

**STRENGTHENING MARINE PROTECTED AREA
MANAGEMENT IN RUFJI, MAFIA AND KILWA
DISTRICTS TANZANIA
2019 - 2023**

1. Project summary

The proposed project aims to improve management effectiveness in the marine protected areas (MPAs) and associated buffer zones within the Rufiji-Mafia-Kilwa seascape to maintain and improve its ecological value and livelihoods. The project contributes to the overarching goal of conserving the long-term ecological integrity, resilience and biological productivity of the Rufiji-Mafia-Kilwa seascape as an internationally important biodiversity hotspot supporting the livelihoods of natural resource-dependent communities.

The proposed project area is the most biologically productive and diverse marine area in Tanzania and East Africa. It includes 25% of Tanzanian mainland's nearshore waters supporting substantial fisheries production; 26% of its coral reef habitat (625 km²); and over 50% of its mangrove forest (532 km²). Marine resources within the seascape support the food security and livelihoods of over 100,000 coastal residents. Yet, the area faces a number of significant challenges which threaten its ability to continue to provide these goods and services. This includes unsustainable fishing and mangrove harvesting practices. In addition, the seascape lies downstream of the Rufiji River Basin (177,420 km²) which drains 20% of the country through one of East Africa's largest river, the Rufiji. The basin is a focus for major national development initiatives in the agriculture and energy sectors which in turn negatively affect environmental flows into the Rufiji Delta and adjacent marine ecosystems.

In response to the existing threats and challenges, the project seeks to deliver four high level outcomes through four components. The first will focus on improving the management effectiveness of existing protected areas (PAs) - Mafia Island Marine Park (822km²) and the Rufiji Delta mangrove forest reserve (532km²), the second will focus on eight fisheries co-management areas (3,750km²) in the buffer zone between the two - through enhanced implementation of management and monitoring. The third will provide enhanced enterprise skills and alternative food and livelihood pathways to lessen the dependence of coastal communities on natural resources and the fourth aims to ensure broader seascape level management and seascape value recognition in national development planning through improved coordination and integration of management efforts in Rufiji-Mafia-Kilwa seascape including seeking designation as UNESCO Man & Biosphere Reserve (see the Theory of Change graphic below).

The implementing organisations will be: WWF Germany, WWF Tanzania Country Office and Wetlands International East Africa. The primary implementation partners include the Ministry of Livestock & Fisheries Development (in particular its Marine Parks & Reserves Unit / Mafia Island Marine Park and Fisheries Development Divisions), Tanzania Forest Service (TFS) of the Ministry of Natural Resources & Tourism (MNRT), Kibiti, Mafia and Kilwa District Councils, approximately 48 coastal communities, including their respective village councils, beach management units (BMUs), village liaison committees (VLCs) and village natural resources committees (VNRCs) as appropriate; the National Environment Management Council of the Vice President's Office (VPO) and the Rufiji Basin Water Board.

2. Background

Impetus and background of the project:

The Mafia-Rufiji-Kilwa Seascape stretches for **365 Km** along the coast of the West Indian Ocean, south of Tanzania's capital Dar es Salaam. It features globally outstanding biodiversity and productivity. The seascape consists of three habitat types, representative of the Western Indian Ocean Coastline: The Mafia Island coastal reef, the Rufiji Delta mangrove forest and the shallow nutrient rich waters of the Mafia Channel which feature extended sea grass meadows and connect the above named habitats.

The core areas of the Mafia Island coastal reef and the Rufiji mangroves are legally protected: **The Mafia Island Marine Park (MIMP)**, established in 1996 as the first marine protected area in Tanzania; and **the Rufiji delta mangrove forest reserve** that covers the majority of the mangrove area. The whole seascape, including the shallow Mafia Channel was designated as **RAMSAR site** in 2004. The area of the RAMSAR site is **596,908 ha(5,969Km²)**. It will function as the basis of the envisaged designation of a Man & Biosphere Reserve under this project. Additionally most of the buffer zone between the above named protected areas is covered by nine **Collaborative Fisheries Management Areas (CFMAs)** that are co-managed by communities and Fisheries Department (see chapter 4 and maps in annex D).

The Mafia Island Marine Park has functioned relatively well till now although it remains challenged by limited financial resources and the difficulties of managing resource-use by the approximately 23,000 people that reside within the park boundary. Although participatory management principles are built in to MIMP's legal structure, they are not implemented effectively. Other management measures include two no-take zones, fishing gear restrictions, protection of turtle nesting sites and others. According to the Park management authority, destructive fishing methods like dynamite fishing and seine nets were reduced by about 80% within the park. Use of small mesh size nets and overfishing are still unsolved issues.

The Rufiji Delta mangrove forest reserve has received little management attention since its establishment in the 1990s. The latest mangrove management plan was produced in 2001 and had limited impact. Since 1990 at least 10% of mangrove cover in the Rufiji Delta has been converted to other uses such as rice paddy, salt pans and the ecological structure significantly altered by timber and pole extraction in many areas. Illegal clearing, grazing and timber logging are the main threats to the mangroves in the delta.

