





LIST OF ABBREVIATION AND ACRONYMS

BMU	BEACH MANAGEMENT UNIT	MBWEKEKI	MBWERA MASHARIKI, MBWERA MAGHARIBI,
CBD	CONVENTION OF BIOLOGICAL DIVERSITY		KIECHURU, KIASI
CBNRM	COMMUNITY-BASED NATURAL	MCHIMCHUNYA	MCHINGA, MFISINI, MCHUNGU, NYAMISATI
	RESOURCES MANAGEMENT	MCS	MONITORING, CONTROL AND SURVEILLANCE
CEA	COAST EAST AFRICA	METT	MANAGEMENT EFFECTIVENESS TRACKING TOOLS
CFMA	COLLABORATIVE FISHING MANAGEMENT AREAS	MJIMWOGE	MJIMWEMA, MWONGOZO, GEZAULOLE
CIS	COLLABORATIVE INITIATIVES	MKISAMI	MBUTU MKWAJUNI, SARA KICHANGANI, MINONDO
CITES	CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES	MSIKIVI	MSINDAJI, KIVINJA 'A'
CSO	CIVIL SOCIETY ORGANIZATION	NGO	NON-GOVERNMENTAL ORGANIZATION
CSP	COUNTRY STRATEGIC PLAN	NYAMANJISUPUTA	NYAMATUNGUTUNGU, MARENDEGO, NJIANNE, Somanga Kusini, Somanga Kaskazini,
CSR	CORPORATE SOCIAL RESPONSIBILITY		SONGOSONGO, POMBWE, JAJA.
DSFA	DEEP SEA FISHING AUTHORITY	PAs	PROTECTED AREAS
EC	EUROPEAN COMMISSION	PSMA	PORT STATE MEASURES AGREEMENT
EEZ	EXCLUSIVE ECONOMIC ZONE	SADC	SOUTHERN AFRICAN DEVELOPMENT COMMUNITY
EIA	ENVIRONMENTAL IMPACT ASSESSMENT	SAGCOT	SOUTHERN AGRICULTURAL GROWTH CORRIDOR OF TANZANIA
EITI	EXTRACTIVE INDUSTRIES TRANSPARENCY	SEA	STRATEGY ENVIRONMENTAL ASSESSMENT
CDE	INITIATIVES	SEF	SUSTAINABLE ENERGY FORUM
GPF	GLOBAL PROGRAMME FRAMEWORK	SFM	SUSTAINABLE FOREST MANAGEMENT
HWC	HUMAN WILDLIFE CONFLICT	SOM	STANDARD OPERATING MANUAL
IGG	INCLUSIVE GREEN GROWTH		
IUU	ILLEGAL, UNREPORTED AND UNREGULATED FISHING	SUHODE	THE SUSTAINABLE HOLISTIC DEVELOPMENT FOUNDATION
IWT	ILLEGAL WILDLIFE TRADE	SWIOTUNA	SOUTH WEST INDIAN OCEAN TUNA COMMISSION
JFM	JOINT FOREST MANAGEMENT	TAFE	TANZANIA PARLIAMENTARIAN FRIENDS OF ENVIRONMENT
JOJIBAKI	JOJO, JIMBO, BANJA, KIRONGWE	TZS	TANZANIAN SHILLING
JSDF	JAPAN SOCIAL DEVELOPMENT FUND		
KIMSA	KIOMBONI, MSALA	UAVS	UNMANNED AERIAL VEHICLE
LAPSSET	LAMU PORT AND LAMU -SOUTHERN SUDAN	VLFR	VILLAGE LAND FOREST RESERVE
	-ETHIOPIA TRANSPORT CORRIDOR	WMA	WILDLIFE MANAGEMENT AREA
MANET	MAZINGIRA NETWORK - TANZANIA	WUA	WATER USER ASSOCIATIONS
		WWF TCO	WORLD WILDLIFE FUND TANZANIA COUNTRY OFFICE



FOREWORD



WWF Tanzania has a long and proud history of conserving and protecting the natural resources in Tanzania. Our key areas of focus have been wildlife, marine, forests, fresh water and some of the most endangered species in the world.

Through working collaboratively with different stakeholders and partners both within and outside the country, WWF has made significant contribution to improve the management and protection of natural resources in different areas in

Tanzania, while improving the quality of life and livelihoods of the people depending on these natural resources. Some of the threats to nature that WWF has worked hard to tackle include loss and physical alteration of habitats, deforestation, illegal logging, illegal fishing, poaching, unsustainable use of water resources and climate change.

We celebrate the successes in conservation that WWF has been a part of and with pleasure I am excited to share some of these achievements while implementing our 2015 – 2020 Strategic Plan.

This plan was delivered through seven conservation goals across six priority thematic areas. The focus was on conservation of species (Rhino and Elephant), Forest, Freshwater, Marine (Near shore fisheries and Tuna) and Energy. Conservation activities were implemented in selected priority sites including Selous-Ruvuma Miombo Landscape, Moyowosi-Ugalla-Malagarasi Landscape, Rufiji River Basin with focus on Great Ruaha and Kilombero River catchments, Udzungwa Mountain Forest Landscape, Mara-Serengeti Landscape with focus on Mara River, Pare-Usambara Mountain Forest Landscape, Low-Land Coastal Forest Landscape with focus on Matumbi-Kich, Kilwa and Rhondo Forests, Rufiji-Mafia-Kilwa Seascape, Northern Mozambique Channel off Mtwara Seascape and Western Indian Ocean Region with focus on TUNA fisheries management.

Through working with the government of Tanzania and partners we have seen a significant increase of the area under sustainable community management, improved quality and quality of water resources along the Ruaha and Mara Rivers, improved fisheries Co-Management in the Rufiji- Mafia Kilwa seascape, increased elephant populations in the Selous game Reserve, the gazettement of new protected areas for Wildlife Management Areas (WMAs) and Village Land Forest Reserves (VLFR) just to mention a few. It has been an exciting and a learning time as well.

However, the natural capital and biodiversity status are still under considerable degree of threat, and that is why through the successes and lessons learned during the implementation of the 2015-2020 CSP, we are planning to strengthen our conservation initiatives to fit in with the current needs for natural resources protection and securing people's livelihoods.

My sincere appreciation goes to all who put in their efforts, support and contributions to accomplish the effective implementation of WWF Tanzania's 2015-2020 Strategic Plan. WWF Tanzania Office Staff, the Government of the United Republic of Tanzania, WWF national offices, local communities, CSOs and development partners have made this happen. Without your support the successes we are celebrating today would not have been possible. We look forward to continuing working with you to build a future where humans and nature live in harmony.

Dr. Amani Ngusaru

Country Director - WWF Tanzania Country Office

1.0. INTRODUCTION

1.1. PREAMBLE

This synthesis abridged report on Success and Lessons on Nature Conservation Interventions forms part of the documentation of the of the WWF Tanzania Strategic Plan 2015 – 2020 adopted in 2016 with the goal: "by 2030, Tanzania's outstanding and globally significant natural wealth and biodiversity are sustained, and support equitable and gender-sensitive local livelihoods and national economic development for present and future generations".

The key approach for implementation of the strategic plan were working in partnership with key stakeholders including the Government of Tanzania, Civil society organizations and NGO's and the private sector. After the ending of the strategic plan in 2020 and inauguration of the new WWF Tanzania Strategic Plan 2021 – 2025, this success and lessons report summarizes achievements and lessons learned from the implementation of the ended strategic plan through

consolidation and synthesis of reports from respective programme progress reports for individual programmes and interim departmental reports, and consultation with key professionals who were involved in the implementation of the plan.

