additionally, the project team, and through support, key actors will participate in local, national, and international meetings and conferences to share experiences and learn from others. This information will be continually documented and added to the online landscape restoration hub.

***Output 4.1.3: Knowledge transfer and lessons sharing promoted within and outside the Tana Delta and coastal and Western Kenya ecosystems, including cross-county benchmarking, and with the TRI global child partner projects***

250. To build on the knowledge products developed in Output 4.1.2, this output will focus on ensuring this knowledge is transferred effectively between stakeholders. This output will also work to build the presence of landscape restoration at the national level within Kenya by engaging with media outlets. Exchange visits have been found to be a very effective tool for sharing experiences between communities and inspiring people to adopt new ways of doing things. This project will facilitate a number of exchange visits at the national and international levels. Nationally, the project will organize exchange visits between communities and county officials in the target landscapes and areas of the country where successful landscape restoration initiatives have taken place. These areas will be identified through the stocktaking

exercise conducted in Output 4.1.2. These exchange visit will allow land managers and county officials within the target landscapes to see first-hand what sustainable land management and landscape restoration looks like and how the practices can benefit their communities. The project will coordinate with the TRI FAO Kenya child project to ensure that the exchange visits are as effective as possible. Internationally, exchange visits will also be organized between stakeholders within the target landscapes and other TRI child projects in other countries. Sharing experiences and techniques among TRI child projects will better ensure that principles and processes tested across counties can be applied and replicated in others. After every exchange visit, detailed interviews will be conducted with participating stakeholders to document experiences and lessons learned. These documentations will be compiled and added to the online landscape restoration hub developed in Output 4.1.2.

251. In addition to exchange visits, the project will support stakeholders to participate in TRI Annual Knowledge Sharing events, Biennial Landscape Restoration Finance events, and TRI-sponsored South-South exchanges that address landscape restoration. These events will serve as opportunities for project stakeholders to present on what is being done in their respective landscapes, and learn from stakeholders in other countries who are facing similar experiences. While the exchange visits and stakeholder participation at events focuses on direct exchanges of information and knowledge, the project will also work with media outlets to increase the exchange of ideas and information regarding landscape restoration at the national to reach a broad range of individuals. Knowledge products and the landscape restoration hub developed in Output 4.1.2 will be shared with and reformatted into easily digested sound bites convenient for reporters to use. The project team will also organize regular press briefing materials and calls to ensure journalists are aware of the intricacies surrounding landscape restoration and sustainable land management. Increasing the number of media stories that cover the challenges and benefits of landscape restoration will help raise awareness across the country and help build support for these types of initiatives. Activities under output cross-link with policy development work conducted under Component 1.

***Outcome 4.2: Monitoring and evaluation systems adopted to support adaptive management of landscape restoration interventions and strategies.***

252. With the aim of helping track progress towards Kenya's national landscape restoration commitment to the Bonn Challenge and AFR100, the project will pilot and develop innovative monitoring techniques that can be scaled across the country. Monitoring will consist not only of tracking changes in vegetation cover, but also the use of certain land management techniques, and the impacts from these. Nature Kenya and WRI will borrow from their backgrounds in natural resource monitoring to develop a landscape restoration framework that can be adopted and applied across the country. The project will coordinate IUCN as they develop the Bonn Challenge Barometer, ensuring that the Kenyan monitoring system is aligned with this initiative. The ability to monitor success, both in changes in the land as well as environmental and socio-economic impacts, is paramount to the adoption of landscape restoration interventions. Monitoring results can be used to attract private investment in a landscape, allocate national and county budgets appropriately, and adapt sustainable land management techniques to maximize impacts. Outcome 4.2 will be achieved through the following output:

***Output 4.2.1: Innovative landscape restoration monitoring tools developed to track progress towards sub-national landscape restoration targets and capacity to use these tools enhanced***

253. Developing and implementing a comprehensive monitoring framework in the target landscapes will require the input and efforts of multiple stakeholders. Landscape restoration monitoring needs to focus on the impacts of interventions as much as the biophysical changes in the landscape, as landscape restoration is not an end in and of itself, but is a means to achieving objectives. Nature Kenya has a long history of monitoring biodiversity and pressures to landscape conversion. These methods will be applied and taught to stakeholders within the target landscapes who will be responsible for conducting regular monitoring. These include the Important Bird Areas (IBA) framework and the Annual Status and Trends report.

254. WRI also has an extensive experience mapping and monitoring tree cover across the globe. The Global Forest Watch (GFW) platform has gained global attention as the premier tree cover loss monitoring

system. The project will use the GFW platform to monitoring tree cover loss in the target landscapes to ensure the appropriate agencies have the information they need to enforce forest protections. WRI has also been collaborating with FAO to develop an international landscape restoration monitoring framework which will help guide the national monitoring system. This framework is intended to help prioritize landscape restoration objectives and identify the most important indicators. It also helps identify which actors will be responsible for collecting each of the indicators and how to bring all this data together into one coherent system. This framework will be applied in selected target landscapes in order to identify the most appropriate system for the country. This process will bring together all relevant national and county ministries as the task of monitoring for landscape restoration will need to be divided among multiple parties. This process is very important for setting objectives as well as expectations for each of the institutions regarding efforts and budgets.

255. To monitor changes in the biophysical environment, WRI has been piloting the use of Collect Earth, a tool developed by FAO and OpenForis, which uses freely available high-resolution imagery and sample plots to count trees and monitor vegetation regrowth. The tool was developed to track changes in arid landscapes where traditional remote sensing techniques have not been very successful. Collect Earth and other monitoring methods will be used to collect baselines for the target landscapes early on in the project. These baselines will include tree cover; land use; state, pressure and response variables; biodiversity; carbon; and other indicators identified during the monitoring framework development stage. The project will also target the ICCAs within the Tana Delta, monitoring biodiversity value, tree cover, and carbon. These indicators will be measured annually to ensure that community management practices are not compromising the quality of forest habitats.

256. Landscape restoration is a long-term process, in some cases taking decades to occur. Because of this, monitoring needs to be continuous to ensure that impacts from interventions are captured. With this in mind, to ensure continuity in monitoring efforts, the project will conduct trainings for all relevant stakeholders on the use of Collect Earth, Global Forest Watch, IBA framework, and annual status and trends monitoring. These training of the trainers will build much needed capacity and will allow counties and national institutions to conduct their own surveys using the tools past the end of the project.

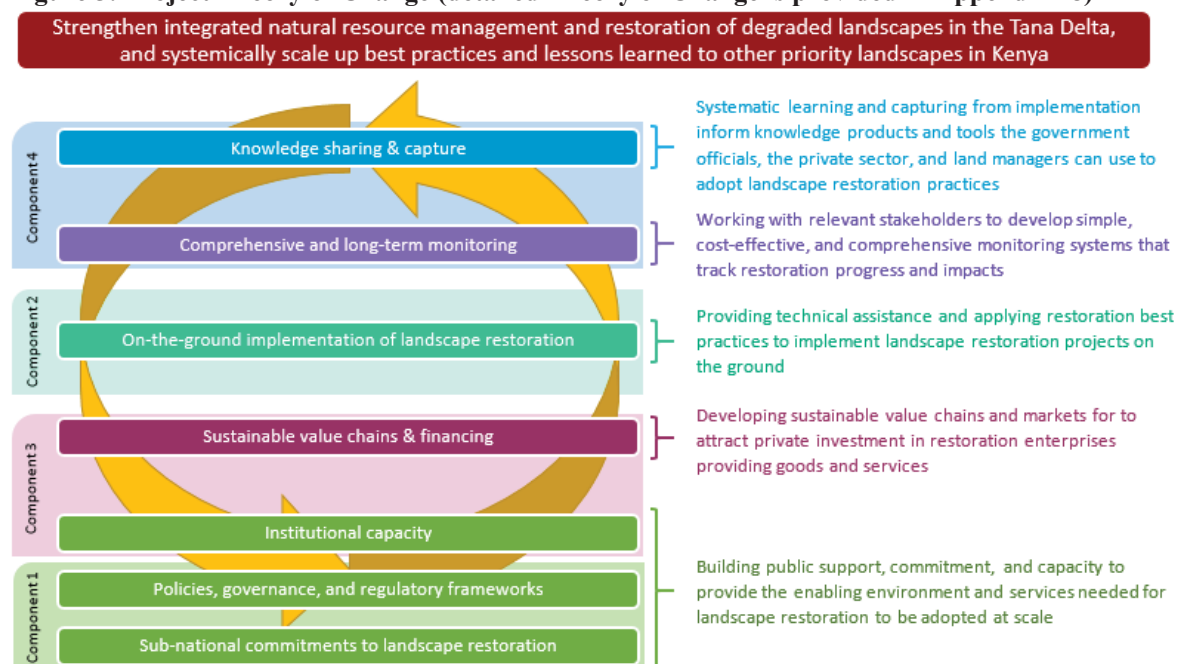
### **3.4. Intervention logic and key assumptions**

257. Neither integrated natural resources management nor landscape restoration are new concepts. They have been around for decades, and their principles have been implemented in many parts of the world, usually as small, one-off projects. In Kenya, there are many examples of successful adoptions and implementation of these practices, from agroforestry systems, to holistic livestock management, to commercial tree and bamboo plantations. The potential landscape restoration for increasing water security, poverty reduction, and sustainable development is enormous, but the road is not easy. Scaling up these disparate successes to broad-based, sustained transformation that provides for poverty alleviation and sustainable development will require mobilizing significant resources, not least of which is the will of government officials and the people who live on the land.

258. Successfully scaling up landscape restoration in Kenya will require the following:

- Providing the right enabling environment to allow land users, private companies, and government agencies to implement landscape restoration;
- Identifying sustainable value chains and financing;
- On-the-ground implementation of landscape restoration;
- Comprehensive, long-term monitoring of landscape restoration efforts; and
- Knowledge sharing and capture to learn from past mistakes and replicate successful strategies.

**Figure 5: Project Theory of Change (detailed Theory of Change is provided in Appendix 18)**



259. **Enabling environment:** The project theory of change begins by providing the correct enabling environment and institutional capacity for landscape restoration to take place on the ground. This will mean political will in the form of landscape restoration commitments, adequate policies and governance frameworks that incentivize the restoration of degraded landscapes, and increased institutional capacity to provide services to land users at the local level. These enabling conditions are primarily provided by the government, both national and county, and set the foundation on which successful, long-term landscape restoration can occur at scale.

260. **Sustainable value chains and financing:** In addition to the appropriate enabling environment, landscape restoration at scale will require the involvement of the private sector and individuals to build a landscape restoration economy. Identifying and developing value chains for goods and services produced through restoring landscapes will provide the market incentive for local land users and private companies to invest in these enterprises. Long-term financing outside of government budgets and international aid is crucial to the sustainability of landscape restoration initiatives. Alternative financing mechanisms such as payment for ecosystem services, and private investment by national and international companies will help meet the financial needs of land managers, accelerating the uptake of landscape restoration.

261. **Landscape restoration implementation:** With the enabling environment in place and sustainable markets and financing identified, landscape restoration can begin to take place across the country. Ensuring that communities are knowledgeable of landscape restoration practices and understand how to integrate them into their production systems is key for adoption. Extension services, materials on best practices, and training will provide land managers the tools they need to change their practices and start restoring their landscapes. Piloting strategies in target landscapes will test the appropriateness of practices for scaling across the country. As more communities adopt landscape restoration practices into their land management regimes and begin reaping the benefits, other communities will follow, creating a landscape restoration movement.