The productivity of the area features some rich commercial fish stocks (prawn, small pelagic fish, octopus, reef fish and others) which support wide spread small scale and semi industrial fisheries while being the main livelihood and food sources for most of the inhabitants of the coastal communities in the area. Most of the fish stocks already show significant signs of overfishing. The wider Rufiji delta and catchment areas belong to the most densely populated rural areas in Tanzania and are subject to ambitious national economic development plans focused on sectors such as agriculture, timber and energy. The concurrence of the economic development in the catchment area and climate change related changes have already significantly changed environmental flows in the delta. The mangroves are already affected by reduced freshwater and sediment flows caused by upstream dams and altered rain patterns.

Scope and urgency:

The project will focus on increasing the resilience of the coastal ecosystems and the communities, depending on their natural resources and ecosystem services, by reducing overexploitation in the seascape. This will be done by i) improving the management of the protected areas by introducing effective co-management including surveillance and enforcement, raising awareness and increasing compliance to management, ii) facilitating the next level of small scale fisheries management through introducing catch data monitoring and catch management measures, iii) providing enhanced enterprise

skills and alternative food and livelihood pathways to lessen the dependence of coastal communities on natural resources and iv) developing an overall framework for integrated sustainable development planning through the designation of the Rufiji-Mafia-Kilwa Seascape as a **Man and Biosphere reserve**. Together these measures will significantly strengthen the resilience of the outstanding nature and secure the future of coastal communities depending on marine natural resources.

MPA project focus and relevance for systems/networks of protected areas:

The Mafia Island Marine Park (822 km²) MIMP is the northern extent of a triangle of high coral reef biodiversity in the western Indian Ocean (WIO) that extends down the northern Mozambique coast to Nacala, and across to the north-western tip of Madagascar ¹. Mafia has an estimated 280 species of hard coral, on a range of 33 to 293 species for 22 sites across all WIO countries. MIMP's location on the central Tanzanian coast makes it a pivotal link in the supply of larvae of corals, fish and related biodiversity from the centre of marine biodiversity in the WIO (more precisely Northern Mozambique Channel), up the East African coast (Zanzibar, northern Tanzania and Kenya), as driven by the prevailing South Equatorial Current (SAC) and north-flowing East Africa Coastal Current (EACC). MIMP also hosts a mosaic of coral, seagrass, mangrove and intertidal habitats that are ecologically inter-dependent in supporting fish life cycles, and which are highly representative of the WIO marine habitats and biodiversity. MIMP's beaches support a nesting female population of 80-100 green and hawksbill turtles that are known to forage as far as Kenyan and Somali waters. Mafia also provides foraging grounds for green turtles that nest elsewhere in the WIO. MIMP's shorelines and extensive inter-tidal flats provide staging grounds for various palearctic migrating birds and other waders. Sizeable colonies of the Comoros lesser fruit bat (*Pteropus seychellensis comorensis*) occur within the park.

Among the management measures of the park are two no-take reserves, fishing gear restrictions, protection of Sea Turtle nesting sites and others. The park management has been able to reduce the use of destructive fishing methods within the park by about 90%. There is some tension between fishers and the park authority regarding some of the gear restriction, which are stricter within the park than outside. The park raises revenues from visitors entrance fees cover about 50% of the required budget. There is no support from the state.

The Rufiji Deltamangrove forest reserve (532 km²) and its water ways, hosts the largest concentration of mangroves in Tanzania, the second largest on the Eastern Africa seaboard, after the Zambezi Delta, and approx. 50% of Tanzania's mangroves. Rufiji has the highest mangrove species diversity of any site in the western Indian Ocean, containing all of the 9 species of mangrove found on the continental coast of Eastern Africa, which is rare in a single site. Many resident and migratory bird populations rely on the delta and its wetlands including Mangrove Kingfisher [*Halcyon senegaloides*], Greater Sand Plover [*Charadrius leschenaultii*] and Grey Plover [*Pluvialis squatarola*].

The **proposed Rufiji-Mafia-Kilwa Man & Biosphere (MAB) Reserve** would encompass the two existing protected areas above, as well as extensive shallow (0-50m depth) marine waters which link the two and which form their respective marine buffer areas. The high nutrient output from the Rufiji Delta supports extensive fisheries and related marine life in the Mafia Channel between MIMP and the Rufiji Delta mangrove system, including nationally important prawn and pelagic fisheries, and a variety of vulnerable and endangered marine species including an aggregation of over 100 whale sharks [*Rhincodon typus*], 5 species of marine turtle and a small remnant population of dugong [*Dugong dugon*]. The southern extent of the proposed area is the Songosongo archipelago, an extensive mosaic of coral reefs and sandbars whose corals have demonstrated relatively high resilience to coral bleaching, hypothesised because of their proximity to the more turbid waters of the Rufiji Delta which mitigates the synergistic impacts of raised sea temperature and exposure to ultra-violet radiation.

¹ Obura D (2012) The diversity and biogeography of Western Indian Ocean reef-building Corals. PLoS ONE 7(9)

Collaborative Fisheries Management Areas (CFMAs): small scale fisheries in the project area are co-managed by communities through Beach Management Units (BMUs) that make up 8 CFMAs inside the buffer areas and MIMP. The most important fisheries in the area are prawn, small pelagics, octopus and reef fish. The CFMAs cover all areas outside the marine park and overlap partly with the park. The management encloses licensing of fishing boats, gear restrictions and licensing of temporary fishing by migrant fishers. Some communities in small islands (Songosongo, Fanjove, Nyuni, Okuza and Simaya) in Kilwa district and Jojo and Banja in Mafia district practice temporary octopus closures. Also some BMUs conduct regular patrols using the available resources.