The intention of this report is to provide relevant insights on achievements and lessons to the internal and external stakeholders including donor(s), government and nonstate actors such as civil society organizations and the private sector interested in scaling up of best practices for nature conservation in Tanzania and beyond. Thus, the document has been prepared as an easy-to-read compilation of achievements and lessons in order to ensure that the messages therein are effectively communicated to each of the intended audience's programme.

1.2. BACKGROUND

The history of WWF operations in Tanzania dates back to 1962, six decades of experience. WWF began as an independent international non-government organization dedicated to conservation and environmental protection, in particular rhino protection. Both institutional and programming scope were reformed over time in line with international conservation policy shifts, reaching the peak at the beginning of the 21st century (Fig. 1)

Figure 1: Timeline of WWF's programming, and institutional and practice reforms in Tanzania

1965 - 2000	1992	2009	2000 - 2015	2015 - 2020
Conceptual Focus Endangered species National PAs Flagship Projects Rhino project Tarangire National park Udzungwa Mountains National Park Mafia Island Marine Park	Institutional strengthening Tanzania Programme Office established Consolidation and incerase of activities in the Country	Institutional strengthening WWF TCO established Increased scope and mandate	Conceptual focus Integrated conservation and social development (livelihood) approach Community-based natural resources management Landscape/seascape planning Flagship Projects Eastern Selous Project Rufiji Mafia Kilwa seascape CBNRM in WMAs Ruaha Water Project GEF Coastal Forest Project	Conceptual focus Integrated pro-poor landscape, seascape and watershed management Addressing national and global drivers of change through innovation and partnerships Flagship Projects Selous-Ruvuma landscape Regional Tuna management Freshwater Programme Elephant Programme Rufiji Mafia Kilwa Seascape

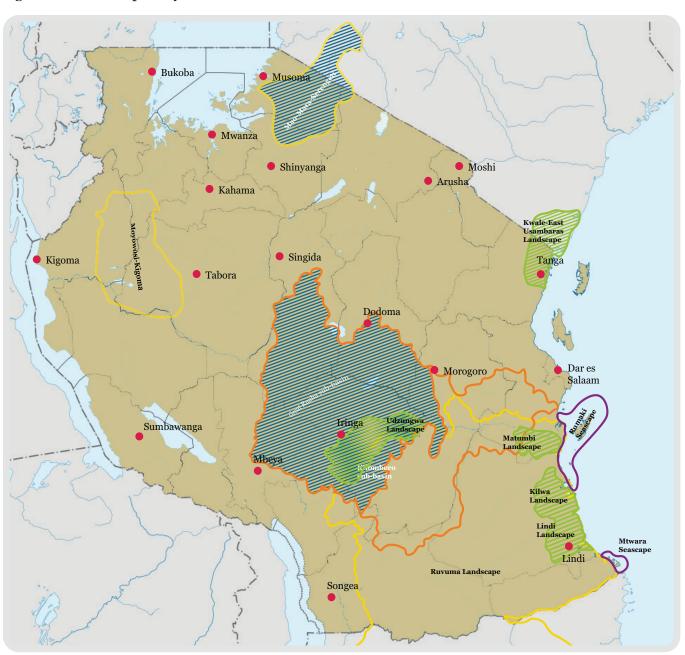
In line with the WWF Global Programme Framework (GPF) (2007 – 2020), the WWF TCO envisaged sustaining the natural assets for the benefit of the people and landscapes. Three key strategic directions are evident¹: 1) conserving the world's biological diversity, 2) improved livelihoods through sustainable utilization of renewable natural resources, and 3) reduction of water pollution. The focus has been on three priority geographical areas: the Coastal East Africa ecosystems (coastal forests, Eastern Arc Mountains, mangroves, and marine ecosystems), African Rift Lakes (lakes Victoria, Tanganyika and Nyasa) as well as the Miombo woodland (western and southern Tanzania)².

1.3. WWF TCO STRATEGIC PLAN 2015 - 2020

The WWF Tanzania first Country Strategic Plan (CSP) (2015 – 2020) covering six flagship programmes, 13 priority sites including the Rufiji basin and six transboundary areas (Fig. 2, and Table 1), was formulated in line with national conservation and natural resource management policies;

with a particular focus on conservation of Tanzania's natural wealth and biodiversity, improving livelihoods of natural resource dependent local communities in the context of gender equitability; and strong commitment to partnerships with state and non-state actors.

Figure 2: WWF TCO priority areas



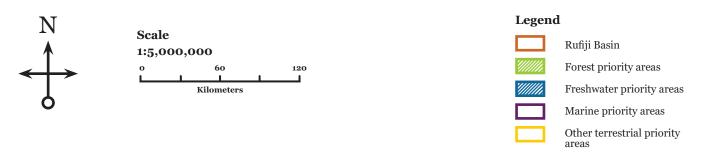


Table 1: WWF TCO priority areas

Programme: ELEPHANTS	Priority Area Selous-Ruvuma landscape Moyowosi-Kigosi-U galla	Synergy
Programme: FOREST PROGRAMME	Udzungwa Mountains Usambara lowland coastal forests Matumbi-Kichi coastal forests (Rufiji) Kilwa coastal forests Rondo coastal forests Selous-Ruvuma miombo woodland	Transboundary Initiative with WWF Kenya
Programme: FRESHWATER	Mara river (Lake Victoria basin) Kilombero River sub-basin Great Ruaha River sub-basin	Transboundary Initiative with WWF Kenya
Programme: MARINE (NEARSHORE FISHERIES)	Rufiji Mafia Kilwa Seascape Mtwara (Mtwara-Quirimbas)	Transboundary priority with WWF Kenya
Programme: MARINE (TUNA)	All TZ marine waters inclusing EEZ	Regional Initiative across South Western Indian Ocean
Programme: SELOUS RUVUMA	Selous-Ruvuma landscape	Transboundary priority with WWF MZ
Programme: ENERGY	Matumbi-Kichi coastal forests Kilwa coastal forests Rondo coastal forests Selous-Ruvuma landscape	Transboundary priority with WWF MZ

2.0. CONSERVATION STRATEGY ACHIEVEMENTS

The linkages of the six flagship programmes to the WWF Tanzania strategic directions are summarized in Table 2. The table includes two additional programmes: Regional Forest Programme and Sustainable Investment Programme.

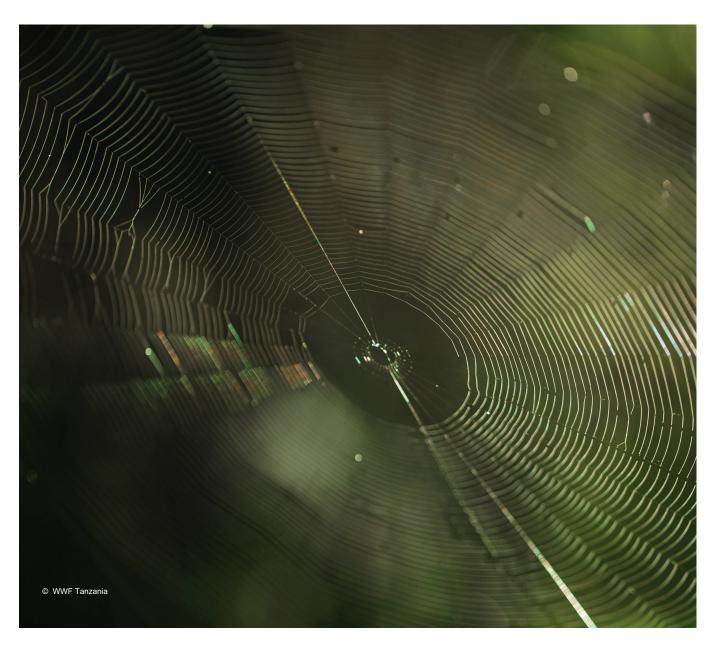


Table 2: A matrix summarizing different programmes contributing to achievement of the WWF Tanzania strategic directions