262. **Monitoring progress and impacts:** Once landscape restoration is taking place on the ground, it is important that progress is tracked to maintain political will and prove the success of strategies. Additionally, landscape restoration is about more than just the number of hectares restored, but also the societal, economic, and environmental impacts that result from changes in land management practices. Ensuring

that monitoring efforts are aligned with national, county, and local objectives is paramount to its success. It is important that monitoring is able to show how impacts on the ground are helping achieve development and environmental objectives, as these factors influence policies, strategies, and investment. Monitoring is a constant feedback loop, providing valuable information to adjust implementation strategies, identifying which policies are working effectively, and encouraging investors to continue supporting businesses on the ground.

263. ***Knowledge sharing and capture:*** Ensuring that we learn from our successes and failures is one of the most important steps in making sure we do not continuously reinvent the wheel and try what has been proven to be unsuccessful. Knowledge capture is a fundamental part of moving landscape restoration forward and increase effectiveness of interventions. This knowledge does not reside only with experts, but with local communities and land managers as well. Keeping track of what has been done, whether or not it was successful, and what recommendations implementers have for others are key for adapting strategies and plans. However, ensuring this information is recorded is not enough. In order for this information to have real impact, it needs to be easily available and shared with everyone. This can be done through online platforms to serve as information hubs, or as tailored communication materials in a format and language that is most easily understood by local groups. It can also be done through direct exchanges between communities, field visits, and photographs. These more immersive methods are very powerful, and can inspire individuals or communities to take action and make changes back home.

264. The project theory of change is an iterative process. While some aspects take place linearly, results on the ground will help inform how policies, governance structures, financing mechanisms, and value chains can be modified to further enable change to occur. Because of this, all the components are equally important in achieving the project objective, and must be implemented accordingly.

### **Project assumptions**

265. This theory of change includes a number of assumptions which have the potential to influence the activities needed to achieve the objective. First among these is the assumption that the Government of Kenya will maintain its current political support towards sustainable land management and landscape restoration as approaches to achieving multiple development goals. Over the past three years, the Ministry of Environment and Natural Resources has been a strong advocate for landscape restoration, pushing for a national target and strategy. The project also assumes that national and county governments will make use of strategies, plans, guidelines, methodologies, best practices and lessons developed through this project and will apply these tools effectively for landscape restoration and sustainable land management in other parts of the country.

266. The project also relies heavily on the coordination among different sectors and ministries to ensure that limited resources are used effectively and strategies do not contradict one another. This assumes that there will be willingness among these sectors and ministries to align their management efforts. In the past, these groups have been open to collaborating to achieve objectives, and the project is confident that this will also apply to landscape restoration. Similarly, a lack of coordination among funding groups has made it difficult to scale landscape restoration. Although there are multiple funding streams available, financing has always been a limited resource for landscape restoration. The funding groups are not always aligned with one another, sometimes investing in projects that others unsuccessfully implemented in the past. Because of the inefficiencies that uncoordinated funding creates, the project assumes that funding institutions, private sector actors, and national and county government will see value in coordinating their investment efforts and are willing to collaborate with one another.

267. Building institutional capacity to provide services to land managers is an important part of the theory of change. One of the biggest gaps the project has identified is the lack of adequate extension services or farmer field schools to train and provide guidance to individuals on the ground. The project intends to re-establish extension services within the Tana Delta landscape as a pilot for the rest of the country. The ability to achieve this output assumes that county governments, private sector actors, and land managers see the value in re-establishing extension service programs and are eager to learn new



approaches. These extension services were provided in the past and were highly regarded by the majority of Kenyan, so there is little concern that there will not be support for this initiative.

268. Other key assumptions underlying the intervention logic for this project are as follows:

- (i) National and county governments will allocate financial and other resources for the implementation of the specific activities of the project;
- (ii) There will be increased long-term national and county level financing for landscape restoration in the Tana Delta, as a result of implementation of this GEF project;
- (iii) Donors and other partners working on landscape restoration in Kenya will continue to support partnerships for sustainable land management at national and county level; and
- (iv) Local communities will cooperate in the implementation of project activities;
- (v) Public and private investors are willing to invest in landscape restoration in the Tana Delta.

### 3.5. Risk analysis and risk management measures

269. During the PPG phase of this project the main barriers to achieving outcomes and objectives were considered fully and the project has been designed accordingly, including a commensurate strategy of interventions for the issues that the proposed project and its key partners are in a position to address. Aspects that remain outside the reach of the project may also represent risks for the project. However, these have been classified as relatively low, resulting in a high probability of success for the project. The main risks to the project are listed below in Table 9:

**Table 9. Project risks and risk management measures**

<b>Risk</b>	<b>Impact/ Likelihood</b>	<b>Risk Management Strategies</b>
<b>Inadequate political will:</b> <i>The national and county governments may not accord sufficient priority to the formulation of policies, regulations, strategies and plans and may not provide full mandate to national and county institutions to comprehensively implement landscape restoration measures in the project sites. There results from the National election may change the leadership within the government in key ministries, especially those that have shown strong support for landscape restoration.</i>	Medium / Low	<p>Support for restoration is already reflected to varying degrees in national legislation and policies, and will be further strengthened through implementation of Components 1 and 4 focusing on support for policy development and information and awareness-raising work.</p> <p>The project will also use the already established national and county government coordination mechanisms including contacts and networks that Nature Kenya and WRI have established through previous work and during the SEA and LUP process.</p> <p>The project intends to involve the County Governors, Executive Committee Members and members of the County Assembly from the target landscapes during project implementation, to ensure interventions are aligned with County Government priorities.</p> <p>Additionally, the project will work closely with the national assembly, county assembly, inter-ministerial committees and similar national inter-sectoral coordination mechanisms.</p> <p>While there is a risk that the National election results may result in changes within the government, the project feels certain that support for landscape restoration will continue to be a focus any new administration. Many of the individuals who have helped build support for landscape restoration within the government have non-appointed positions, and</p>

		thus will remain and support any new administration in carrying out Kenya's commitment.
<b>Inadequate awareness and stakeholder support:</b> <i>There is a risk that stakeholders may not fully support the implementation of landscape restoration action plans, strategies and activities defined in the project due to lack of awareness on the potential benefits of undertaking sustainable development in the Tana Delta.</i>	Medium / Low	<p>As part of Components 1 and 4, the project will carry out public awareness campaigns targeting various stakeholder groups to raise awareness on the importance of investing in and sustainably managing resources within the Tana Delta ecosystems.</p> <p>The project will also develop an effective communication strategy targeting a diverse range of stakeholders, include all indigenous groups, and both men and women.</p> <p>The project will promote stakeholder ownership of project activities by engaging stakeholders and communities in the design and implementation of activities. Local communities have been deeply engaged during the PPG phase, showing support and buy-in of proposed project activities.</p>
<b>Inadequate capacity at national and county level:</b> <i>There is a risk that the National Government and county governments of Tana River and Lamu will not have adequate capacity to undertake activities proposed in this project. There could be limitations in terms of budgetary allocations and availability of skilled staff to participate in this project.</i>	Medium / Medium	<p>The project has identified during the PPG that capacity gaps exist within national and county governments. To address this, Component 3 of the project will work to build and strengthen capacity at the national and county levels to enable a range of institutions at different scales to effectively coordinate and engage in restoration and sustainable land management.</p> <p>Capacity building efforts will also be supported by work under Component 4, particularly opportunities for South-South learning and knowledge sharing, and partnerships with other supportive organizations and initiatives.</p> <p>The project will also provide financial support to the county governments in order to build their capacity to participate in the implementation of project activities.</p> <p>The project will encourage cooperation between various county government departments involved in the implementation of this project in order to maximise use of limited financial and human resources.</p> <p>The training programmes implemented by the project will contribute in enhancing the skills of local experts in order to meet the needs to implement activities on the ground.</p>
<b>Inadequate cooperation &amp; coordination:</b> <i>The key issues affecting the long-term sustainability of the Tana Delta ecosystem may not be adequately incorporated into projects, programmes, policies and activities of national and county governments and their partners, in the manner envisaged in the project. The county governments may not have</i>	Medium / Low	<p>The project will train decision-makers from a variety of county government institutions and departments to build better knowledge and understanding of landscape restoration and how it can be used to address key threats to the Tana Delta ecosystem. This will increase the possibility of landscape restoration approaches being integrated into national and county development planning and policy-making processes.</p> <p>The project will also leverage existing national and county coordination mechanisms established during the SEA and LUP processes in order to ensure that</p>

<i>capacity to coordinate implementation of project activities.</i>		<p>efforts being made by different institutions are aligned. This will mitigate the risk that projects being undertaken by the government do not affect the long-term sustainability of the ecosystem.</p> <p>The project will promote participatory approaches at various levels and provide support to local communities, CBOs and NGOs to ensure that they are involved and fully participate in project activity planning and implementation.</p> <p>The project will also work with government stakeholders to establish inter-ministerial coordination committees. These committees will allow for the coordinated inclusion of various government departments and institutions in the process of implementation of the project activities in each of the target counties.</p>
<p><b>Adverse impacts of climate change:</b>  <i>The Tana Delta may face severe environmental, ecological and socio-economic disruptions owing to impacts of climate variability and change, and this may affect the ability of the national and county governments and project partners to implement priority activities planned for this project.</i></p>	Medium /Low	<p>The landscape restoration interventions that will be planned and implemented as part of this project will contribute in alleviating the impacts of climate change. This is one of the primary objectives of landscape restoration in productive landscapes.</p> <p>The project will also support local communities to develop alternative livelihood systems that are less vulnerable and are adapted to variable climate impacts.</p>
<p><b>Increased upstream damming:</b>  <i>The construction of the High Grand Falls Dam in the upper Tana River basin may complicate environmental problems in the Tana Delta through major reductions of streamflow and flooding cycles. This may increase the degradation of riverine forests and therefore reduce the impact of landscape restoration measures that will be undertaken.</i></p>	High/High	<p>The project will sensitize national and county government officials on the potential adverse impacts of the proposed mega dam project being planned for the upper Tana River basin. This will be done leveraging existing inter-ministerial coordination bodies such as the Inter-Ministerial Technical Committee on Sustainable Management of Deltas in Kenya.</p> <p>The project will conduct public awareness campaigns targeting local communities, Community-Based Organisations (CBOs) and Non-Governmental Organisations (NGOs) to build their capacity for advocating against this upstream project.</p>
<p><b>Insecurity due to terrorist activities and banditry:</b> <i>There is possibility of terrorist activities in Tana River and Lamu Counties that may derail implementation of the project.</i></p>	Medium/High	<p>The project will cooperate with security agents operating in Tana River and Lamu Counties to ensure project implementation is not at risk of attacks.</p> <p>The project will also limit movement in the Delta for non-local staff.</p> <p>When accessing remote parts of the Tana Delta, the project will seek police escort to ensure security for project personnel.</p>
<p><b>Public and private sector investors not willing to invest in landscape restoration:</b><i>There is some possibility that public and private investors may not be willing to invest in landscape restoration projects in the Tana</i></p>	Medium / Medium	<p>A key emphasis of the activities under Component 3 will be to further develop, test, and scale-up financing tools, risk mitigation instruments, and incentives that demonstrate the potential for restoration to yield a substantial return on investment. The project will also hold a series of events with private sector and other</p>

<p><i>Delta, due to lack of information and experience.</i></p>		<p>local stakeholders to build awareness of these potential business returns.</p> <p>Project investment in local entrepreneurial training will also improve capacity for communities to develop investment-worthy business plans that are attractive to private investors.</p> <p>Work under Component 1 will also develop and strengthen the enabling policy environment, and should send a strong signal to private investors on the willingness of the public sector to engage in public-private partnerships on landscape restoration.</p>
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### 3.6. Consistency with national priorities or plans

270. The project is consistent with Kenya's national priorities and plans, and is relevant to the sector plans of both the national and county governments. In view of this, the project has received endorsement from the Government of Kenya through the Ministry of Environment and Natural Resources. This project is based on the premise that the Government of Kenya is committed to sustainable land use practices, improved economic growth and biodiversity protection. The Kenya Constitution recognizes a clean and safe environment as a fundamental basic human right, and requires that land be managed sustainably for present and future generations. This aligns with the project's overarching objective to restore degraded landscapes and scale up the use of integrated natural resource management to ensure long-term sustainable use of land and resources.