Ramsar Site Rufiji-Mafia-Kilwa

The site was designated in October, 2004. In 2006 Tanzania developed an action plan in order to improve the monitoring and management of the Ramsar Sites in the country. The measures include reduction of bycatch and regular bird counts.

Alignment and contribution to regional conservation plans and policies:

Nairobi Convention: the project is consistent with commitments made by signatories to the Nairobi Convention which seeks to address the accelerating degradation of oceans and coastal areas in the WIO through sustainable management and use of the marine and coastal environment.

North Mozambique Channel Initiative [NMCi]²: the project area is the northern extent of the area targeted by the NMCi, which is a multi-partner initiative whose goal is to help countries make the Northern Mozambique Channel a model of integrated ocean management based on Blue Economy Principles. The NMCi was endorsed at the Nairobi Convention CoP8 (June 2015).

Convention on Biological Diversity (CBD 1992) Tanzania signed the CBD in 1992 and ratified it in 1996. In 2003 the Tanzanian government launched a “**Natural Integrated Coastal Environment Management Strategy**”. The overriding priority of the strategy is to reduce environmental degradation and reduce poverty. The project is fully aligned to this strategy.

Sustainable Development Goals (SDGs 2015) On the basis of the SDGs Tanzania developed specific goals for the country, which include the commitment to protect additional 10% of marine/coastal areas by 2025

New Partnership for Africa's Development (NEPAD) NEPAD has identified rapid biodiversity loss as one of the major environmental challenges in Africa. The Rufiji-Mafia-Kilwa seascape is among the biodiversity hotspots identified by the “Africa Environment Outlook Report (UNEP 2002).

Evidence of change:

Reduced levels of illegal and unsustainable fishing in Mafia Island Marine Park and Songosongo archipelago leading to fish stock recovery and improved livelihoods, and resilience of coral reef habitats and related biodiversity.

Improved management of gears and fishing effort in prawn and pelagic fisheries in Rufiji Delta and Mafia Channel leading to greater protection for vulnerable and endangered species such as whale sharks, other sharks & rays, dugong etc.

Reduced levels of illegal and unsustainable mangrove exploitation leading to improved condition and ecological functions of Rufiji mangrove forests and reforestation.

² http://wwf.panda.org/what_we_do/how_we_work/our_global_goals/oceans/solutions/northern_mozambique_channel_initiative.cfm

Enhanced recognition of Rufiji-Mafia-Kilwa seascape ecological and livelihood values at national policy level that enables improved and holistic decision-making and regulation of agriculture and energy sector development in Rufiji Basin resulting in improved/preserved environmental flows in lower Rufiji River and healthy Rufiji Delta mangrove systems.

3. Theory of Change

The project area faces a number of significant challenges which threaten its ability to continue to provide goods and services to both people and nature. These include unsustainable fishing and mangrove harvesting practices for food and livelihood purposes. These particular threats are linked to inadequacies in the management of Tanzania's near shore waters. For example, the core areas for the project, Mafia Island Marine Park (MIMP), the Mangrove Forest Areas and the adjoining CFMAs, while enjoying some level of legal protection face significant staffing and funding challenges. MIMP has only twelve members of staff to manage the 822km² and they are required to share the Park's own revenue with other marine parks in the country. The Mangrove forests of Tanzania which were declared as a national forest reserves over a century ago still lack a functional management systems. Directly resulting from this, the mangrove forest in Rufiji Delta has been degraded and converted to rice paddies and experienced intense pole extraction. In the northern delta, 11.3% of the mangrove cover was lost between 1989 and 2010³. In the collaborative fisheries areas (CFMAs) the challenges are around inadequate community capacity for management, insecure long term funding for management actions, uncertainty over stock status and sustainable reference points. Consequently the three productive fisheries (prawn, small pelagic fish, anchovy, mackerels etc. and octopus) are arguably overfished, subject to illegal fishing methods like small size mesh and blast fishing which are contributing to over-fishing. Arguably these unsustainable resource use patterns in both mangroves and fisheries areas are driven by poverty, lack of livelihood options, lack of control of immigrant fisher numbers and robust market demand for fisheries products.

Another emerging critical challenge facing the 5500 km² Rufiji-Mafia-Kilwa seascape is the impact of upstream development in the Rufiji Basin, affecting environmental flows in the Rufiji River, which in turn drive marine productivity and biodiversity in the project area. The Rufiji Basin is prioritized nationally for development in the agriculture and power sectors. Agriculture development in the Ruaha and Kilombero sub-basins and the Rufiji flood-plain goes back several decades but has been given new impetus in recent years by the national *Southern Agricultural Growth Corridor of Tanzania (SAGCOT)* initiative, ongoing since 2010. Historic developments in these two sectors, exacerbated by climate variability, have already driven decadal change in environmental flows into the Rufiji Delta⁴. Awareness amongst national and basin-level decision-makers of the downstream impact on delta and coastal livelihoods, and other economic and ecological assets in Rufiji-Mafia-Kilwa, is currently very limited.