PROGRAMMES	OBJECTIVES	LINKAGES TO COUNTRY'S STRATEGIC DIRECTIONS			
		Conservation of biological diversity	Livelihood improvement through sustainable utilization of natural resources	Reduction of pollution	
FOREST PROGRAMME	 Increasing charcoal production efficiency and use of alternative domestic energy by 20% and 10% respectively Maintaining and/or increasing the area under sustainable Forest Management (SFM) by 30%, effectively managed and contributing to human wellbeing Increased government and relevant agencies' compliance to international and national forest trade frameworks by at least 15% Improved access to forest financing to promote compliance to local and international commitments & strategic public-private partnerships 	~	~	×	
REGIONAL FOREST PROGRAMME	 Forest cover has been maintained or increased through support to sustainable community forestry management Governments are committed to obey international, regional, bilateral agreements and national laws to reduce illegal trade in timber and other forest products Improved access to forest financing to promote compliance to local and international commitments and strategic public-private partnerships 	~	~	×	
RUVUMA LANDSCAPE	 Engaging the state and Non-State Actors more effectively in improved climate-adapted, integrated planning and management of small-and large-scale. Improved climate- adapted, rights-based management of small- and large-scale water-use in Great Ruaha, Mara and Kilombero catchments Small-scale water user's rights are better upheld, especially for men and women dependent on river abstraction for safe and sufficient water supply. Reducing seasonal drying of the Great Ruaha by at least 30% against 2015 baseline. Water quality in target rivers, especially Mara River, fully meets statutory water quality standards. 	~	~	×	

PROGRAMMES	OBJECTIVES	LINKAGES TO COUNTRY'S STRATEGIC DIRECTIONS			
		Conservation of biological diversity	Livelihood improvement through sustainable utilization of natural resources	Reduction of pollution	
FRESHWATER PROGRAMME	 Engaging the state and Non-State Actors more effectively in improved climate-adapted, integrated planning and management of small-and large-scale. Improved climate- adapted, rights-based management of small- and large-scale wateruse in Great Ruaha, Mara and Kilombero catchments Small-scale water user's rights are better upheld, especially for men and women dependent on river abstraction for safe and sufficient water supply. Reducing seasonal drying of the Great Ruaha by at least 30% against 2015 baseline. Water quality in target rivers, especially Mara River, fully meets statutory water quality standards. 	~	~	~	
MARINE PROGRAMME: NEAR-SHORE MARINE SUB - PROGRAMME	 Effective, climate adapted, marine spatial management in place in 2 priority seascapes such that artisanal fisheries are more sustainably & equitably managed & local user rights upheld Reducing blast fishing by 80% in 5 coastal districts from 2016 baseline Establishing national sustainable financing mechanism for marine ecosystem management Octopus fisheries are sustainable or recovering and, supporting livelihoods of coastal communities Marine turtles, whale sharks, other sharks and dugong population at least stable at 2014 levels 	~	~	~	
MARINE PROGRAMME: MARINE -TUNA PROGRAMME	 Strengthening regional policy legal frameworks for tuna fisheries Monitoring, control, and regional monitoring, control and surveillance (MCS) programmes are strengthened in alignment with regional tuna fisheries governance framework Increase by at least 10% from 2015 levels, in benefits to Tanzania from tuna fisheries through equitable fisheries access arrangements and a productive artisanal fishery 	~	~	×	
ELEPHANT PROGRAMME	 Information on the status of elephants in priority landscapes is transparently shared to at least 90% of target stakeholders, Reducing poaching in target landscape by 80% against 2015 baseline and Reducing demand for ivory amongst relevant Chinese communities within & outside Tanzania by 80%. 	~	~	×	

Table 2: A matrix summarizing different programmes contributing to achievement of the WWF Tanzania strategic directions

PROGRAMMES	OBJECTIVES	LINKAGES TO COUNTRY'S STRATEGIC DIRECTIONS		
		Conservation of biological diversity	Livelihood improvement through sustainable utilization of natural resources	Reduction of pollution
ENERGY AND CLIMATE CHANGE	 At least 50% of domestic and non-domestic users are using sustainable, renewable energy in rural & semi-urban demonstration areas in priority landscapes At least one effective mechanism developed and promoted for rapid adoption of renewable energy technologies in target areas, based on market or finance-driven approaches. Strengthening local authority capacity to promote and mainstream renewable energy in selected landscapes. Large scale hydropower and fossil-fuel energy projects in all WWF priority landscapes comply fully with statutory regulations, including subsidiary guidelines. 	~	~	×
SUSTAINABLE INVESTMENT PROGRAMME	Government and Financial Regulatory Institutions in at least 2 Coastal East Africa (CEA) Country have in place systems to integrate environmental and social considerations into investments decisions; and Environmental and social standards are guiding key investments in at least 3 key priority development corridors in Kenya (LAPSSET), Mozambique (Ruvuma landscape), Tanzania Southern Agricultural Growth Corridor of Tanzania (SAGCOT) and Mtwara-Ruvuma)	~	~	×

Key✓ Linkage existsX Linkage does not exist

The programmes were equally linked to two strategic directions: conservation of biological diversity and livelihood improvement through sustainable utilization of renewable natural resources. However, the Fresh Water Programme and Marine Programme (Near shore) were linked to all the three strategic directions i.e., addressed reduction of pollution concurrent with all other strategic directions. Though originally planned, the Ruvuma Landscape programme could not implement activities related to reducing water pollution due to a lack of funds.

2.1. FOREST PROGRAMME

The main focus of the forest programme was to sustain biodiversity values for improved rights and improve livelihoods of forest-dependent men and women through sustainable forest utilization in Matumbi-Kichi, Kilwa, and Selous-Ruyuma miombo woodland.



2.1.1. CONSERVATION OF BIOLOGICAL DIVERSITY

Forest area under sustainable management in the target landscapes has increased by 50%, from 300,000 ha to 450,000 ha. Forest health and biodiversity have also improved and certified Village Land Forest Reserves (VLFRs) have expanded from 122,935.4 ha in 9 villages to 200,712.4 ha in 13 villages between 2016 and 2020.

Moreover, enrichment planting of the endangered species of *Erythrina* spp seedlings was done in about 27 ha of Kilwa landscape in order to enhance ecological restoration. In addition, forest area under Forest Stewardship Council (FSC) certification has increased from 183,858 ha in 2015 to 204,713 ha in 2019.

Forest certification through international certification schemes such as the Forest Stewardship Council (FSC) enforces voluntary market-based principles for responsible forest management, which promote environmental protection including both biodiversity and water resources. In this case, timber and other forest products from certified responsibly managed forests fetches premium prices in the 'niche' international markets.

Besides the tangible achievements, the implementation of the strategic plan contributed to creating enabling environment to halt the loss of biodiversity and enhancement of the restoration of biodiversity. Key outcomes included formulation of the East Africa Forest Policy and Strategy, Tanzania Country Position Paper on post-2030 CBD framework; the regional Zanzibar Declaration (2015) on collaboration on timber trade, the publication of Tanzania National Forests Stewardship Standards in 2018 adapted from the international forest certification standards of the Forest Stewardship Council (FSC); revision of the Southern Africa Development Community (SADC) forest protocol related the illegal timber stockpiles management agreement with China; Timber Trade Stakeholders Forum established to ensure harmonization across the East Africa Community (EAC) region; and MoU was signed between Tanzania and Mozambique to adopt joint cross-border measures for controlling timber trade.