271. The major policy tool guiding national development in all sectors is Vision 2030 which envisions Kenya becoming a middle-income country by 2030. The Vision 2030 takes into account all other plans and strategies from various sectors including agriculture, water, and forestry. To support this, the National Land Policy provides for sustainable land management in the production process. The Constitution provides a framework that enables national and county government to move Kenya to the next level socially, environmentally and economically. Schedule IV of the Constitution devolves the implementation of national policies to the county governments. These functions include land use, agriculture, forestry and water among others. This project is therefore designed to incrementally support Kenya's national and county government's aspirations to meet these policy targets. Kenya is already working towards achieving these policy aspirations. For example, the Tana Delta Land Use Plan (LUP) was developed following a scientific process embedded in a Strategic Environment Assessment (SEA), a process that is being replicated in the Yala Swamp adjacent to Lake Victoria. Kenya aspires to catalyse nationwide land use planning that allows the delivery of social, environmental and economic targets in line with sector-based strategies and action plans. Of relevance are the Poverty Reduction Strategy Paper, the Economic Recovery Strategy Paper, the National Biodiversity Strategy and Action Plan, the National Climate Change Strategy and Action Plan and the National Forest Programme. Kenya is in the process of developing the first National Wildlife Conservation and Management Strategy, as well as a National Landscape Restoration Strategy to add to these strategic frameworks.

272. The project is particularly consistent with the goals of the National Forest Master Plan (1995-2020) that contains various implementation strategies targeting conservation of indigenous forests and their biodiversity. The plan also pays special attention to habitats of high biodiversity and endemism and priority areas for conservation, including wetlands and forests. Under the plan, the Kenya Government aspires to increase forest cover from 1.7%, the current state of cover, to 10% of the total land area in Kenya, a target that is also reflected in the Vision 2030 as well as the Constitution. The project will contribute to the realisation of this goal, including the biodiversity conservation targets set by the Kenyan Government as a Contracting Party to the Convention on Biological Diversity (CBD). Kenya's National Climate Change Response Strategy (2010) forestry mitigation actions include rehabilitation and restoration of all degraded forests and riverine vegetation by afforesting/reforesting over 4.1 million ha. The project's objective of

scaling up landscape restoration in the Tana Delta and other landscapes in Kenya is very much aligned with these government goals.

273. Kenya has aligned itself with other governments that have made pledges to the Bonn Challenge and AFR100. The Bonn Challenge is the largest restoration initiative the world has ever seen, with a target to restore 150 million hectares of degraded and deforested lands by 2020, and at least an additional 200 million hectares by 2030 as called for by the New York Declaration on Forests. The Bonn Challenge has already resulted in commitments, including Kenya's 5.1 million hectares, to restore more than 160 million hectares of degraded land and is well on track to achieving the 2020 target ahead of schedule. AFR100, the African Forest Landscape Restoration Initiative, is a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030, contributing towards the Bonn Challenge goal. It aims to accelerate restoration to enhance food security, increase climate change resilience and mitigation, and combat rural poverty. This project is designed to cooperate with other projects within The Restoration Initiative (TRI) to catalyse nationwide integrated natural resources management (INRM) within the landscape restoration approach. To deliver the Bonn Challenge and AFR100 targets, there is a need to learn how to engage all stakeholders in promoting sustainable natural resources management. Restoration leadership and action, and innovation and sustainability in the implementation of restoration initiatives is critical. Kenya considers the Bonn Challenge and AFR100 target implementation very important for the country, and was one of the first countries in Africa to make a hectare commitment. During the GEF 6 National Formulation Exercise, Kenya allocated GEF resources from STAR for this action in support of two GEF Projects, one led by FAO with Kenya Forestry Research Institute and this project led by UN Environment with Nature Kenya, enhancing integrated natural resource management to arrest and reverse current trends in biodiversity and land degradation for increased ecosystem services in the Tana Delta.

**Table 8. Project contribution to the Bonn Challenge and AFR100 restoration initiatives**

<b>AFR100 and Bonn Challenge Goals</b>	<b>How the project will support achievement of objectives</b>
Food security	The adoption of INRM and landscape restoration practices in degraded production landscapes will improve productivity and thus the ability of farmers to produce more food to support themselves and their families. The project will mainly focus on the restoration of degraded production landscapes, building knowledge and capacity of local communities. Practices such as agroforestry, CSA, silvopastoralism, and EverGreen agriculture have been proven to increase the overall yields of food. Their application in Kenya will help address food shortage disasters that occur during droughts, by helping increase the soil's ability to hold water, and by reducing the rate of evaporation.
Climate change resilience and mitigation	The restoration techniques this project intends to pilot and scale up will also contribute significantly to the sequestration of carbon in both natural and production landscapes. CSA, INRM, agroforestry, silvopastoralism, and other landscape restoration practices primarily focus on the integration of trees or perennial plants into production systems in order to improve climate resilience and improved productivity over time. These trees help conserve water, decrease evaporation, increase soil nutrients, reduce soil erosion, and in some cases, provide food and other products. The trees and perennial plants store significant levels of carbon in their bodies and root systems, and over time, add carbon into the soil itself. Regeneration of natural ecosystems and forests will also increase tree cover, resulting in an increase in carbon sequestration.
Combat rural poverty	In Kenya, as is the case in many countries, rural populations tend to be some of the poorest. The project aims to identify sustainable value chains and financing to help jump start a new industry of landscape restoration enterprises. These businesses would directly engage these poor



	communities and provide them alternative, climate resilient livelihoods that help restore landscape productivity.
Ecological integrity and zero net land degradation	Target landscapes include important natural areas that help maintain ecosystem functions. The project will support communities and local government officials in restoring degraded natural habitat as well as address the demand for forest resources through the application of INRM in production landscapes. These two approaches will help reduce ecosystem degradation, and will help restore ecological integrity so that vital ecosystem services continue to be provided.
Informed and meaningful involvement of all stakeholders	The project will take a participatory approach to all of the activities being proposed. A major focus of the project is to increase stakeholder participation in planning and policy decision making to ensure the decision does not adversely affect communities. The project will work closely with local level stakeholders to ensure they have the knowledge and capacity to undertake their own landscape restoration efforts.
Sustainable sources of private finance	The project realizes that in order to achieve the scale needed to reach Kenya's 5.1 million hectare target, the private sector will also have to get involved with funding restoration efforts. The project will develop innovative financing mechanisms, build the capacity of local entrepreneurs to access and administer private finance, and encourage private investment through policies and incentives.
Long-term monitoring of progress and impacts	The need for monitoring systems that can not only track the number of hectares restored but also the socio-economic and environmental impacts is key for the success of landscape restoration initiatives. Governments need to track progress as well as the impacts of their efforts so that they can use this information to make informed decisions regarding priority areas, budget, and policies. Monitoring is a key component of this project, and it intends to pilot comprehensive frameworks in both target landscapes. Focus will be on identifying key objectives and indicators that can be collected over the long-term at a reasonable cost. Lessons learned will be shared with national level stakeholders so that a national landscape restoration monitoring system can be implemented.

274. This project and Kenya's 5.1 million hectare commitment to the Bonn Challenge and AFR100 also contribute directly to the National Climate Change Action Plan (NCCAP). The plan calls for the reforestation of forest habitats both to sequester carbon and to protect water sources such as rivers and wetlands. Through the project interventions, direct landscape restoration will be achieved on the ground, and important enabling conditions such as policies, incentives, and financing, will set the groundwork for large-scale landscape restoration in other areas of the country.

275. The project is also consistent with the National Water Master Plan 2030 that aims at ensuring that improved water and sanitation are available and accessible to all Kenyans by the year 2030. The plan also aims at ensuring that Kenya has a clean, secure and sustainable environment. Kenya's Wetlands Policy aims at protecting important wetlands in the country. The Tana Delta is a designated RAMSAR site of global importance and is considered one of the most important wetlands in the country. The implementation of this landscape restoration project will ensure water resources in the Tana Delta are used on a more sustainable basis, contributing to the realisation of national goals for the protection of important wetlands and benefitting communities and ecosystems.

276. The proposed project will assist Kenya to fulfill its obligations under United Nations Convention to Combat Desertification (UNCCD)<sup>49</sup>. Kenya ratified the UNCCD on 24 June 1997 and in 2002, it formulated the National Action Programme (NAP) for combating desertification through a popular stakeholders consultative process at local and national levels. The project will assist in the implementation of Kenya's NAP that aims at reclaiming severely degraded areas, rehabilitating partly degraded areas, reducing further degradation of affected areas, and conserving areas that are not yet degraded. Kenya's

<sup>49</sup> UNDP (2013): Combating desertification in Kenya: Emerging lessons from empowering local communities, UNEP, Nairobi, Kenya, 44p.

other engagements in UNCCD since 1995 have been through the commemoration of the World Day to Combat Desertification (WDCD). Every year, Community Based Organizations (CBOs) affected by desertification are involved in WDCD activities. In addition, there are a number of successful interventions aimed at combating desertification throughout the country that this project will learn lessons and best practices. The landscape restoration activities that will be implemented through this project are greatly aligned with the Kenya's NAP objectives, and will contribute immensely in controlling desertification in the Tana Delta and other landscapes in Kenya.

277.

278. Kenya is currently among 105 countries that has set national Land Degradation Neutrality (LDN) targets. In its LDN, Kenya has prioritized the issue of halting land degradation across sectors, in order to enhance the attainment of food security through sustainable land management practices, water harvesting and land based initiatives. Kenya's LDN calls for securing enough healthy and productive natural resources by avoiding degradation whenever possible and restoring land that has already been degraded. Better management practices and better land use planning can improve economic, social and ecological sustainability for present and future generations. This project will assist Kenya to achieve its national LDN baseline and targets and subsequently this achievement will greatly contribute to advancing national sustainable development priorities, such as the National Climate Change Action Plan and the Green Economy Initiative.

279.

280. The project is also consistent with Kenya's National Climate Change Response Strategy (NCCRS 2010), National Climate Change Action Plan (NCCAP 2013), and a National Adaptation Plan (NAP) which provides a vision for low carbon and climate resilient development pathway. The project will contribute in assisting Kenya to operationalise these policies and plans through the implementation of climate change actions in various areas such as afforestation and reforestation and other clean energy development, energy efficiency, climate smart agriculture, and drought management. The project will also play an important part in Kenya's Nationally Determined Contribution (NDC, 2015)<sup>50</sup> that builds on the participatory multi-stakeholder and cross-sectoral consultative processes established during the development of NCCRS and NCCAP at national and county levels. Kenya's NDC has identified adaption and mitigation measures that need to be implemented to forestall the impacts of climate change.