A central opportunity that the proposed project seeks to build on is the broad adoption of co-management policies and approaches across natural resources sectors in Tanzania. This is explicitly true of all the relevant national and local authorities in the project area including the Ministry of Livestock and Fisheries Development; the Marine Parks & Reserves Unit; the Tanzania Forest Service (TFS) and all three district authorities. Co-management is not a new concept in the project area, particularly in the fisheries management areas that buffer MIMP, but it is relatively weak within MIMP and the Rufiji Delta mangrove forest reserve and, in general, a lot of community capacity development is still needed throughout the project area. Other opportunities and enabling factors include: (i) Wetlands International's *Mangrove Capital Africa* initiative, which has made a 10-year commitment of seed funding

³ Nindi SJ, Machano H & Rubens JP (2014) Remote sensing study of mangrove vegetation change in Rufiji Delta, Tanzania from 1990 to 2010. WWF Tanzania Country Office, Dar es Salaam. 48pp.

⁴ Rubens JP & Machano H (2015) Climate Vulnerability Assessment in Rufiji Mafia Kilwa Seascape, Tanzania. Unpublished report to WWF Tanzania Country Office, Dar es Salaam. 61pp

for mangrove co-management in Rufiji Delta, but which requires complementary financial resources; (ii) past work by WWF Tanzania and government partners in supporting the establishment of collaborative fisheries management areas (CFMAs) in the project area, though existing CFMA plans lack strategic management measures for priority fisheries; (iii) ongoing stock assessment of priority fisheries under the Govt. of Tanzania/World Bank SWIOFish Tanzania project which will provide a baseline for the proposed BAF project; and (iv) the readiness of the Vice President's Office (VPO) and its National Environment Management Council (NEMC) to support an application to UNESCO to designate the project area as a UNESCO Man and Biosphere Reserve. This has the potential to significantly raise the profile of the area at national level, in particular the institutional connection to the Vice-President's Office which has substantial influence on national and sectoral development policy in the context of safeguarding the environment.

Therefore in view of the above constraints and opportunities the project's theory of change is underpinned by four integrated elements.

- The first element is to strengthen co-management within the three governance systems (MIMP, CFMAs and Rufiji Delta mangrove forest reserve), all of which have policy, legal and institutional frameworks that are conducive, and have communities that are generally receptive to that.
- The second is adoption of a science-based approach to resource assessment, to inform understanding of stock status, setting of sustainable harvesting levels, and formulation of appropriate harvest-control rules, for the key productive resources in the project area; namely three priority fisheries (prawns, small pelagics and octopus) and mangroves.
- The third element is to apply a complementary livelihoods approach, respecting the fact that communities are better able to buy into, and comply with, co-management-related restrictions on access to natural resources if short-term losses are compensated through diversification of sources of income.
- The fourth element is establishment of an overarching designation of the area as a Man and Biosphere (MAB) Reserve, to support co-ordination between the various management authorities, and raise the profile of the Rufiji-Mafia-Kilwa seascape nationally.

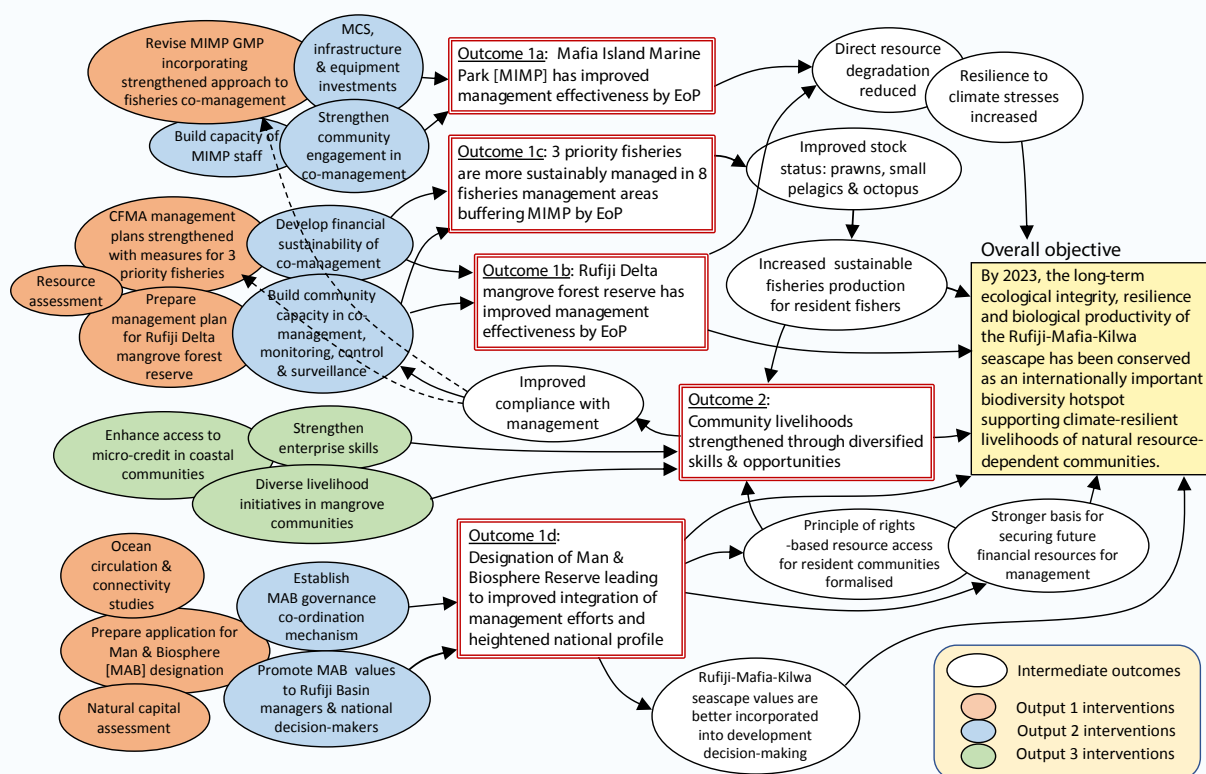
Project implementing partners take the view that an integrated co-management and livelihoods-based approach is not only the best solution to the management challenges outlined, but probably the only one available. This is not to under-estimate the significant challenges in building capacity of relatively poor and under-resourced coastal communities to engage in effective natural resources management, nor the long-term nature of such an endeavour. However, financial resources are not available to support more costly, centralized governance approaches. Secondly, the level of community livelihood dependence on natural resources is such that a community rights-based co-management approach is, at the very least, a necessary element in controlling what are otherwise virtually open-access regimes in practice.