These initiatives have enabled the government of Tanzania and its agencies to comply with international and regional forest trade frameworks, which enforces agreed-upon principles for responsible forest management, notably environmental protection of both biodiversity and water resources, among other things. Other components of the enabling environment for protection of biodiversity, increased revenue from forest management by source and groups supported by the ended strategic plan were: development of a mechanism for regional stockpile inventory management; East Africa Timber Trade Stakeholders Forum; implementing Zanzibar declaration; and support implementation of trade regulation on CITES species such as East African Sandalwood (Osyris lanceolata) and rosewood (Dalbergia species) in the efforts of implementing Zanzibar declaration as well as engagement with China on legal timber trade.

Besides that, the access to forest financing has improved to promote compliance to local and international commitments and strategic public-private partnerships. To realize this WWF TCO programmes attracted more than \$ 9.05 million into Tanzania to kick-start the implementation of the said policies, strategies, and protocols that facilitated enforcement of market-based principles of protecting biodiversity and water resources.



50%

Forest area under sustainable management in the target landscapes has increased by 50%, from 300,000 ha to 450,000 ha

2.1.2. LIVELIHOOD IMPROVEMENT

INCREASE IN ANNUAL AVERAGE INCOME FROM 2016 TO 2020

2016

YEA

→ 2020



\$23,169

An annual average income of TZS 50.9 million (USD \$ 23,169) in 2016

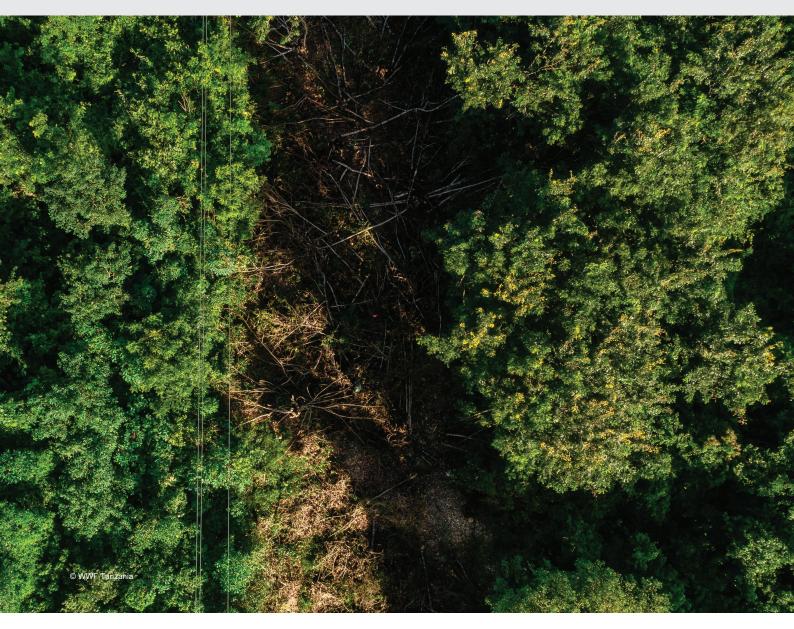


\$728,991

An annual average income of TZS 1.69 billion (US\$ 728,991) in 2020

Community-level incomes from sustainable timber sales under Forest area under Forest Stewardship Council (FSC) certification in the Matumbi – Kichi - Kilwa and Ruvuma landscapes increased across 45 participating villages from an annual average income of TZS 50.9 million (USD \$

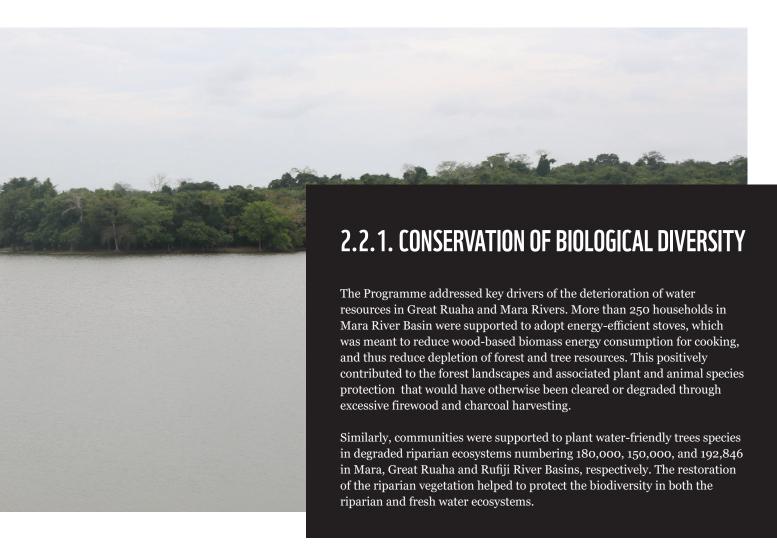
23,169) in 2016 to TZS 1.69 billion (US\$ 728,991) in 2020. The revenues from FSC certified timber sales were invested various community development projects such as the construction of village offices, village water supply system, and school buildings.



2.2. FRESHWATER PROGRAMME

The Programme focus was on ensuring environmental flows are restored to, or maintained at, target levels in Great Ruaha, Mara and Kilombero Rivers, to contribute to water security for men and women, and wildlife, dependent on them.

The programme achieved its strategic objectives, through adopting a number of approaches such as Community Based Natural Resources Management (CBNRM), support to Civil Society Organisations (CSOs), use of National Policy and Legislative, sustainable financing, and climate change vulnerability and adaptation as well as good governance.





Communities were supported to plant water-friendly trees species in degraded riparian ecosystems numbering 180,000, 150,000, and 192,846 in Mara, Great Ruaha and Rufiji River Basins.

2.2.2. LIVELIHOOD IMPROVEMENT



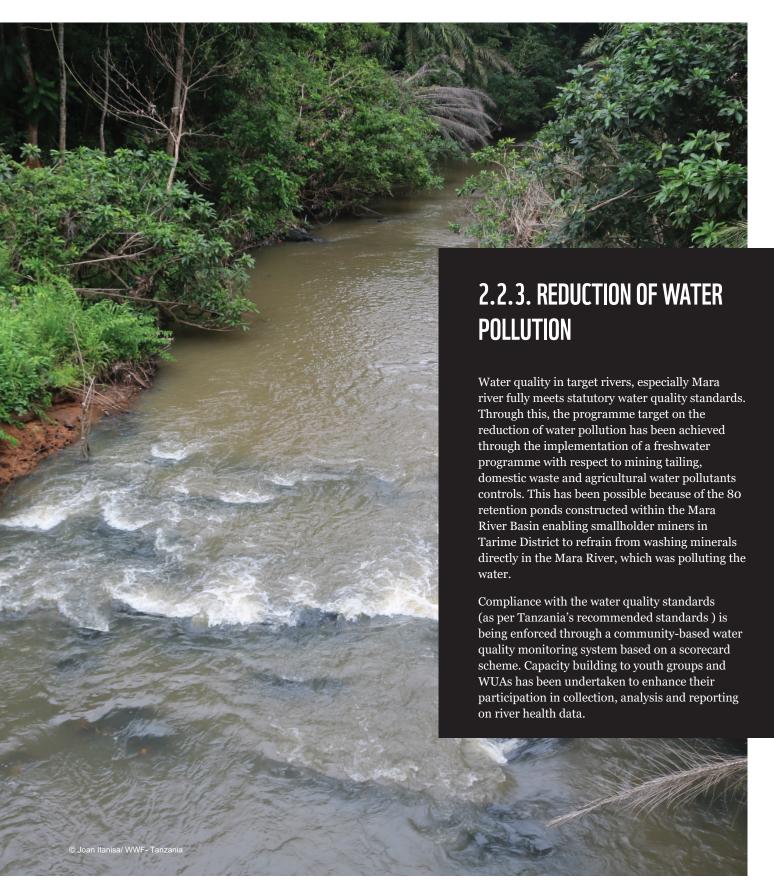
IN THE COURSE OF UNDERTAKING CAPACITY DEVELOPMENT, A TOTAL OF 200,000 PEOPLE WERE TRAINED AND MENTORED IN VARIOUS ENVIRONMENTAL FRIENDLY INCOME GENERATING ACTIVITIES SUCH AS BEEKEEPING, BACKYARD GARDENING, HANDCRAFTING AND RENEWABLE ENERGY STOVES MAKING

The Established 6 Water User Associations (WUAs) under the water resource management component are collecting water user fees, on behalf of Water Basin Boards, where they are allowed to retain 20% of the collected user fees.