281. The proposed project is in line with the United Nations Development Assistance Framework (2014-2018) for Kenya. More specifically it contributes to the following UNDAF's Strategic Results Areas: 1) Transformational Governance encompassing Policy and Institutional Frameworks; Democratic Participation and Human Rights; Devolution and Accountability; and Evidence-based Decision-making, 3) Inclusive and Sustainable Economic Growth, with Improving the Business Environment; Strengthening Productive Sectors and Trade; and Promoting Job Creation, Skills Development and Improved Working Conditions, and 4) Environmental Sustainability, Land Management and Human Security including Policy and Legal Framework Development; and Peace, Community Security and Resilience. The UNDAF Results Areas are aligned with the three Pillars (Political, Social and Economic) of the Government's Vision 2030 transformational agenda.

### **3.7. Incremental cost reasoning**

282. Without GEF support, landscape restoration actions at the national and county level will continue to receive low attention in the Tana Delta. Any planned activities will continue to be ad hoc or focused on single objectives and will not maximise the flow of multiple benefits, including global benefits and local livelihood benefits. Lessons learned by the different counties and agencies will not be collected and shared as effectively as they could be to scale up action on restoration of degraded landscapes and forests. Through this project, GEF investment will be used to catalyse actions across the suite of project interventions that will achieve significant global environmental benefits (details in Table 1) beyond the baseline of national action. Summary of the incremental cost reasoning and analysis is presented in the Table 10 below and further details are provided in Appendix 3.

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<sup>50</sup> Ministry of Environment and Natural Resources (July 2015): Kenya's Intended Nationally Determined Contributions.

Table 10. Incremental cost reasoning and analysis

<i>Baseline Scenario</i>	<i>GEF Incremental Contribution Alternative</i>	<i>Key Outcomes Expected with the Alternative Scenario</i>
<p><b>At the national level:</b></p> <ul style="list-style-type: none"> <li>There are several different policies and plans currently in place (e.g., National Land Policy, Vision 2030 development blueprint, the National Constitution, National Forest Programme, sector legislation and Tana Land Use Plan) that all provide guidance for sustainable land management. Yet, there are no national or county policies, legislation, regulations or strategies that specifically look at how these can be coordinated in order to address landscape degradation and meet Kenya's 5.1 million ha landscape restoration target.</li> <li>National Constitution requires that no more than two-thirds of either gender be represented in policy planning. In practice, these targets are low. Most planning platforms are biased towards male participants, leading to inequitable decision-making processes.</li> <li>A high-level national event was held in September 2016 to launch Kenya's 5.1 million ha landscape restoration commitment to the Bonn Challenge and AFR100. While the event had strong support from government officials within the Ministry of Environment and Natural Resources, Ministry of Agriculture, Ministry of Water, and others, there has not been any other type of national forum that highlights the importance of meeting these commitments. There has also been a lack of communication of this national commitment to county-level officials, resulting in many counties not being aware of the commitment.</li> <li>There has been limited reporting by media outlets, mostly anecdotal (both print and digital) on stories about the benefits and importance of landscape</li> </ul>	<p>The project will strengthen integrated natural resource management and restoration of degraded landscapes in the Tana Delta, and systematically scale up best practices and lessons learned to other priority landscapes in Kenya.</p> <p>The project will provide the foundation on which a landscape restoration movement can take hold in the Tana Delta, and can help scale these successes to other landscapes in Kenya.</p> <p><b>Component 1:</b></p> <ul style="list-style-type: none"> <li>County landscape restoration assessments will be conducted for at least 2 counties and recommended targets will be provided to the county governments. The project will support these counties in officially adopting these targets into their policies and making an official commitment toward the national landscape restoration target.</li> <li>The project will support the preparation and implementation of a national landscape restoration strategy and county policies, legislation, regulations or strategies specific to landscape restoration to ensure an adequate enabling environment is in place for landscape restoration to be realized at scale.</li> <li>Village land use plans will be prepared, guided by the Tana Delta Land Use Plan. These plans will include areas that will fall under newly established Indigenous Community Conservation Areas (ICCAs).</li> </ul> <p><b>Component 2:</b></p> <ul style="list-style-type: none"> <li>The project will support the development and implementation of sustainable land management and landscape restoration practices in the Tana Delta, and</li> </ul>	<ul style="list-style-type: none"> <li>At least 130,000 ha of land will be under sustainable livestock, fish and crop management.</li> <li>At least 10,000 ha of degraded landscapes will be in the process of restoration.</li> <li>95,000 ha of Indigenous Community Conservation Areas (ICCAs) in the Tana Delta will be managed for multiple uses to benefit globally important biodiversity and contribute towards landscape restoration targets.</li> <li>At least 55,000 ha of land will be under sustainable forest management as mangrove or riverine vegetation.</li> <li>At least 40,000 ha of land in the core of the Tana Delta will be under community conservation area for sustainable multiple uses.</li> <li>At least 20,000 ha of production land that had recently been converted will be managed sustainably and undergoing landscape restoration.</li> <li>55,000 ha of grazing land will have dry and wet season grazing regimes based on carrying capacity; crop farmers will be receiving farmer extension services through farmer field schools; fisher folks will be using fish ponds; climate smart irrigation will be demonstrated through the use of green houses (a sub-set of the 130,000 ha under sustainable management).</li> <li>Livestock, crop, fish, tourism, beekeeping, and nature-based business cooperatives will be operational in the Tana Delta, have capacity, and encourage their membership to include</li> </ul>

<p>restoration and sustainable land management. This topic has not seen much attention by the media in recent years, and there is little evidence to believe that this will change.</p> <ul style="list-style-type: none"> <li>• Landscape restoration funding and programmes are largely uncoordinated among groups, with current actions limited to minimal tree planting, largely as a public relations effort.</li> <li>• There has been a near collapse of farmer field extension services, leading to rampant land degradation and loss of production value. Community Forest Associations exist but have no capacity or resources to undertake landscape restoration. There is also very little capacity among farmers, pastoralists, and fisher folk for sustainable land management and landscape restoration, due in part to the lack of extension services for many years.</li> <li>• Lesson sharing through exchange visits has been very limited, both within the country and between Kenya and other countries in the region. This has resulted in many unsuccessful projects being implemented across the country as experiences were not documented and shared. There are also successful examples that have not been replicated because of limited knowledge of what has taken place.</li> <li>• Monitoring of landscape restoration efforts has been very limited across the country. Important Bird Areas' annual status and trends reports based on basic monitoring without detailed annual biodiversity data have been conducted. There is also limited information on soil, water, and forest cover change. Training on monitoring techniques has been limited to basic training for a subset of site managers to implement the Important Bird Areas' monitoring framework. Monitoring is not up to date and is costly and slow. All monitoring streams are managed by different institutions, and there is no mechanism for pulling all of the data together into a system that can help guide landscape restoration efforts.</li> </ul>	<p>share these with other target landscapes. These practices will be demonstrated to support sustainable management of at least 40,000 ha of land within the core of the Tana Delta, and at least 20,000 ha of production land that had recently been converted and will undergo landscape restoration.</p> <ul style="list-style-type: none"> <li>• County-level Restoration Opportunity Assessment Methodology (ROAM) analyses will be conducted in at least two counties, contributing towards the establishment of county landscape restoration targets, and identifying priority areas within the counties that should be targeted for interventions.</li> <li>• The project will support the management of 95,000 ha of ICCAs in the Tana Delta for multiple uses to benefit globally important biodiversity and meet landscape restoration targets.</li> </ul> <p><b>Component 3:</b></p> <ul style="list-style-type: none"> <li>• The project will focus on both harnessing existing domestic public financing structures and accessing risk reduction products that are underutilized at present in landscape restoration activities. Bankable models with proven successes for landscape restoration from across the county will be mined for approaches that can be applied to the target counties.</li> <li>• Private sector investment in landscape restoration enterprises and income generating activities will be enhanced through the development of the Tana Delta Green Industrial Park. The Green Industrial Park will serve as a business centre for numerous income generating activities and landscape restoration enterprises.</li> <li>• The project will work with the Tana Sustainable Development Board (TSDB) to identify and reach out to potential private investors who can invest in landscape restoration enterprises. Guidance documents and local policies will be developed to ensure that private investment in the Delta is participatory and sustainable.</li> </ul>	<p>biodiversity, sustainable land management and landscape restoration in their production processes: Crop farmers (500 households); Pastoralists (500 households); Fisher folk (100 households); Others (300 households – beekeeping, tourism, fruits etc.) are involved in diversified livelihood options supportive of forest landscape restoration.</p> <ul style="list-style-type: none"> <li>• Tana River and Lamu County governments will have established a functional county model process that is systemically adopted by at least two other counties.</li> <li>• Low-emission and resilient development pathways are being implemented that will sequester 42,630,872 tCO2eq</li> <li>• Pastoralist households (1,530 households, 12,250 people (50% men, 50% women)) will be benefiting from secure water access routes for livestock; 90% of farming households (1,530 households, 12,250 people (50% men, 50% women)) will be benefiting from secure access to flood recession farming areas; 90% of fishing households (218 households, 1,750 people (50% men, 50% women)) will be benefiting from secure access to fishing waters; (220 households, 1,320 of the most vulnerable people) will demonstrate the benefits provided from developing or diversifying traditional sustainable livelihoods activities.</li> <li>• Landscape restoration assessments will be conducted for at least two counties, resulting in county-level targets.</li> <li>• Lessons learned from sustainable value chain identification in the Tana Delta will be applied to at least two other landscapes in Kenya.</li> <li>• Local producer groups/cooperatives will be able to negotiate business terms with private sector investors to include support for sustainable production and landscape restoration in the production process. These producer</li> </ul>
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<p><b>At the county level:</b></p> <ul style="list-style-type: none"> <li>130,000 ha of land within the Tana Delta are currently under unsustainable land management or undergoing landscape degradation. The unsustainable land management practices included livestock overgrazing, lack of application of soil conservation measures in farms and overfishing in rivers and ox bow lakes using inappropriate fishing gear and techniques.</li> <li>There is an overarching land use plan for the entire Delta, but no village land use plans exist, leading to land that is currently under inadequate protection and unsustainable management.</li> <li>There are a limited number of households demonstrating how livelihoods can be developed or diversified to support the long-term conservation of the Tana Delta's natural resources. Currently, there are roughly 400 households (3,000 people) benefiting from income-generating activities.</li> <li>Tana River and Lamu Counties have approved a Land Use Plan with sustainable land management objectives. Despite this, there are currently no county landscape restoration commitments linked to the national target of 5.1 million ha. This is partly due to a lack of a county-level technical body that can assess landscape restoration potential and recommend a target to county officials.</li> <li>Roughly 70,000 people from 115 villages in the Tana Delta are aware of the Tana Delta Land Use Plan. Despite this, there has been very limited mobilization of efforts to begin implementing the plan to restore landscapes and sustainably use resources.</li> </ul>	<ul style="list-style-type: none"> <li>The project aims to establish forums through which private, government, and local community sectors can engage with one another to guide and encourage investment in sustainable practices that benefit the environment as well as local livelihoods.</li> <li>The project will strengthen and enable a range of institutions across sectors and at different scales in order to effectively coordinate and engage in landscape restoration and sustainable land management.</li> <li>Extension services will play a key role in the adoption and application of landscape restoration best practices in the target counties and across the country. Where extension services are lacking, the project will train institutions on sustainable land management and landscape restoration best practices and the appropriate methods for enabling land managers to implement them. The project will also develop materials that can be used by extension officers to communicate best practices and management techniques in effective ways.</li> <li>A project incubator will be established in the Tana Delta to provide business readiness support to local entrepreneurs. The project will develop materials targeted at local producer groups and cooperatives to facilitate the negotiation of terms for contracts, ensuring that communities are not taken advantage of. Bringing together private investors and local entrepreneurs with landscape restoration business ideas will help bridge the gap between projects and financing, increasing the number of successful investments in landscape restoration.</li> </ul>	<p>groups/cooperatives will have begun to engage in commercially viable production following landscape restoration plans and strategies and lessons will be replicated in one other landscape.</p> <ul style="list-style-type: none"> <li>Private sector actors and county governments have established mechanisms that facilitate financing of sustainable landscape restoration across all sectors of the economy.</li> <li>Key actors and sectors at both the national and county level will have processes in place that allow for coordinated and strategic investment in landscape restoration and sustainable land management initiatives.</li> <li>At least two county governments will have fully mainstreamed landscape restoration into their land-use sectors, and lessons learned from this process are replicated in four additional counties.</li> <li>At least two county governments will have functioning farmer field extension services, and these programs are mainstreamed and financed by the county governments and private sector actors.</li> <li>At least one private sector business entrepreneur will invest in a business in the Tana Delta that is aligned with the land use plan and landscape restoration plans and targets.</li> <li>CFAs from selected landscapes in at least five counties are trained and aware of their role in landscape restoration.</li> <li>At least 1,000 individuals from various land use sectors have received training on sustainable land management and landscape restoration best practices.</li> <li>At least 10 capacity building events have been conducted.</li> </ul>
<ul style="list-style-type: none"> <li>A Tana Planning Advisory Committee and county house committees exist but no county landscape restoration specific governance and regulatory structures are currently established. This has made it difficult to coordinate landscape restoration initiatives in the region.</li> </ul>	<p><b>Component 4:</b></p> <ul style="list-style-type: none"> <li>The project will support the collection of landscape restoration best practices from across the country in order to identify which strategies have been most successful, why, and how they can be scaled up in the target landscapes. The best practices and lessons learned on implementation during this project will be shared through an online platform to allow others</li> </ul>	