The above approach makes a number of key assumptions, including that a sufficient proportion of community members [who are not a homogenous group] are receptive to participating in co-management and are resilient to intra-community pressures that might otherwise undermine their efforts; that stock assessment will accurately inform sustainable harvesting strategies; and that raising the profile, and awareness of the values of the Rufiji-Mafia-Kilwa seascape will contribute to better development decision-making in the Rufiji Basin. The assumption that national and district authorities will support sustainable revenue-generating mechanisms to support co-management, particularly in Rufiji Delta mangrove forest reserve and CFMAs, is fundamental to longer-term sustainability. Both fisheries and mangroves are significant revenue-generating resources that currently operate sub-optimally; therein

lies the potential to agree upon a rights-based co-management system in which all parties increase benefit.

Monitoring and evaluation of the effectiveness or otherwise of the above approach is fundamental. The first level will be to apply a robust but low-cost system of performance monitoring of co-management bodies [i.e. village liaison committees (VLCs) in MIMP; village natural resources management committees (VNRCs) in Rufiji Delta mangroves; and beach management units (BMUs) in CFMAs]. A BMU performance monitoring system developed by WWF has been running for several years, involving quarterly self-reporting of selected performance parameters including financial. Technical effectiveness, of fisheries, will be evaluated through ongoing fisheries catch data monitoring and periodic stock assessment, to test whether co-management initiatives translate into improvements in stock status and total production. For MIMP and the Rufiji Mangrove Forest Reserve, management effectiveness will be tracked using the METT tool developed through a WWF-World Bank collaboration.

Fig. 1: Theory of Change



4. Objectives

Overarching goal: conserving the long-term ecological integrity, resilience and biological productivity of the Rufiji-Mafia-Kilwa seascape as an internationally important biodiversity hotspot supporting the livelihoods of natural resource-dependent communities.

Project objective: Marine protected areas and associated buffer zones within the Rufiji-Mafia-Kilwa seascape are more effectively managed to maintain and improve ecological value and livelihoods for nature and people.

Expected outcomes:

1. Improved management effectiveness of Mafia Island Marine Park (MIMP), Rufiji Delta mangrove forest reserve and MIMP buffer zones covering approx. 5,500 km²:

- 1.a** MIMP has improved management effectiveness through enhanced implementation of co-management and improved monitoring.

- 1.b** Loss and degradation of mangroves in the Rufiji Delta mangrove forest reserve is significantly decreased by improved management effectiveness and reforestation.
- 1.c** Fisheries management areas buffering MIMP have improved management effectiveness (by defining and implementing sustainable harvest control rules and building the capacity of stakeholders to effectively implement co-management measures).
- 1.d** Seascape level management and profile strengthened:
Improved co-ordination & integration of management efforts in the three districts (Kibiti, Mafia and Kilwa) including seeking designation for UNESCO Man & Biosphere (MAB) Reserve.
Seascape values are better integrated into national and Rufiji Basin-level development decision-making.

2. Target coastal communities in the coastal area have improved livelihood security and resilience to changes in environmental flows by sustainable use of natural resources and diversifying livelihoods. The approach taken to strengthening complementary livelihoods in MIMP and CFMA fishing communities under this project will enhance access to credit, build enterprise skills and provide access to diverse, demand-led skills training. The approach is not to target any particular livelihood practice, but rather to provide a package of measures that nurtures small-scale enterprise, individual entrepreneurship and diversification of income-sources.

MPAs km² (and according IUCN category) newly established/ benefitting from enhanced management through the project:

Enhanced management:

- Mafia Island Marine Park (822 km²) – IUCN category VI
- Rufiji Delta mangrove forest reserve (532 km²) - IUCN category IV
- 8 Collaborative Fisheries Management Areas (CFMAs) (3,750 km²) – Locally Managed Marine Area (LMMAs)

Newly established (subject to UNESCO approval):

Rufiji-Mafia-Kilwa Man & Biosphere Reserve (approx. 5,500 km²)⁵ – IUCN category V

NOTE: the new Biosphere Reserve **includes** all of the above areas

The use of the IUCN green listing has been considered in preparation of this proposal.