The water abstraction survey in the Lake Victoria basin enabled the identification of more than 80% of water users that were not paying any user fees before; and thus, helped to revise and improve its collection strategies. For participating communities, revenues from participatory water resource management are being invested in various community development projects such as the construction of village offices, water supply, and school buildings.

In the course of undertaking capacity development, a total of 200,000 people were trained and mentored in various environmental friendly income generating activities such as beekeeping, backyard gardening, handcrafting and renewable energy stoves making. More than 50% of the trained community members are now engaged in beekeeping, handcrafting and renewable energy stoves making, which has improved their livelihoods. For example, average annual household incomes have increased as a result of participation in beekeeping, backyard gardening and handcrafting respectively.







Similarly, effective management of about 1,463.33 ha of forests that form watersheds within the basin; and restoration of riparian vegetation has contributed to a reduction in water pollution due to sedimentation and chemical pollution from agricultural fields along Mara River.

2.3. MARINE PROGRAMME

The Programme supported fisheries co-management development in the Rufiji-Mafia-Kilwa seascape and associated coastal areas in central and southern Tanzania. This has been undertaken in close partnership with coastal communities and national and local government authorities, through an integrated programme of projects with funding support from the European Commission (EC), the Governments of Japan through the Japan Social Development Fund (JSDF), UK, Norway, Sweden and the WWF Network.

WWF Tanzania Marine Programme has been operating through Fisheries Co-management, Rufiji - Mafia - Kilwa (RUMAKI) Seascape, Whale Shark Research and Management and other projects for over twenty years.

2000 - 2007	Mafia Marine Park
2007 - 2012	RUMAKI Seascape project
2007 - 2012	RUMAKI Seascape project extended to 2 more district (Temeke and Mtwara)

Figure 3: Marine Programme scope Chronology

The area under the Fisheries Co- Management Programme falls under two Seascapes: the Rufiji-Mafia-Kilwa (RUMAKI) Seascape and the Mtwara-Quirimbas Seascape.

The marine programme in the CSP I comprised of two sub-programmes i.e., near-shore marine and Tuna subprogramme. In the context of this report, the Tuna sub programme is treated as part of the regional programmes.

2.3.1. CONSERVATION OF BIOLOGICAL DIVERSITY

The population of key programme species⁶ such as whale shark in Mafia District has increased considerably from 185 in 2018 to 206 in 2020 (Fig. 4). The records show that 95% were male sharks and immature with average length of 6.4 m compared to previous records of 87% male with average length of 5.8 m.

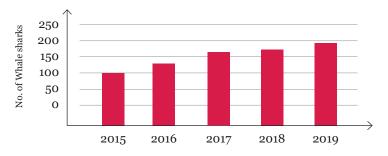
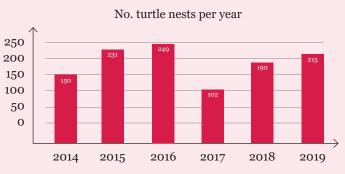


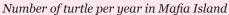
Figure 4: Progressive increase of number of whale sharks in Mafia.

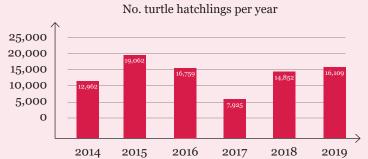
At the same time the population of Marine Turtles have been progressively stabilizing. The 3-year mean (2017-2020) for number of nests was 180 while the mean for number of hatchlings was 13,179. Since 2017, the numbers of nests and consequently hatchlings have been increasing progressively.

On the other hand, the number of Collaborative Fisheries Management Areas (CFMAs) in Kigamboni, Kibiti, Mafia, Kilwa and Mtwara districts has increased by 43%, from 7 in 2015 to 10 in 2020. The Beach Management Units (BMUs) have increased by 119%, from 21 BMUs in 2015 to 68 BMUs in 2020.

Under the facilitation of WWF Regional Marine Programme and WWF TCO, the FAO-coordinated Port State Measures Agreement (PSMA) endorsed for United Republic of Tanzania (URT). Deep Sea Fishing Authority (DSFA) Draft Regulations of 2020 revised. Training to fishers from Kigamboni, Kilwa, Mafia and Mtwara on basic skills and knowledge on deep sea fishing techniques for the effective fish capture in Exclusive Economic Zones (EEZ7) and South West Indian Ocean Tuna Forum (SWIOTUNA) Sustainable Fisheries Access/Partnership promoted







Number of turtle egg hatchlings per year

2.3.2. LIVELIHOOD IMPROVEMENT

WWF TCO, supported Vice president's office to conduct a study on preliminary information for National Blue Economy. The findings showed that, the total fishing industrial vessels grew to 461 by 2019, of which 4% (18) were locally owned vessels. The number of fishers grew from 36,321 in 2011 to 54,511 in 2019. Contribution of marine fishing is now at 15.3% of USD 6,047,848.33 of the total fishing industry (marine and inland fishing).

Artisanal fishing survey conducted in 3 important priority fisheries (i.e., prawn, octopus and small pelagic) led to the identification of three replenishment zones (fish breeding areas) in the CFMA areas of NYAMANJISOPOJA, MBWEKIEKI, MSIKIVI, MCHIMCHUNYA, KIMSA, JOJIBAKI, MJIMWOGE and MKISAMI.

NUMBER OF FISHERS GREW FROM 2011 TO 2019 2011 YEARS 2019 36,321 36,321 - Number of fishers in 2011 54,511 - Number of fishers in 2019

INCREASE IN TONS OF OCTOPUS PRODUCTION



 $\textbf{2,600} \xrightarrow{\text{TONS}} \textbf{3,000}$

Overall, trend Octopus production nationwide has increased reaching a range of 2,600 to 3,000 tons per annum from an earlier production of 1,300 tons per annum.

In effort to promote Marine Stewardship Council (FSC) certification in Octopus fisheries, the Programme, spearheaded the sustainable Octopus fishing. A total of 9 villages in Mafia and Kilwa districts practiced temporary closure resulting into increase of 24 times production compared to baseline with total weight of 107,020 kg of octopus whose value was TZS 535,097,500 (\$232,651). Overall, trend Octopus production nationwide has increased reaching a range of 2,600 to 3,000 tons per annum from an earlier production of 1,300 tons per annum. Ferry fish market in Dar es Salaam receives 1,300 tons of Octopus per annum, key suppliers being Tanga, Mtwara, Mafia, Kilwa and Bagamoyo, the prices range between TZS 6000 - 8000 (USD 2.6 - 3.5) per kg.

Communities in Songosongo were supported with ice producing plant, four machines with production capacity of 350 kg of ice flakes each (i.e., 1400kg/24 hrs). This improved storage and reduced post-harvest loss of fisheries products.



52%

Tuna catch have increased by 52% from 50,592.40 to 105,205.21 metric tons between 2011 to 2019 respectively.