<ul style="list-style-type: none"> <li>While the Tana Delta has two technical committees that are made up of over 50 different institutions (the Tana Planning Advisory Committee with 25 institutions; Tana Delta Conservation Network with 38 user groups), neither of the groups nor the private sector are sufficiently included in county decision-making processes. This has led to county decisions that adversely affect stakeholders who make up these groups, many of whom live and depend on the delta.</li> <li>At the county level, there has been limited inclusion of landscape restoration or sustainable land management into plans, budgets or strategies. County Integrated Development Plans (CIDs) have been weak on including sustainable land management across all sectors of the county economy, and biodiversity, landscape restoration, and environmental action plans do not currently exist. County budgets have only included meagre allocations for tree planting activities, and have not included other landscape restoration interventions such as agroforestry or extension services.</li> <li>2010 estimates for total carbon stocks in the Tana Delta are 50 million tCO<sub>2</sub>eq.</li> <li>Private sector engagement in landscape restoration and sustainable land management is uncoordinated, becoming a key driver of land degradation. This is partially due to the lack of bankable sustainable land management or landscape restoration projects within the target landscapes.</li> <li>There are currently no sustainable financing mechanisms in place or are operating within the target landscapes.</li> <li>Lesson sharing from past landscape restoration efforts is limited to the national Site Support Groups' forum convened annually by Nature Kenya. Currently, no platform exists that allows for counties to share lessons and experiences with others to build local knowledge on best practices and strategies.</li> </ul>	<p>across the country and the region to share in the learning.</p> <ul style="list-style-type: none"> <li>The project will support at least four of the major media outlets in Kenya to cover landscape restoration issues and sharing of information across their networks. The online platform will be promoted to serve as an information resource for journalists.</li> <li>Exchange visits between communities in Kenya as well as between Kenya and other TRI countries in the region will be supported to inspire land managers and allow for sharing of experiences. Exchange visits will be documented and participants will be interviewed to assess the effectiveness of the visits.</li> <li>Trainings will also be conducted to ensure that land managers and county officials have the capacity needed to implement landscape restoration.</li> <li>The project will support the development of landscape restoration monitoring systems at both the national and regional level, focusing not only on the progress of restored areas, but the environmental, social and economic impacts resulting from the restoration. These systems will allow Kenya to report on its Bonn Challenge and AFR100 commitments, and will allow counties to assess the benefits arising from landscape restoration interventions.</li> <li>Stakeholder capacity will be enhanced so that they can conduct landscape restoration monitoring in at least four counties. This will include training on multiple tools for on-the-ground monitoring and remote sensing.</li> </ul> <p>Monitoring frameworks and tools will be developed and used to track progress towards meeting restoration targets.</p>	<ul style="list-style-type: none"> <li>There is private sector engagement in supporting CFAs in landscape restoration.</li> <li>At least four county governments have participated in inter-county site exchange visits.</li> <li>At least two exchange visits have taken place between Kenya and one other TRI global project country.</li> <li>Key stakeholders will participate in at least two TRI sponsored events.</li> <li>At least four of the major media outlets in Kenya are covering landscape restoration issues and sharing information across their networks.</li> <li>Incentive programs developed in the Tana Delta are piloted in at least one other county in coastal or western Kenya.</li> <li>At least five county governments and national agencies present at landscape level have mainstreamed landscape restoration and biodiversity monitoring.</li> <li>Stakeholder capacity to conduct landscape restoration monitoring in at least four counties has been enhanced.</li> <li>Monitoring frameworks and tools developed are being used to track progress towards restoration targets.</li> <li>Five county governments are engaged in monitoring and annual status and data is included in annual status and trends reports.</li> </ul>
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### 3.8. Sustainability

283. The sustainability of the Tana Delta landscape restoration project activities is important for the continued support and engagement of the national and county governments in the restoration and sustainable management of landscapes and resources in the Tana Delta. This is considered critical since most of the project activities are foundational in nature, designed mainly to build capacity of the county governments, communities and other stakeholders and guide the development of plans and policies so that implementation measures are carried out effectively, leading to sustainable development in the Tana Delta and other landscapes in Kenya. Although significant short-term outcomes are expected to be delivered in the next five years, the project will provide a firm foundation for the future. The project is designed to promote the long-term sustainability of all its activities and outcomes through: integration of project implementation arrangements into the existing national and county coordination mechanisms; integration of project activities into existing national and county institutions; involvement of all key stakeholders including local communities, CBOs and NGOs in the identification and implementation of project activities; and building capacity of government institutions at both the national and county level to develop and implement management plans and enforce regulations. Sustainability will also be ensured by the project through building the capacity of local communities and NGOs to participate in planning processes as well as in the monitoring of landscape restoration impacts, in developing alternative livelihood systems, and in engaging with public and private investors. The project also has strong awareness creation elements designed to provide information and increase awareness on the importance and opportunities of landscape restoration among natural resources users, managers, decision-makers and policy-makers. It is intended that this will improve the visibility of landscape restoration interventions in Kenya, and therefore lead to greater prioritization and increased budgetary allocation for landscape restoration initiatives. The project recognizes three aspects of sustainability as detailed below.

284. ***Institutional Sustainability:*** The project was designed as a process that would be sustained beyond the life of the project through the enhancement of capacity of national and county government institutions. This approach will ensure continuation of project activities once the project ends. The national and county coordination mechanisms that were established during the development of the Strategic Environmental Assessment and Land Use Plan processes in 2011 will be strengthened by the project in order for these mechanisms to continue to play a greater role in guiding sustainable development and landscape restoration in the region. Training and materials developed through this project will also help build capacity at the county level to provide much needed extension services to land managers. The project will ensure that these services are embedded within county processes and budgets so that they continue to provide support to landscape restoration implementation once GEF funding ends.

285. The project will be executed by Nature Kenya, using its own staff to coordinate implementation of most of the activities at national and county levels. This will ensure that experiences, lessons learned and best practices generated by the project will be mainstreamed into other projects that Nature Kenya implements in the future.

286. The project will also undertake specific measures to ensure all activities initiated are sustained beyond the life of the GEF project grant. First, the project will enhance institutional sustainability through activities focused on: capacity building of county government institutions and long-term engagement of investors in landscape restoration projects. Capacity and awareness building and activities are integrated in each component of the project.

287. ***Financial Sustainability:*** The main indicator of financial sustainability will be the extent to which the national and county governments allocate funds for landscape restoration activities through the provision of co-financing contributions. The project will engage the county governments in a consultative process to reach an agreement on the future financing of activities that will be initiated under the project once GEF funding ends. Most of the target counties have expressed their willingness to make substantial financial contributions to address the root causes of land degradation issues in the Tana Delta, as evidenced by the extent of co-financing approved by each of these counties to this project. Co-financing is a key condition of project activities at national and county level and will include consideration of financing ongoing recurrent costs of implementation. Identifying and supporting leaders and environmental champions at local level will be important for the continuation of the project activities. The project recognises that sustainability can be assured through promotion of national and county ownership of the project activities and by ensuring that the project works towards the realisation of local, county and national goals and benefits over the medium to long-term. In this respect, project management would insist on the preparation of project feasibility plans for long-term

sustainability of alternative livelihood projects including investments in landscape restoration. Co-financing to the project will remain important after the end of the project due to other active projects and programmes coordinated by national, regional and international NGOs that will continue to be implemented in Tana River and Lamu Counties, as well as in target counties in Western Kenya.

288. **Social Sustainability:** Sustainability of project outcomes will be enhanced by the project's support for inclusive and transparent approaches to landscape restoration and benefits sharing that involve all stakeholders, particularly local communities, women, and minorities, ensuring that restoration planning and initiatives are demand-driven and built upon a wide base of support. Involvement of local communities in the implementation of project activities will be very important for the attainment of social sustainability. The project will therefore promote broad stakeholder involvement in the identification and selection of projects on alternative livelihood systems and on the restoration of degraded ecosystems. In addition, the project will also build the capacity of local communities to manage Indigenous Community Conservation Areas (ICCAs). Through the implementation of landscape restoration projects, the project will also provide an opportunity for local communities to develop gender-sensitive income-generating activities – such as eco-tourism and bee-keeping – that can be used to supplement the financing coming from governments, NGOs and donor agencies.

289. Empowering communities through capacitybuilding, participatory decision-making processes, and enhancing the capacity of local communities to design and manage projects on a long-term basis is also considered important for sustaining project activities over the medium to long-term. Sustainability of outcomes will also be enhanced by the project's efforts to engage and catalyse private sector investment in landscape restoration – further demonstrating the potential for landscape restoration to provide a strong return on investment.