Area	New	Better managed	Project contribution*
MPAs IUCN categories			
I Strict Nature Reserve / Wilderness Area			
II National Park			
III Natural Monument or Feature			
IV Habitat/Species management Area		532 km ² [Rufiji actual forest reserve & water ways]	Significant

⁵ **Note:** "Estimated area of the proposed Man & Biosphere Reserve of 5,500 km² includes MIMP [822km²]; mangrove forest reserve [532km²] and existing 8 CFMAs [3,750 km²] plus some allowance for buffer area in the Rufiji Delta."

V Protected Seascape/Landscape	5,500 km ²		Significant
VI Protected area with sustainable use of natural resources		822 km ² [MIMP]	Significant
Other areas			
Locally Managed Marine Area		3,750 km ² [CFMAs]	Significant

* Important = one of several actors making important contributions. Significant = Leading role among several actors.

Contribution to establishing networks of protected areas:

In terms of **regional connectedness** and gradients of larvae transport, coral reef habitats in MIMP and Songosongo archipelago are a critical area linking the centre of WIO marine biodiversity to reef habitats in Zanzibar, northern Tanzania and Kenya, via the East African coastal current. Recent scientific studies showed that the reef habitats in the project area are less vulnerable towards coral bleaching events than other East African reefs. Thus larvae distribution from the Mafia Island coral reef supports the recovery of other reefs along the East African Coast. The importance of this function will increase once the sea temperature rises and coral bleaching events are expected to happen more frequently in future. Strengthening management in MIMP and Songosongo archipelago and including the latter in a broader Man & Biosphere Reserve will contribute to safeguarding regional connectivity.

Within the Rufiji-Mafia-Kilwa seascape area, the project will strengthen understanding of connectivity between mangrove and reef habitats through an ocean circulation study and a study of genetic connectivity in indicator reef-fish species. Lessons learnt and tools developed will be shared with other marine parks in the region.

Beneficiaries (households / people) and impact on livelihood conditions and food security:

Approx. 48 target communities / 100,000 people including:

- Rufiji Delta mangrove forest reserve: 19 communities / 45,000 people
- Mafia Island Marine Park: 14 communities / 23,000 people

Indirectly, all communities in the project area will benefit through enhanced fisheries biomass/production and mangrove well-being broadly.

Estimates of direct beneficiaries:

- Approx. 840 new VSL (Village savings and loans) members in MIMP x 6 = 4800 householders
- Existing 5870 VSL members outside MIMP x6 = 35,200 householders (though activities with this group not major)
- No. Fishermen in MIMP = approx. 2000 x 6 householders = 12,000
- Mangrove beneficiaries from livelihoods and restoration etc. = assessment under way

The project will directly target livelihoods by improving access to small-scale credit and strengthening enterprise skills. The project will further strengthen livelihood and food security through improving information-based fisheries management, which will lead to improved fish stock health and increased total catches. Within the mangrove area, alternatives to mangrove wood products and sustainable use of mangrove resources will be promoted in order to sustain income, energy supply and food security.

Local population: The target area covers some 49 coastal communities in Kibiti, Mafia (Pwani Region) & Kilwa (Lindi Region) districts; (14 communities in Mafia Island Marine Park; 19 in Kibiti district covering 4 CFMAs and Rufiji Delta mangrove forest reserve, 10 communities in Mafia covering 3 CFMAs, 6 communities in Kilwa covering 1 CFMA).

Table 2: Analysis and prioritisation of fishing villages by importance for management of priority fisheries

CFMAs&MIMP		Communities	Popn	District	Prawns	Small pelagics	Octopus	Reef fisheries
BK	1	Bweni	1765	Mafia			1	
	2	Kanga	1993					
Jojibaki	3	Banja	600					
	4	Jojo	983					
	5	Jimbo	2049					
	6	Kirongwe	2069					
Dokichunda	7	Chunguruma	1746			2		
	8	Ndagoni	2525					
	9	Dongo	1496					
	10	Kilindoni	12,141			3		
MIMP	11	Juani	1056					4
	12	Chole	864					5
	13	Bwejuu	584				6	6
	14	Jibondo	1809				7	7
	15	Miburani	1567				8	
	16	Chem Chem	1951					

Msikivi	17	Kivinga A	982	Kibiti				
	18	Msindaji	442					
Mchimchunya	19	Mchungu	939					
	20	Nyamisati	2350					
	21	Mchinga	4088					
	22	Mfisini	4088					
Kimsa	23	Kiomboni	2638		9			
	24	Msala	1212		10			
Mbwekteki	25	Mbwera East	1587		11			
	26	Mbwera west	2249					
	27	Kierchuru	909		12			
	28	Kiasi	1591		13			
	29	Jaja	1407		14			
Nyamanjisopoja	30	Pombwe	819		15			
	31	Marendego	918					
	32	Nyamandungutungu	918					
	33	Somanga N	5304	Kilwa		16		
	34	Somanga S	2204			17		
	35	Songosongo	3026			18		
	36	Njianne	3416					
Total population (Population census 2012)			74,365					

* darker shading indicates village hosting significant fishing effort for priority fishery / lighter shading indicates fishing effort is low

* Villages are listed by north to south orientation

Given the large number of communities, selected villages will be prioritized for different management and livelihood activities. Table 2 above summarises an analysis of 36 fishing villages based on importance for management of priority fisheries. Of these 18 [numbered shading] will be engaged in fisheries co-management initiatives; 4 in MIMP and 14 outside. All 14 villages in MIMP will benefit from livelihood activities. 19 communities will be engaged in Rufiji Delta mangrove forest reserve management activities of which 6 will be prioritized for livelihood interventions.