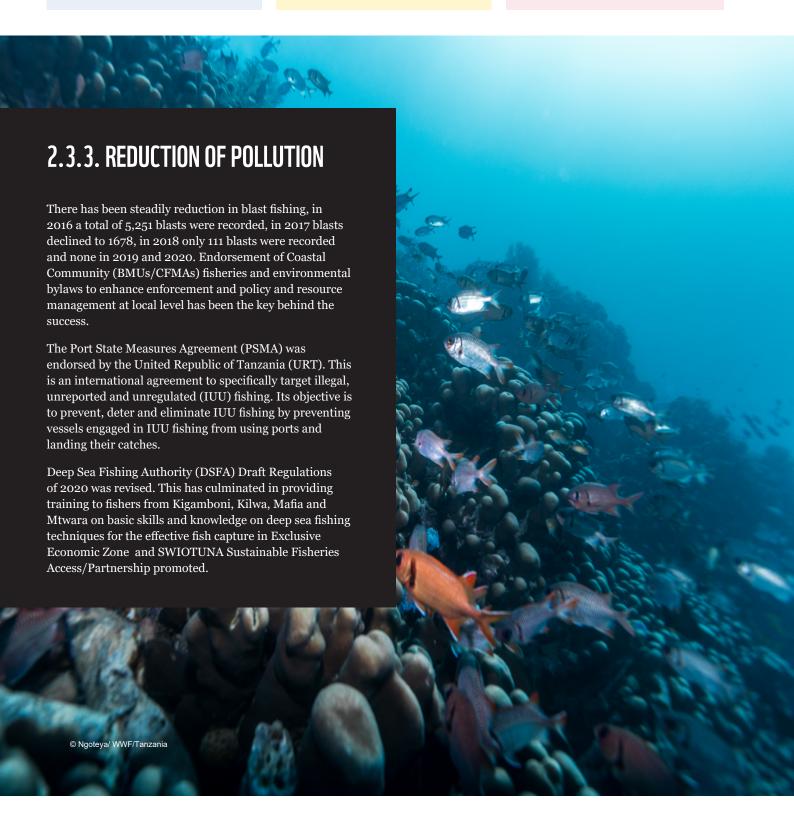
20.5%

The number of fishing vessels grew by 20.5% from 7,664 to 9,650 at the reporting period.



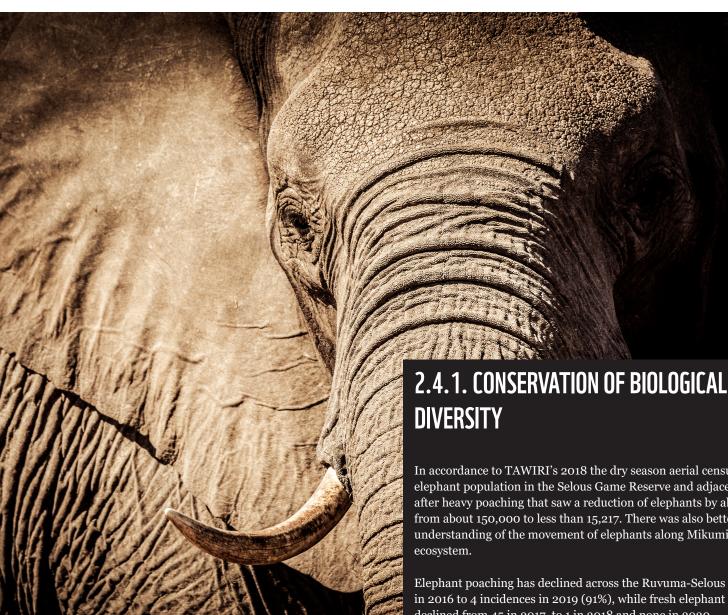
121%

Livelihoods of communities adjacent to the coastal zone involved in CFMAs have improved, through engagement in Village Community Banks (VICOBA). The Number of VICOBA have increased by 121% from 156 in 2015 to 344 in 2020.



2.4. ELEPHANT PROGRAMME

WWF Tanzania has been supporting elephant conservation and management in Tanzania for many years mainly in the Ruvuma landscape.





91%

Elephant poaching has declined across the Ruvuma-Selous by (91%). In accordance to TAWIRI's 2018 the dry season aerial census for elephant population in the Selous Game Reserve and adjacent area, after heavy poaching that saw a reduction of elephants by about 90% from about 150,000 to less than 15,217. There was also better understanding of the movement of elephants along Mikumi - Selous

Elephant poaching has declined across the Ruvuma-Selous from 43 in 2016 to 4 incidences in 2019 (91%), while fresh elephant carcasses declined from 45 in 2017, to 1 in 2018 and none in 2020.

Elephant poaching has declined and in 2020, there were zero elephant poaching in community protected areas. There have been efforts to eliminate illegal wildlife trade (IWT) by supporting antipoaching patrols and strengthening the capacity of law enforcement agencies. Capacity of 169 prosecutor and investigators on effective,

efficient and prosecution of wildlife and forestry crimes was strengthened. This has improved successful prosecution in the courts of law, and resulted into delivery of appropriate penalties. Four ivory poaching cases were ruled in high court by June 2017 which is an increase of (25%) of cases ruled.

As a result of the programme lobbying and WWF as whole, the Chinese government ended commercial processing and sale of ivory by December 2017, the decision affected 34 processing enterprises and 143 designated trading venues, the world's once largest ivory market.

2.4.2. LIVELIHOOD IMPROVEMENT

Increased involvement and support to WMAs led to reduced human-wildlife conflicts, which have resulted to positive outcomes on livelihoods of local communities.

Mitigation measure to reduce human elephant conflicts has led to increased arable crop yields. The programme introduced a total of 10 mitigation measures that were adopted by farmers in three pilot villages against elephants from destroying their crops.

2.5. ENERGY AND CLIMATE CHANGE

The programme aimed to contribute towards a sustainable energy transition in Eastern and Southern Africa where renewable energy solutions meet all energy needs in the region by 2050.

2.5.1. CONSERVATION OF BIOLOGICAL DIVERSITY

Sustainable renewable energy and adaptation to climate change has incorporated solar power, biogas, and energy-efficient stoves for cooking and lighting energy sources. There has been establishment of six (6) energy village models to promote access to renewable energy in rural areas through demonstration to create awareness on renewable energy technologies. This has led to eased pressure on forests as a result of reduced demand on wood fuel.

More lessening of pressure on forests is being conferred through the government investments of the 3.5% deduction from all petroleum revenue to support rural electrification and mini grid development programmes. Similarly, oil companies, Equinox and Shell Tanzania committed to establish a renewable energy desk that will be dedicated to renewable energy and green growth.

WWF facilitated establishment of a national sustainable energy forum (SEF) to bring together civil society organizations (CSOs) working in the energy and environmental conservation sectors in Tanzania. The forum has enabled active participation of more than 30 CSOs in advocacy to influence various policies and practices in favour of the protection of the environment and ecosystems. The advocacy has been accomplished by engaging with the National Parliament through energy and investment, and environment committees; and Tanzania Parliamentarian Friends of Environment (TAFE).

Through the advocacy work, among other things, the government was convinced to adopt environmental impact assessment (EIA) and social impact assessment (SEA) as prerequisite for large investments in hydropower, fossil-fuel energy and extractive sectors. This has been strengthened by the enacting of the EIA and SEA regulations in 2017. These developments provide risk averting mechanisms that avoid all possible repercussions on the environment including the integrity of ecosystems and inherent biodiversity.





3.5%

More lessening of pressure on forests is being conferred through the government investments of the 3.5% deduction from all petroleum revenue to support rural electrification and mini grid development programmes.