### 3.9. Replication

290. This project has been designed specifically for up-scaling in other counties across Kenya to help meet the 5.1 million hectare target that has largely not been capitalized upon through national and county processes. These degraded lands constitute essential resources for addressing climate mitigation and adaptation challenges, strengthening ecosystem health and resilience, and improving livelihoods. The project will therefore work with other county governments and other stakeholders to formulate strategies for scaling up landscape restoration projects based on experiences from the Tana Delta. The project implementation team is already engaged in a number of counties through other project funding, and will replicate certain aspects of the Tana Delta project in these counties including: Kilifi County (Arabuko-Sokoke and Dakacha woodlands), Kitui County (Mumoni and Mtito Hills forests and woodlands), Taita-Taveta County (Taita Hills forests and woodlands), Siaya and Busia Counties (Yala Swamp), Bungoma County (Mt. Elgon forest and surrounding agriculture land), and Trans-Nzoia County (Mt. Elgon and Cherangany Hills forests). The support to scale up certain aspects in these counties will be supported by co-financing as well as GEF funding. In all of these counties, strong county and local engagement is already underway, and there is a high likelihood of policies, plans, trainings, and best practices being adapted and replicated there.

291. There is also great potential for replication at the national level through multiple government institutions as well as private sector companies. . These include:

292. Government institutions:

- Ministry of Environment and Natural Resources
- Kenya Forest Service
- Kenya Wildlife Service
- National Environment Management Authority
- Ministry of Lands and Physical Planning
- National Land Commission
- Ministry of Agriculture, Livestock and Fisheries
- Ministry of Water and Irrigation
- County Environment and Natural Resources departments

Private Sector Companies:

- Companies dealing in natural good and services such as fruits, honey, timber, non-timber forest products, and tourism.

293. Many of the activities carried out through the project will be relevant to other areas of the country. It is expected that through successful demonstration of local plans, policies, governance frameworks, incentive programs, and capacity-building exercises, national actors will adopt some of these practices for replication in other parts of the country. Extension services in particular are one area in which the project anticipates strong interest from the national government, potentially restarting the extension programs that were once successful in Kenya.

294. In addition to replication at the national and county levels, there is also potential for replication at the international level with other TRI project countries. The project will document the lessons learned from training workshops and other capacity-building activities that will be undertaken, and provide materials that facilitate sharing with other projects in other countries. The project will also work closely with other relevant GEF funded projects in Africa and other parts of the world in order to share lessons and experiences on landscape restoration and sustainable land management so that best practices can be replicated throughout the region, especially in countries where degraded arid and semi-arid landscapes dominate.

### **3.10. Public awareness, communications and mainstreaming strategy**

295. The project will set up a working archive of successful replicable experiences and best practice case studies as well as learnings from failed experiences. The project will accumulate a substantial body of knowledge about sustainable, integrated community-based projects that will have a positive effect on national, regional and global environmental problems. Proven approaches and techniques, as well as practices to be avoided, will be proactively shared and communicated to interested communities, media outlets, and NGOs, and mainstreamed within other environment, development and small grant programmes; local, county and national governments; the UN Environment and GEF systems; international environmental NGOs; other practitioners; and other donor agencies. All information gathered on best practices and lessons learned will be stored online in an information platform.

296. The project will also ensure regular communication between the Project Office, Nature Kenya UN Environment and TRI Global programme coordination unit. The project management will maintain necessary consultations with UN Environment and GEF projects in Kenya in order to consolidate joint efforts and share experiences. The project will also provide regular updates to the national and county governments, UN Environment and GEF on the progress made in the implementation of the project.

297. Both electronic and print media will be engaged through the project by disseminating information on landscape restoration success stories and other activities that will be undertaken by the project. The project will therefore ensure that there is an increase in media coverage and public awareness of landscape restoration and integrated natural resources management issues in Kenya.

298. The project will organise regular meetings with county governments to brief them on the progress in the implementation of the project, as well as hear updates on progress made by the counties in the development and implementation of policies, strategies, and institutional and regulatory frameworks for the implementation of landscape restoration projects in target sites. Regular review meetings with the county governments will also provide avenues for mainstreaming project activities into the county government processes and institutions.

299. In addition, the project will also organise public meetings for local communities and other stakeholders, to create awareness of the goals of the project, particularly the benefits of landscape restoration and sustainable land management in the Tana Delta and other target landscapes. The project will also disseminate information to potential investors in Kenya and abroad, on the potential landscape investment opportunities in the Tana Delta.

300. More detail regarding specific information sharing and communication activities can be found in Section 3.3 under Component 4.

### **3.11. Environmental and social safeguards**

301. During the PPG phase, the project underwent the UN Environment Environmental, Social and Economic Review. The review is based on UN Environment's Environmental, Social and Economic

Sustainability Framework. This framework sets minimum sustainability standards for UNEnvironment and its implementing/executing partners, and enables UN Environment to anticipate and manage emerging environmental, social and economic issues. The assessment finds no major threats on the seven safeguards since the project is not involved in major infrastructural development, introduction of new technologies, displacement of populations or introduction of GMOs (Appendix 16).

302. No specific environmental concern was raised with respect to this project. The only social concern related to the need for a more thorough gender engagement strategy. In this regard, the project will also ensure gender equity in the planning and implementation of project activities in each of the target counties. Deliberate effort will be made to encourage the participation of women and youth in the implementation of alternative livelihood projects, including capacity-building activities.

303. The project will otherwise work very closely with county regulatory authorities to ensure compliance of environmental and social safeguards as provided in various statutory regulations. In addition, the community groups will also be trained to monitor environmental indicators, including biodiversity and critical ecosystems, to ensure that the ongoing project activities do not harm the environment or cause carbon leakages.



#### SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

304. The proposed project is nested within The Restoration Initiative (TRI), a program designed and led by three GEF Agencies (FAO, IUCN and UN Environment), and developed to make a significant global contribution to restoring ecosystem functioning and improving livelihoods through the restoration of priority degraded and deforested landscapes, in support of the Bonn Challenge. The TRI program consists of 11 national child projects (NCP) in 10 countries of Africa and Asia, and it is supported by a global learning, financing, and partnerships project (GCP) to develop and disseminate best practices and tools, catalyze investment in restoration, expand the scope of countries and actors engaged in forest and landscape restoration, and realize benefits at scale. Mechanisms have been built to ensure cross-linkages between the project, other child projects - especially with the second Kenya child project implemented by FAO and in the neighbouring African countries - and the overall program. In addition, the Tana Delta project will benefit by the wealth of international experts, lessons learned, and best practices in the domain of FLR, that the GCP will make available. The cooperation between the proposed project and the GCP will also be critical in the area of Monitoring and Evaluation. The harmonization of M&E systems among all TRI partners will be facilitated through a program-level tracking tool, developed within the GPC, and integrated into all child projects, thus allowing for greater compatibility and utility of aggregated M&E data.

305. The United Nations Environment (UN Environment) will implement the project and bring to bear its vast scientific and empirical experience of critical relevance to the objectives of the project. UN Environment through the GEF has in the past decades partnered with national and international organizations on the implementation of national and multi-country projects focusing on issues related to landscape restoration and biodiversity conservation. This project will benefit from the results and outputs of these projects and explore approaches that better integrate the many elements of the landscape restoration and biodiversity conservation. UN Environment will be providing technical support in the project and expertise in coordinating the development of environmental policy consensus through sharing experiences of its other projects being supported by GEF or other agencies. As the GEF Agency for this project, UN Environment will provide a platform for a collaborative partnership between national and international organizations which will bring the best available expertise in science and knowledge from the scientific community to partners who are working at the development interface at the national level.

306. **UNEnvironment, as the GEF Implementing Agency** will implement the project through its Ecosystems Division and will be responsible for overall project supervision to ensure consistency with GEF and UNEnvironment policies and procedures and will provide guidance on linkages with related UNEnvironment and GEF-funded activities. UNEnvironment will also monitor implementation of the activities undertaken during the execution of the project and will provide the overall coordination and to ensure that the project is in line with UNEnvironment Medium-Term Strategy and its Program of Work (PoW).

307. More specifically UN Environment shall:

- Provide project oversight to ensure that GEF policies and criteria are adhered to, and that the project meets its objectives and achieves expected outcomes in an efficient and effective manner. Project supervision is entrusted to the UN Environment/GEF Task Manager and Fund Management Officer. Project supervision missions by the Task Manager and/or Fund Management Officer will be stipulated in the project supervision plan to be developed during project appraisal phase;
- Enter into an Execution Agreement with Nature Kenya as the lead executing agency for the provision of services to the project;
- Have a representative on the project steering committee;
- Report to the GEF Secretariat on the progress against milestones outlined in the CEO approval letter;
- Inform the GEF Secretariat whenever there is a potentially substantive co-financing change (i.e. one affecting the project objectives, the underlying concept, scale, scope, strategic priority, conformity with GEF criteria, likelihood of project success, or outcome of the project);
- Be responsible to submit the overall annual project implementation review report to the GEF Secretariat and Evaluation Office and rate the project on an annual basis in terms of progress in meeting project objectives, project implementation progress, risk, and quality of project monitoring and evaluation, and report to the GEF Secretariat through the project implementation review (PIR) report;

- Review and clear manuscripts prepared by the Executing Agency before publication, and review and agree on any publishing contracts;
- Undertake a mid-term management review of the entire project or request the Evaluation Office (EO) to perform an independent mid-term evaluation;
- Ensure that the EO of UN Environment arranges for an independent terminal evaluation and submits its report to the GEF Evaluation Office;
- As deemed appropriate, facilitate access to information, advisory services, technical and professional support available to UN Environment and assist the Executing Agency to access the advisory services of other United Nations Organizations, whenever necessary;
- Manage and disburse funds from GEF in accordance with the rules and procedures of UN Environment.

308. **Nature Kenya (East Africa Natural History Society)** will be the Project Executing Agency. Nature Kenya supported by the Ministry of Environment and Natural Resources will be responsible for overall execution of the project. Nature Kenya will identify an appropriate staff member to act as **Project Director** with responsibilities for ensuring the above and linking with the Project Management Unit. The World Resources Institute (WRI) will provide appropriate scientific support and technical expertise as required by the project partners in accordance with the objectives and key activities outlined in Section 3.2 of this document.

309. Nature Kenya will establish a project management unit (PMU), which will be based at the Nature Kenya Secretariat in Nairobi, Kenya. The PMU will serve as the project secretariat and operate day-to-day activities. The PMU will consist of a project coordinator (PC), project assistant and thematic consultants (on a need basis). The TORs for staff in the PMU are provided in Appendix 11. The full time Project Coordinator in-charge of the PMU will facilitate the execution of project activities by the project partners involved.

310. The PMU will serve as the critical link between the project pilot sites, the different groups engaged on project activities and the lead project executing agency, Nature Kenya, to ensure that lessons learned are shared among sites and within national committees and to provide visibility of the project at the national and international level. The PMU will be responsible for ensuring adequate communication of information to all national and international partners.

311. The execution of the project at the county level will be supported by the site-level management team (SLMT) consisting of a field project manager, extension officers and a local community empowerment expert. The SLMT will establish coordination mechanisms and help assure intersectoral coordination within the counties to ensure sustainability of the project activities and outcomes. The field project manager will have the responsibility to ensure that there is good communication between the project sites and the national PMU and that within each site the required links and collaborative arrangements are developed to support the implementation of project activities. Each of the participating counties will build on the existing County Government Inter-Ministerial Coordination Committee or similar county inter-agency mechanism, to help assure effective coordination and communication among all county ministries during the implementation of the project at county level.

312. The project will establish a project steering committee (PSC) consisting of representatives of the partner institutions, including: the Ministry of Environment and Natural Resources, UN Environment, Nature Kenya, Kenya Forest Service, Kenya Wildlife Society, National Environment Management Authority, Ministry of Lands and Physical Planning, National Land Commission, Ministry of Agriculture, Livestock and Fisheries, Ministry of Water and Irrigation, the World Resources Institute and Tana and Lamu County representatives. The GEF Focal Point of Kenya will be also a member of the PCS. Site policy officers and staff from counties in areas targeted for up-scaling activities shall attend meetings of the PSC by invitation and only on a need basis. The project manager will serve as the secretary to the project steering committee.