Table: 13a MIMP village targeted for livelihood activities [village savings & loans and enterprise skills training]

Communities	Jimbo	Ndagoni	Baleni	Kungwi	Kibada	Marimbani	Chole	Kiegani	Jibondo	Juani
Population	2049	2525	1632	1636	969	1332	864	2712	1809	1056
Subtotal	16,584									
Communities	Chemchem	Miburani	Bwejuu							
Population	1951	1567	584							
Subtotal	4,102									
Grand total	20,686									

Source: 2012 Population Census

Table: 13b Mangrove Reserve, Livelihood & Prawn Fishing in Rufiji Delta (Kibiti District)

Communities	Ruma	Kiongoroni	Twawasilie	Maparoni	Mbuchi
Population	1720	956	773	1298	2189
Total	6,936				

Source: 2012 Population Census

There will be several significant benefits to the population resulting from the successful implementation of the project. Some of them are described below:

- Through CFMAs and the access rights over their fisheries resources, the communities will be empowered through their participation in planning and decision-making power to manage their natural resources and other aspects of their development process (see section 6, work package 3);
- Through decentralized resource management (co-management) that embrace community-led initiatives and devolve decision-making process to the latter and uphold social benefits, ownership and economic benefit-sharing amongst local communities. Co-management will be enhanced MIMP, CFMAs and the mangrove reserves (see section 6, work package 1-4). With co-management initiatives, BMU in Pombwe (Kibiti) realised TZS 8,232,000 (US\$ 3,593) in 2017 through their commitment in management of fisheries resources;
- Communities will gain income at individual, group and community level through savings and credits groups as a result of improved resource management and community development activities (see section 6, work package 1,3&4)

- d) The fisheries habitats on which they depend for much of their cash and protein sources will be better managed to achieve more ecosystem services e.g. growth of tourism sector;
 - e) Individuals will have access to information and contacts that can be used for accessing finance and equipment for their fisheries, non-fisheries and mangrove related enterprises;
 - f) Enhanced market and communication system through mobile apps to access information for better fish product sales decisions and established business networks (see section 6, activity 3.2)
 - g) Some more groups will be formed (livelihood and conservation), thus providing opportunities for taking advantage of scale to other community members;
- It is important to stress that most of the benefits will not come on stream in the short term and all involved need to acknowledge that this will be a relatively a moderate process.

District Authorities from the project area

- a) The four districts are at different stages in capacity for planning and implementation of environmental activities. They all need to improve skill and knowledge base in management and conservation.
- b) The project will contribute to district staff' acquisition of knowledge and skills in fisheries and mangrove management to be applied locally and will also improve career prospects of fisheries and mangrove forest reserve staff;
- c) This project will provide benefits beyond the fisheries or coastal management benefits, as many of the skills e.g. in resource assessment and planning methods, will be applicable in other situations and in other 'sectors' within the districts;
- d) Districts will understand issues concerning trade-offs arising from policy decisions between conservation and the economic benefits derived from resource use and
- e) The presence of a programme such as this in the three districts will give confidence to potential investors in eco-tourism, and may discourage those hoping to invest in unsustainable resource exploitation.
- f) The lessons learnt by communities, the district teams, scientists and other partners will contribute to a growing set of knowledge and skills on integrated biodiversity conservation and management. This will lead to investments in new programmes of this kind and adjustments and improvements in other projects currently underway (e.g. SWIOFish).

Impact on livelihoods and food security

Food insecurity in Rufiji-Kibiti-Mafia-Kilwa coastal communities is a key problem and is due to a number of factors. The severity of a particular cause varies from one household to another, depending on the nature of that family's involvement in the fishery, their involvement in other business enterprises, and their level of dependence on fish, the state of their income and savings, their ability to shift to other income sources, among other factors. In Rufiji-Mafia-Kilwa seascape, other important factors that affect the food security situation include factors that limit availability of food (fish), such as competition from city traders, factors that reduce peoples access to fish and other food, for example, poverty and household cultural factors (e.g. limiting access of food/cash and income to some household members particularly women) and infrastructural problem (poor roads, bridges and facilities especially the Delta villages). There are poor trade policies and fishery management failures, which have led to bad fishing practices/methods. They limit the continued participation of fisher communities in fish production activities. They also limit local communities' access to fish and other useful foods, by either causing or contributing to a decline in the supply, or lowering local people's ability to purchase them and/ or alternatives. The project will impact on food security by addressing the following:

(a) Fishery management interventions

- The seascape approach will avoid the differences in regulating fisheries and promoting conservation and livelihood developments between the four districts with due consideration of its biodiversity values and economic importance;
- It is addressing access rights through CFMA approach to avoid open access;
- Improve enforcement capabilities through greater patrols and surveillance systems by community members as well as fisheries managers;
- Increased research to accurately determine BIOMASS for important commercial fish species;
- Reviewing the GMPs for MIMP and Mangrove forest reserve to incorporate new regulations in line with the present realities and
- Putting greater scope for community participation in a co-management framework.

(b) Explore opportunities to raise fish supplies

- There is a deliberate interest to intensify the development of mariculture in the country. WWF through livelihood will allow individual women groups to invest in mariculture to increase fish production;
- Reduce post-harvest losses by promoting value addition and better preservation technique.