2.5.2. LIVELIHOOD IMPROVEMENT

Drip irrigation has been promoted to support vegetable gardening along Pangani River valleys, which are prominent for production of vegetables. This has reduced water abstraction in the river system and minimized operational costs by smallholders involved. It has also increased yields of the crops: the yield of onions has increased from 9 bags per acre to 12 bags per acre; and yields of round potatoes has increased as well.



Adoption of energy-efficient fish frying firewood stoves in the fisheries communities at Kilwa Kivinje and Kilwa Masoko has resulted in a decrease in firewood used per 10kg of dried fish from 100 kg of firewood to 50 kg of firewood (a 50 % decrease), and a corresponding increase in average profit of dried fish due to savings of firewood used.



USD 650

Advocacy initiatives, supported under the energy and climate change programme, enhanced governance in oil and gas sectors through the Extractive Industries Transparency Initiative (EITI). As a result, in 2018, the government's monthly revenue recovery in the oil and gas sub-sectors increased by two folds from USD 425 million to USD 650 in 2020.

2.5.3. REDUCTION OF POLLUTION AND WASTEFUL CONSUMPTION

CSOs have been mobilized to advocate and lobbied with the government until it issued a directive to all public institutions with more than 200 people to switch to renewable energy and energy efficiency technologies.

Solar Installations and trainings in Chamndindi, Mabillioni, Miyuyu, Mchakama and Njungwa model villages have increased access to renewable energy by local community including households, businesses, schools and health centers. For instance, it helps school's pupils to access the most needed light for study beyond day light, and parents to increase their social economic activities than ever before.

Enhanced governance on oil and gas sector as per Extractive Industries Transparency Initiative (EITI) through programme's lobbying and the EITI report shows that the government's revenue recovery in oil and gas sub-sector 2018, has raised to almost two folds from USD425 million to USD650 million per month



2.6. RUVUMA LANDSCAPE

Ruvuma Landscape programme covers an area of 278,950 km2. It flanks the Ruvuma River, spanning Tanzania's Southern regions to Mozambique's Northern provinces. The Programme aimed at promoting the integration of socio-ecological connectivity and resilience and stressing linkage of livelihoods and conservation of biodiversity in the Ruvuma Landscape.

2.6.1. CONSERVATION OF BIOLOGICAL DIVERSITY



The gazettement of new Protected Areas (PAs) (i.e., WMA/VLFRs) has led to increased area of forest under proper management by 1% (19,425 hectares) under wildlife and forest co-management from 1,967,357 hectares to 1,986,782 hectares.

The programme continued to support and maintain secure area for 9 WMAs and 25 VLFRs in the landscape. Management Effectiveness Tracking Tool (METT) score cards increased from 30.5% in 2016 to 52% in 2020, signifying improvement in governance of the wildlife and forest conservation institutions. Improvement of governance standards has included increased inclusive and participatory decision making.

Encroachment incidences in the WMAs progressively declined from 548 in 2018 to 311 in 2019 and 181 in

2020. This is owing to increased patrol coverage and law enforcement capabilities of the WMAs to combat illegal wildlife activities. For example, about 47 illegally procurement guns used in poaching activities were confiscated in 2020.

Standard Operations Manual (SOM) for WMAs was developed and adopted by 5 WMAs in the Ruvuma landscape. The manual guides WMA 's office bearers to effectively undertake their function, adhere to human rights and avoid conflicts during activity implementation.



National Rhino management and conservation strategy 2019-2023 was developed and put into use. This has included the initiation of the rhino database that involves development of the roadmap that involves collaboration of state and non-state actors.

Furthermore, there has been concurrent increase law enforcement capabilities of state actors and WMAs managers. There was an increase in court cases prosecuted, where 88 wildlife cases were prosecuted in 2020 compared to 66 wildlife cases in 2019. Of the prosecuted wildlife related cases, 10 (11.4%) were related to elephant

poaching and 79 (89.9%) related to other wildlife species for bushmeat. Three cases (3.4%) resulted into convictions, six (6.8%) were acquitted and 79 (89.8%) were still in progress when the implementation of the strategy was concluded.

2.6.2. LIVELIHOOD IMPROVEMENT



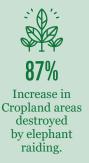
Business facilitations and negotiations were improved between WMAs and investors. This has reduced conflicts, and resumption of smooth tourist operations. Private investors increased by more than 60% in the target WMAs and VLFR.

Increased business investments and earnings in the wildlife and forest co-managed areas has been realized. All 9 WMAs accrued USD 207,462.35 (33% increase in 2020) compared to USD 175,572 in 2019. Income was mainly from block fee, hunting fees, investor's contribution to Corporate Social Responsibility (CSR) and penalty from illegal

timber extraction and wildlife transgression. About 50% of the income i.e., USD 103,731.17 was allocated to social welfare projects like the construction of buildings for schools and dispensaries. More than 40,000 local community members in 20 villages benefitted from the community development projects.



In addition, nature-based enterprises were promoted as part of livelihood diversification and incentivizing communities to participate in conservation activities. Beekeeping was promoted through trainings to the beekeepers' groups and provision of beekeeping equipment for production, processing and storage.



Improvement in protected areas (WMAs) management however, led to an increase in human wildlife conflicts (HWCs) incidences by 12% (1,288 incidences reported in 2020 compared to 1,152 in 2019) with negative repercussion on livelihoods. HWC incidences were mainly caused by elephants. Of the 1,288 incidences of HWCs related to elephants, 1,262 (98%) were elephant crop raiding. More than 418 hectares of food crops were destroyed in 2020 compared to 223 ha in 2019, which corresponds to an increase of 87% in the cropland areas destroyed by elephant raiding. On the other hand, human deaths due to HWC has virtually not changed over the period in consideration: 2 people were killed by elephants in 2020 compared to 6 in 2019, 2 people killed by crocodile in 2020 compared to 2019; and 2 people killed by buffalo in 2020 compared to none in 2019. Nevertheless, despite some exceptions in some cases of HWCs, taken in totality the benefits of improved wildlife conservation documented in this report in the form of the economy of the country and the livelihood benefits outweigh the associated negative repercussions from HWCs. Also, the HWCs are amenable to preventive measures such as identification and proper maintenance of wildlife migration routes coupled with participatory wildlife extension services, which are now adopted as integral components of WMAs management in the current strategic plan are capable of alleviating the HWCs.

2.7. SUSTAINABLE INVESTMENT PROGRAMME

The Sustainable Investment Programme is a regional programme. It was formed after restructuring of the Coastal East Africa Global Initiatives. It is implemented within the East African Coast of Mozambique, Tanzania and Kenya. The programme aimed to promote responsible and sustainable practices along development corridors and in areas of trade and investment, particularly in agriculture, mining/extractives, and infrastructure sectors within the country.



The number of investors complying to inclusive green growth (IGG) guidelines has increased from 16 in 2018 to 33 in 2019 (this is 48.5% increase) in the SAGCOT corridor. This reduce the impact of degradation of the environment and encourage sustainability and inclusiveness on business undertaking. A total of 16 investments were provided with 63 recommendations to ensure compliance with IGG principles.

Environmental impacts of active investments in Mtwara corridor have been identified and plans developed to address the adverse effects likely to crop up. An action plan was prepared for the purpose of identifying and addressing challenges in the corridor for the purpose of safeguarding the environment and ensure sustainability for the investments in the corridor.

At the same time the capacity and awareness of stakeholders on the application of national strategic environmental assessment (SEA) have increased. The collaboration between The Vice President's Office -Division of environment and WWF TCO led to the launch of the National Strategic Environmental Assessment Guidelines.