313. The PSC will be responsible for taking policy decisions about the implementation of the project. It will be also responsible for making, by consensus, management decisions for the project and holding periodic reviews. In order to ensure UN Environment's ultimate accountability to GEF, the final decision-making rests with UN Environment and will be in accordance with its applicable regulations, rules, policies and procedures. Specifically, the PSC will have the following responsibilities:

- a) Provide guidance, as well as overall strategic policy and management direction to the Project;

- b) Annually, review and assess the progress of the project, based up on a pre-defined Monitoring and Evaluation Plan, including progress made towards making measurable impacts in terms of improvement of environmental status;
- c) Discuss and review draft strategies for improving sustainability of environmental benefits and replication;
- d) Monitoring and reviewing of co-financing delivered to the project in line with GEF requirements;
- e) Annually, review and provide strategic direction on the implementation of the work plan;
- f) Advice on appropriate mechanisms for interaction with the private sector and local communities;
- g) Seek additional funding to support the outputs and activities of the project;
- h) Review the extent and effectiveness of stakeholder involvement at the county and national level particularly among different sectors of government that have an interest or impact on landscape restoration activities, including resolution of potential conflicts;
- i) Review the quality of outputs produced by the project;
- j) Review and or monitor the implementation of the project's outreach and communication strategy.

314. The PSC will meet physically once a year and its functions will be mainly to evaluate the overall progress of the project relative to the outputs and milestones expected, to provide strategic direction for the implementation of the project and to guarantee the necessary inter-institutional coordination. PSC meetings will be complemented with ongoing and more regular project meetings in Kenya. Continuous exchange of information through electronic means will be established from the outset, and steering committee meetings via telephone conference or other electronic means can be called as required. Reports and recommendations of all PSC meetings, and other relevant project meetings, will be prepared and disseminated no later than one month after the actual meeting. When necessary, the PSC can take decisions through email consultation without waiting for the annual meeting.

315. All partners will undertake to disseminate information about the project and its outputs through their various networks, conferences, meetings and other relevant consultations. Detailed description of the roles and responsibilities of the PSC, and other committees, are provided in Appendix 11. These formal implementation arrangements will ensure a constant exchange of information and experiences among the partners.

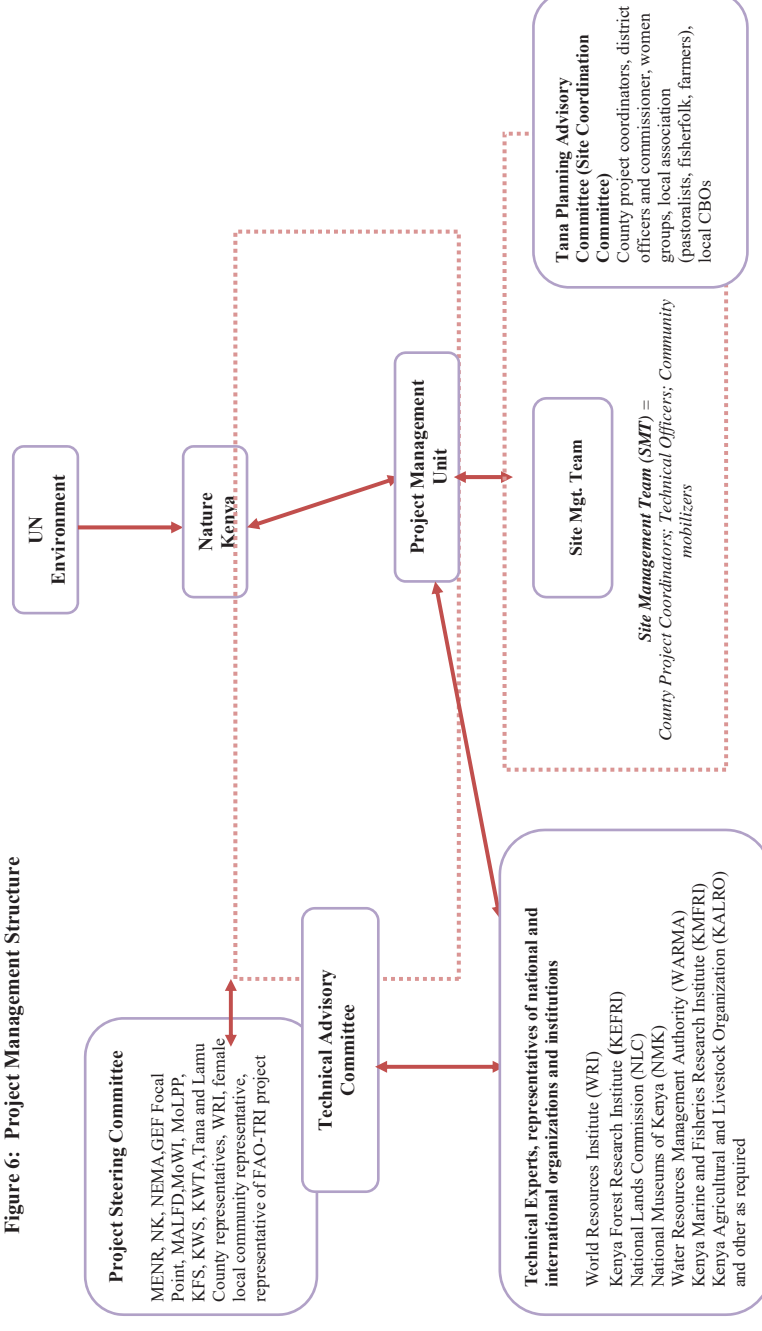
316. A technical advisory committee (TAC) will be established to provide expert guidance and advice on the effective technical implementation of the project. The TAC members will provide ongoing technical advice to the project and will participate in PSC meetings as observers. Membership of TAC will be defined based on the specific technical needs of the project. The composition of the TAC may change according to project needs, and will meet as necessary to guide specific project activities.

317. At the site level, the project implementation will be guided by the existing Tanaplaning advisory committee (TPAC). TPAC members include Tana River and Lamu District Development Officer, District Livestock Officer, District Agricultural Officer, District Commissioner, representatives of County Governments, representatives of pastoralists, fisher folk, farmers, women groups, CBOs, conservation groups, marine fishermen, people with disabilities, among others. TPAC will be convened under the authority of the county governments and its chair will be an appointee of the county governments of Lamu and Tana River Counties. The TPAC shall meet on quarterly basis to review progress and monitor and evaluate overall delivery of the specific project activities in the Tana Delta against an approved work plan. The project manager will also function as the secretary of the TPAC meetings that will be convened by Nature Kenya under the authority of the county governments.

318. For effective site-level project management, the project will work with established local CBOs and NGOs as well as with site-specific village governments at project-site level where actual project activities will take place. At the counties level, a site-level management team will ensure effective dissemination of project-related information to a broad range of stakeholder groups involved in forest landscape restoration, including the county government structures. As implementation of the project progresses, it is planned that village associations and local

organisations, as well as county governments, KFS and KWS and other sectors' field staff, will take an increasingly responsible role in decision making on local project activities, fund raising and financing decisions in line with the principles of community-driven development, sustainable land management and protected areas management that the project is to embrace.

Figure 6: Project Management Structure





## SECTION 5: STAKEHOLDER PARTICIPATION

319. The project development process was highly consultative and reflects the previous discussions and decisions made regarding Tana Delta as described in section 2.6 of this document. The implementation of the project preparatory phase (PPG) was highly participatory involving all key stakeholders including national government, county government, local communities, local and international NGOs, UN Agencies and the private sector. National and site-based consultative workshops were held as follows: National Consultative Workshop on 10<sup>th</sup> January 2017. This meeting was attended by over 35 representatives from all key stakeholders and was graced by the Principle Secretary in the State Department of Natural Resources in the Ministry of Environment and the national GEF Focal Point Desk Officer. A site consultative meeting attended by over 70 local community members, local NGOs, Tana River and Lamu County senior representatives and national state officers at site level together with the project design team agreed to use the Tana Planning Advisory Committee to guide project development and implementation on the ground. On 13<sup>th</sup> January 2017, a 13member Technical Advisory Committee met in Malindi and agreed on the overall framework of the project and the main partners to be involved. The list of key project partners and stakeholders was later verified and agreed upon during the project design phase. The description of roles and responsibilities of the project partners is provided in Annex 14.

320. The project will involve a wide range of stakeholders in the implementation phase of the project. The implementation of the project will be a collaborative effort between national and county governments ministries and departments, together with the CBOs and NGOs. Each of these categories of stakeholders will provide a specific contribution to the implementation of project activities.

321. Stakeholder participation will be at all levels of project implementation. Duty bearers will be involved in oversight at three levels: high-level policy by the project steering committee (PSC) chaired by a senior representative from the Ministry of Environment and Natural Resources with membership drawn from all key national agencies, county governments, NGOs and others; national technical level by the project technical advisory committee (TAC) composed of all agencies and partners involved in the project within their defined mandates and roles; and site level by the Tana planning and advisory committee (TPAC) involving Tana River and Lamu County governments and local community user groups and CBOs and national state officers working at the county level and other national and international NGOs, including Nature Kenya. To mainstream forest landscape restoration into national policy, a National Forest Landscape Restoration Committee (NFLRC) will bring together national actors to develop guidance for county level implementation of FLR efforts. The Community Forest Associations (CFAs) from across Kenya will be involved in lessons sharing and capacity enhancement to cascade the FLR within their mandates in the Forest Law and the National Forest Programme. The Inter-Ministerial Technical Committee convened by the Ministry of Environment and Natural Resources will bring together all relevant line ministries, NGOs, private sector representatives and those from participating landscapes to share lessons and experiences for systemic delivery of FLR efforts at scale.

322. The national government ministries and agencies will be involved in catalyzing national government institutions to develop a land use regulatory framework to guide the access and use of land in line with the Constitution, land policy, Vision 2030 and other development frameworks. The national government ministries will also play an important role in setting up a multi-stakeholder national landscape restoration committee/taskforce, housed at the Ministry of Environment and Natural Resources, and including all relevant ministries and stakeholder groups, to coordinate landscape restoration efforts across sectors. The government ministries will also be involved in the development of a national, cross-sectoral landscape restoration strategy that will guide land use planning and sustainable land management at the county level. They will work with different stakeholders (including Community Forest Associations (CFAs), Water Resource Users Associations (WRUAs) and Site Support Groups (SSGs) to harmonize national plans and policies to ensure effective coordination and implementation of landscape restoration and sustainable land management in selected counties/landscapes. The CSOs will be involved in advocating for policy, institutional frameworks and national support to ensure that water flows in the Tana Delta are maintained at a level that supports ecosystem services, community livelihoods and biodiversity within the counties in the Tana River catchment and that FLR is mainstreamed into the work of government and the private sector. National institutions will be involved in guiding the formulation of national guidelines for county land use regulations for systemic implementation of sustainable land management and landscape restoration.

323. The county government sectors and departments will play an important role in the formulation and

implementation of sector policies, regulations and institutional frameworks that incorporate sustainable natural resource management and forest landscape restoration and biodiversity considerations including capturing these together with the restoration targets committed to in the County Integrated Development Plans (CIDPs). They will also be involved in the integration of county restoration targets in the County Integrated Development Plans (CIDPs). The counties will also be involved in the development of sustainable land management and landscape restoration regulations and targets in coordination with county assemblies, including the development of county-based policy frameworks and approaches for setting up special areas for biodiversity, tourism, and multiple uses, among others. Operational strategies and plans on restoration, county biodiversity plans, environment action plans, village land use plans and policies will be developed by learning from the Tana Delta model process. All these processes will be participatory and consultative.

324. Research institutions will be involved in setting baselines on biodiversity, forest cover, biodiversity monitoring and reporting, including production of annual status and trends reports. They will increase knowledge and generate information needed to inform ROAM assessments in the Tana Delta and other selected landscapes. Specialized experts will be involved in catalyzing sustainable finance, including through ecosystem service assessments, development of the business case for landscape restoration and sustainable natural resources management. They will also be involved in the assessment and quantification of carbon stocks in forests and other land uses, including areas under climate smart agriculture in the Tana Delta.

325. The local communities in the Tana Delta will be beneficiaries of capacity development, landscape restoration through sustainable land use for livestock systems, crop farming, fish farming, eco-tourism and diversified nature-based enterprises including bee-keeping and high-value cash crops. They will participate through their CBOs including Tana Delta Conservation Network and the 38 affiliate groups in its network. Their income generating activities will include fish, livestock, honey, food and cash crops and ecotourism supported business cases for the purpose of upscaling socio-economic status for livelihoods. They will set up community conservation areas as their contribution to national and global good and for sustenance of the tourism pillar in their economic development. They will also be involved in the development and implementation of approaches for less consumption of wood fuel and application of energy saving technologies at schools and household levels. The CBOs will have their capacity enhanced to advocate and negotiate their involvement in county-based decision-making processes which include sustaining demand for sustainable natural resources management intertwined in sustainable living in the Tana Delta. The local people will benefit from the diversity of jobs created through these initiatives and those developed by the private sector actors within the framework of the Green Industrial Park in the Tana Delta.

326. The private investors will be involved in the development of Tana Delta Green Industrial Park within the framework of a business case that includes climate-smart agriculture initiatives as well as pilots and demonstrations for green development pathways for food production and eco-tourism. The TSDB will develop criteria for transparent selection of private sector investors and companies that could invest in the Tana Delta based on the Tana Land Use Plan and landscape restoration principles. An investor conference for the Tana Delta will involve a diversity of potential players from producers as direct investors to consumers as manufacturers for the Tana Delta commodities that are produced in line with Vision 2030. They will also be involved in the development of county-based business cases for sustainable natural resource management and landscape restoration with links to the county and national economy supported by private sector frameworks for payment for ecosystem services, especially related to water - the main commodity to spur the Tana Delta's economic development. They will progressively create jobs estimated to be 60,000 by the year 2050 when the business case is expected to be fully implemented.

327. The PCU will prepare the Public/Stakeholder's Participation Plan bringing onboard other key stakeholders that are important in the realization of the goals of the project. The plan will be presented to the Project Steering Committee for approval. The plan will provide detailed modalities of engaging with the national and county governments, donors, NGOs, experts and other stakeholders in the finalization and ratification of an agreed project strategy. The project will also seek to inform all stakeholders of the values of forest landscape restoration, mainstreaming biodiversity into other sectors of the economy and general sustainable land management practices, the problems that they are facing, and why they need better management. Nature Kenya will coordinate this work, although all partners will also play their part.

## SECTION 6: MONITORING AND EVALUATION PLAN

328. The project will follow UNEnvironment standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarised in Appendix 8. Reporting requirements and templates are an integral part of the UN Environment legal instrument to be signed by the executing agency and UN Environment.

329. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

330. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEnvironment of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

331. The project Steering Committee will receive periodic reports on progress and will make recommendations to UN Environment concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UN Environment and GEF policies and procedures is the responsibility to the Task Manager in UN Environment-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

332. At the time of project approval 50 percent of baseline data is available. Baseline data gaps will be addressed during the first year of project implementation. A plan for collecting the necessary baseline data is presented in Appendix 6.

333. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEnvironment. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

334. A mid-term management review or evaluation will take place at mid-term. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see Section 5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UN Environment Task Manager to monitor whether the agreed recommendations are being implemented.

335. In-line with UN Environment Evaluation Policy and the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation. Additionally, a Mid-Term Review will be commissioned and launched by the Project Manager before the project reaches its mid-point. If project is rated as being at risk, a Mid-Term Evaluation will be conducted by the Evaluation Office instead of a MTR.

336. The Evaluation Office will be responsible for the Terminal Evaluation (TE) and will liaise with the Task Manager and Executing Agency(ies) throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The Terminal Evaluation will be initiated no earlier than six months prior to the operational completion of project activities and, if a follow-on phase of the project is envisaged, should be completed prior to completion of the project and the submission of the follow-on proposal. Terminal Evaluations must be initiated no later than six months after operational completion.

337. The draft Terminal Evaluation report will be sent by the Evaluation Office to project stakeholders for comments. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalised and further reviewed by the GEF Independent Evaluation Office upon submission. The evaluation report will be publicly disclosed and may be followed by a recommendation compliance process.”

338. The harmonized TRI GEF Tracking Tools are attached as Appendix15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above, the mid-term and terminal evaluation will verify the information of the tracking tool.

## SECTION 7: PROJECT FINANCING AND BUDGET

### 7.1 Overall project budget

339. The overall budget of the project is US\$39,872,080 which includes the GEF contribution of US\$3,345,413 and co-financing contributions amounting to US\$36,526,667. Details of the budget according to UN Environment budget lines are attached as Appendix 1.

### 7.2 Project co-financing

340. A total of US\$36,526,667 is committed as co-finance. Of this US\$27,761,667 is in cash and US\$8,765,000 is in kind. The breakdown per project component is given in Appendix 2. The co-financing from partners committed to the project includes two elements: commitment from a wide range of national partners to support the different components of the project as indicated in Appendix 2 and commitments from international partners. The co-financing from international partners generally supports provision of inputs on methodologies, data collection and analysis, and capacity development. International partners, particularly WRI, will also support making the results of the work undertaken available to the wider international community.

### 7.3 Project cost-effectiveness

341. The project considered three alternative approaches for addressing the various challenges threatening the sustainable management and conservation of the Tana Delta ecosystem in Kenya. The first approach considered is the business-as-usual approach in which there is no intervention and development and environmental management current trends are left to continue without additional support. This approach was considered to be inappropriate due to the fact that the existing problems and challenges facing the Tana Delta are not being adequately addressed due to various barriers that have been presented in the earlier sections of this document. The degradation of the Tana Delta ecosystems is on an upward trend and in the absence of any significant intervention, the situation is likely to continue to deteriorate, with a possibility of reaching an irreversible stage. This will have serious repercussions to the biodiversity including the various global benefits and ecosystem goods and services that the delta provides.

342. The second approach that was considered was to adopt a purely thematic approach in which interventions and catalytic actions will be focused on specific thematic area such as water management, land degradation, biodiversity loss, etc. This approach would entail provision of support to projects that are being implemented in the delta and which are focused on a narrow and specific thematic area. This approach was also found to be unsuitable in that it has a low possibility of achieving the desired goal of the project in view of the nature, magnitude and complexity of the numerous high priority issues that need to be dealt with in the delta. It was noted that addressing only one thematic issue in the delta would not allow for the required multi-sectoral linkages including sharing of knowledge, experiences and lessons among various stakeholders in the Lamu and Tana River Counties. Thus, the thematic approach would not be an effective and efficient way of achieving sustained progress in the management and conservation of the Tana Delta ecosystems in Kenya.

343. The third approach that was considered is the integrated multi-thematic approach that is based on the experience gained by various stakeholders through implementation of projects focused on the management and conservation of the Tana Delta. This approach was considered to be more appropriate for the Tana Delta considering the multitude of problems, root causes, barriers and challenges that need to be addressed. There is consensus among the national and county governments in Kenya and other stakeholders that a multi-sectoral approach is a much more cost-effective approach than undertaking actions based on a specific thematic area. This is considered important when dealing with trans-county issues such as the alteration of river flows and degradation of ecosystems in the delta. This integrated approach has a potential of yielding tangible results in terms of cost effectiveness. There is also a high chance of optimising both human and financial resources by: (1) considering priority issues that cut across more than one county, and (2) by tackling problems that cut across counties with the aim of yielding tangible results.

344. To achieve the project objective and obtain the tangible results, the project's five-year implementation period focuses on activities that will provide significant and sustainable impacts. The project will build on the experiences of existing institutions including best practices, knowledge and networks, not only in the Tana Delta counties of Lamu and Tana River, but also in other counties in Kenya, where the problem of land degradation



is equally important. The project would also focus on addressing the root causes and barriers that have been identified within the existing national and county institutional frameworks. The activities described in this project document are therefore designed to provide tailor-made technical assistance and building of the capacity of relevant national and county government institutions and other stakeholders, including the strengthening of national and county policy, institutional and regulatory frameworks for sustainable conservation of the Tana Delta ecosystems. The project will also adapt existing best practices, guidelines, methodologies and technologies for sustainable management and conservation for the ecosystems and improve mechanisms of disseminating them widely to various stakeholders in the region.

345. It should be noted that the proposed project builds upon the willingness of the government of Kenya and the county governments of Tana River and Lamu to work jointly to promote rational use of natural resources in the Tana Delta, taking into account the role of the Tana Delta ecosystems in the provision of global environmental benefits including sustainability of economic development and human well-being. The integrated management approach as demonstrated by the SEA/LUP process, including county and national cross-sectoral institutional and implementation arrangements such as the TPAC and IMTC, can help overcome the limitations of the traditional sectoral approach in the management of natural resources. The multi-sectoral/multi-thematic approach has the advantage of facilitating simultaneous consideration of economic, social and ecological outcomes in the sustainable management of the whole Tana Delta ecosystem.

346. Project cost-effectiveness is also strongly enhanced by the partnership approach that will be adopted by the project in the implementation of various key activities as outlined in this document. Partnership is an important pillar of the project at both the national and county levels, and this allows greater coordination between different stakeholder's interventions including pooling of resources together to create greater impact on the ground. It also allows county governments and their partners to establish synergies and multiplier effects with a far much greater potential of yielding cost-effectiveness as compared to the ineffective efforts by various individual players focused on a specific thematic area.

347. The project cost-effectiveness is also enhanced by building on the existing national and county capacity and also working through established institutional and implementation structures that already exists (such those established during SEA and LUP processes), rather than re-inventing the wheel and creating new structures. Also, by integrating into the project, mechanisms of promoting learning from the previous lessons, mistakes and successes of other projects implemented in the Tana Delta, the project's cost effectiveness will be enhanced.

348. In conclusion, it can be noted that cost-effectiveness of the project would be achieved through the following: (i) design and implementation of customised-pilot activities that can yield concrete results and that can be up-scaled in counties in Kenya, (ii) supporting the existing county and national institutional frameworks and processes that have potential for delivering results (e.g. those established during SEA and LUP processes) and (iii) promoting an integrated participatory approach involving the key stakeholders so that coordination of activities and sustainability of results are optimised. Previous experience in the Tana Delta shows that a 'bottom-up' participatory approach involving key stakeholders in all stages of the project cycle is more beneficial as compared to the traditional 'top-down' approach. Also, adaptive management which is embedded within an ecosystem-based management approach is now recognised as the best practice for ecosystem management. The project design has taken into consideration all these approaches.