2.7.2. LIVELIHOOD IMPROVEMENT

Development of sustainable finance principles for Tanzania is set to support financial sectors to adhere to sustainable development and environmental safeguard when review business plans or feasibility studies submitted by project proponents applying for funding. In line to that effective advocacy on sustainable investment for Community Based Organisations (CBOs) have increased, they are now engaging investors more frequently on investments best practices in the corridor due to advocacy that have been conducted

by CSOs, for example, 2 CSOs "the Sustainable Holistic Development Foundation" and "Mazingira Network-Tanzania" (i.e. SUHODE and MANET) effectively engaged in advocacy training and capacity building to CBOs for in-situ of ecosystem monitoring and environmental performance in the SAGCOT (Ihemi, Mbarali and Kilombero clusters) whereas MANET dealt with awareness raising to communities and investors through meetings and policy engagement dialogues in the very same clusters.

3.0. INNOVATIONS PROMOTED

Implementation of the CSP I devised several innovations in order to ensure achievement of the set objectives. Two main thrusts were developed:

- i. improved processes for NRM, and
- ii. improved tools for NRM.

3.1. IMPROVED PROCESSES FOR NRM

- The integration of indigenous traditional knowledge and introduction of Community-based Trainers (CBTs) and Community-based Mentors (CBMs) were evident in Freshwater Programme. These proved to be instrumental in making natural resources management relevant to local realities. These were innovative approaches in that they helped to avoid the inadequate social and financial sustainability challenges that characterize typical integrated conservation and development projects. The approach ensured that the technologies promoted were appropriate to the local conditions and that engaging community-based change agents empowered them to continually promote ecosystem and livelihood improvement activities without necessarily requiring external technical and/ or financial support. CBTs and CBMs enabled easy knowledge transfers at grassroots and contributed to the early adoption of best practices by communities. Due to less requirement for external financing, the CBTs and CBMs form the most reliable pathways for enhancing sustainability of outcomes achieved during the CSP I.
- Engaging youth in integrated conservation and livelihood interventions was eminent in energy and climate change and forest programmes that promoted youth job creation in relation to fabrication of improved cooking stoves and sustainable charcoal production, respectively. The approach contributed to efficiency and long-term sustainability as the energetic youth were made to settle in the rural areas being assured of increased production efficiencies and profitability through production of improved stoves and sustainable charcoal. Qualitative information confirmed that the youth who would otherwise migrate to towns in search for 'the socalled better employment opportunities' were trained and mentored to stay in the rural areas where they adopted profitable environmentally friendly enterprises including production of improved cooking stoves, beekeeping, sustainable charcoal and timber production. Approaches

- for empowering the youth included awareness creation, life skills, entrepreneurship skills, and improving productivity of income generating activities. For instance, deployment of Energy Learning Models in villages attracted youth and other community members to learn and engage in acquisition of various energy technologies such as improved cooking stoves and solar power for various uses (e.g., lighting, fish drying).
- Linking conservation activities with livelihoods of the communities through collaborative initiatives (CIs) has provided a better leverage in management of natural resources. It has created sense of ownership and incentives for communities to engage in conservation. Introduction of interventions such as beekeeping and sustainable charcoal and timber production, energy technologies and drip irrigation technologies in semiarid areas that directly solve the immediate livelihood needs have positively contributed to incentivizing community participation in conservation.
- Joint implementation of activities and sharing of financial and human resources within WWF TCO programmes and collaboration with external partners including NGOs, CSOs and private sector have helped to leverage technical and financial capacities among implementing partners that enabled effective and efficient implementation of programmes. For example, involvement of MJUMITA, MCDI and TRAFFIC brought long-term capacities in sustainable charcoal production, sustainable timber production and effective forest governance respectively.

3.2. IMPROVED TOOLS FOR NRM

- Wood tracking information system enhanced effective control of illegal logging and timber trade. The system is comprised of hand-held digital timber tracker devices that are linked to a remote database through a web-based tracking software. Each entry of the product information is recorded and transferred to the database, where it enables storage and data retrieval where needed to verify timber consignment identity and allows quick and transparent verification system. The system has improved efficiency and control of timber trade, reduced bureaucracy, reduced entry errors and reduced illegal logging. For example, the technology was applied by Tanzania Forest Service to identify and reprimand traders involved in illegal timber.
- Smart planes and unmanned aerial vehicles (UAVs) were introduced to support for controlling illegal wildlife trade in Mozambique and Tanzania. The technology has improved surveillance effectiveness, reduced patrol costs and assisted in gathering of spatial data for the protected areas. For example, use of UAVs in the Ruvuma Landscape reduced surveillance time and corresponding cost. Additionally, the UAV are smaller and quieter, hence offering relatively non-invasive methods to the wildlife management areas compared to manned planes.
- Digital data collections and land use monitoring/management systems were promoted in community-led natural resources management interventions especially in the wildlife management areas (WMA) and Village Land Forest Reserve (VLFRs). The systems used smartphones and tablets installed with data collection software which are linked to the online database for easy synchronization and storage. The use has increased speed of data capture, reduced errors and easy to use by modest trained data entrants.
- Deployment of acoustic sensors for monitoring water levels of the river flows has improved data collection, as exemplified in Rufiji River basin. Coupled with participatory monitoring approaches that involved community members, the innovation improved efficiency in data collection, reduced costs, increased data collection frequencies and quality. For example, use of acoustic sensors in the Rufiji Water Basin reduced occurrences of average annual missing water level reading, and corresponding cost.



4.0. LESSON LEARNT

- i. Policy and institutional changes in natural resources management take time to be realized. Continuous efforts are needed to remain in place to sustain the reform process. Multiple players including government, NGOs/CSOs, the private sector, community organizations and individual experts need to engage in an inclusive dialogue that accommodate diversity of views and reach consensus. The lengthy the process implies adequate consultations and iterations in reaching a conclusive and participatory policy and institutional reforms.
- ii. Partnerships in conservation and management of natural resources including forest, wildlife, fisheries and water resources are crucial in enhancing collective actions. It requires a thorough political economy analysis to identify interests and incentives of stakeholders so that each category of actors are properly incentivized. Partnership at all levels (local, regional and national) is crucial and require adequate time investment, substantial financing, and institutionalization across actors. Also, partnership ensures leverage of technical and financial resources. For instance, non state actors such as NGOs and CSOs have been strong and effective in reaching out grassroots communities: something that the governments of East African region have limited success to achieve.
- iii. Maintaining close contacts and communications with government agencies at all levels is crucial for promoting conservation work with positive government support. Miscommunications can cause delays and attract mistrust which are detrimental to the sustainable management of the natural resources. For instance, in occasions where active participation of Local Government Authorities has been high in terms of awareness creation and law enforcement, it has resulted in commendable effective interventions that contributed to the reduction of illegal exploitation of the natural resources.

- iv. Ecosystem-based and landscape approaches have proved to be an effective option for concurrent interventions on conservation, environmental protection, and livelihood improvement. It addresses the multi-functionality of a landscape for livelihood support while at the same time ensuring effective identification and addressing underlying drivers of conservation challenges at all levels.
 - **Community-based Natural Resources** Management (through BMUs, WMAs, VLFRs, WUAs) becomes effective in ensuring sustainable management and conservation of resources when deliberately integrated with appropriate interventions to support livelihoods of communities. The best results happen when sustainability models are built on equitable financial returns to the communities together with strengthening of local governance institutions. The CBNRM institutions such as VGS and VNRCs provide cost-effective alternatives to state owned institutions for effective enforcement of the applicable laws and regulations. Furthermore, awareness creation to communities on rights and access to natural resources has resulted into increased readiness and willingness to engage in sustainable utilization.





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