(c) Refocus fish marketing strategies and practice

- Promote the current CFMA closure for 3-4 months for food security and sustainability;
- Aim for moderate volume, high value (e.g. big size of Octopus) added fisheries export product (add value through smoking, marinating, packaging the products);
- Increased direct negotiation between fishermen and factory owners (thereby minimising role of factory agents in dictating prices);
- Increased access to fish price information by fishermen (to reduce the price margin between landing price and export retail price);
- Diversification of exportable product range.

(d) Policy interventions

- WWF participated actively in review of Tanzania National Fisheries Policy (NFP, 1997) to get the new Fisheries Policy of 2015. Moreover, it is actively participating in review of Fisheries legislation of 2019. Efforts will be made to ensure the fisheries legislation be re-focused to put greater emphasis on protection of food security. In section 2.4.1, the NFP states that, “the long-term objective of the NFP which is to develop a robust, competitive and efficient fisheries sector that contributes to food security and nutrition, growth of national economy and improvement of the wellbeing of fisheries stakeholders while conserving environment“. The emphasis on food security is also mentioned in section 1.3.1 and 1.5 in the NFP;
- Human needs are the priority of the project;
- WWF realised a need for controlling the expansion of the fish processing and exporting industry. Such as stopping the licensing of new export processing factories.

Recent WWF Rufiji-Kilwa-Mafia KAP study (Noah et al 2018), suggested that, majority of the household respondents in Rufiji-Mafia-Kilwa reported that marine and/or ocean resources formed

major natural resources adjacent to the villages in the study area. About **63 per cent** of the respondents mentioned marine/ocean as major natural resources. Tungaraza et al (2015) asserted that, about **90.3** per cent of coastal communities rely directly and indirectly on fisheries for their livelihood and income. Accordingly, the household respondents mentioned various uses of the natural resources as summarized below:

- i) Marine/Fisheries natural resources; identified as source of livelihoods for coastal communities
- ii) Land for settlement and farming agricultural resources
- iii) Forests (mangroves and terrestrial forests); important for bee keeping, provide construction materials for houses and boat building, nursery and breeding habitats for most coastal and marine organisms as well as protecting coastal erosion
- iv) Cultural heritages (ruins in Kilwa and light house in Mafia)
- v) Beach offers space for boat anchor, small business and bring revenue from tourism business.
- vi) Rivers and natural wells provide water for household consumption and other domestic activities, such as farming/irrigation.

Gender equality

The Project will integrate gender analysis planning, implementation and budgeting into its programme. It will strive to give equal or equitable opportunities to women and men in the distribution of its direct benefits such as training and cash-earning opportunities that arise (e.g. Cash-for-Work, VICOBA credit and savings). Notwithstanding coastal cultural norms and traditions which often can lead to gender inequality, it will apply national policies and legal provisions for respecting women's rights to participate in fisheries and mangrove resource management and to access to natural resources and project benefits and will encourage partners to do likewise. It will be acknowledged however that socio-cultural change can take generations to achieve. The project will take cognizance of the social information collected previously by WWF and will apply it to guide its approach such that it will be sensitive to the local culture, gender, ethnicity, religious and ethnic traditions and cultures. Analysis of gender and age and social status hierarchy will be an integral part of the Projects' efforts to understand the seascape peoples. WWF appreciates that without an in-depth understanding of partners' trust, effective partnerships cannot be achieved. Some WWF Community development staff originate from the project area and others have extensive experience of working in the project area and therefore possess high level of understanding of and sensitivity to gender and local socio-cultural situation.

Table 4: Contributions to Blue Action Fund (BAF) Programme Results Matrix

Indicator	Contribution
1.1 Umbrella/ indicator species monitoring	Enhanced management in the project area will lead to improved protection of indicator species. The indicator will be measured through the monitoring of whale sharks, turtles and birds.
1.2 Improvement in livelihoods	This will be delivered through small-scale enterprise development including access to micro-finance, the development of artisanal offshore fishery in MIMP, mangrove restoration and cash for work initiatives.

1.3 Attitude towards protection	Mobile applications have been shown to significantly influence attitudes towards marine resources in other locations. Furthermore, co-management capacity building will also contribute towards this outcome. At national level a number of institutions have committed / endorsed the initiative in writing showing attitudes towards protection. They include; The Vice President's Office (VPO), the National Environmental Management Council (NEMC), the Tanzania Forest Services (TFS), the Districts Authorities (LGAs) in the project area and many others.
2.1 New MPAs/ Expansion	Promotion of designation of Rufiji-Mafia-Kilwa Man & Biosphere Reserve (approx. 5,500 km ²) – IUCN category V.
2.2 Management effectiveness	This will be addressed through multiple activities including strengthening of co-management structures and the collection of data vital to base management decisions upon.
2.3 Key fisheries at msy	Stock assessment will be conducted during the project (baseline underway through the South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish).
2.4 Adoption of improved livelihoods	see 1.2
2.5 Reduction of key threats	Illegal harvesting and lack of data will be addressed in this project.
3.1.1 Management plan and monitoring	Existing management plans of MIMP and the mangrove forest reserve will be revised during/towards the end of the project.
3.2.1 Management plan activities	Active monitoring of management plan implementation will be conducted.
3.2.3 Monitoring supported by local communities	Mobile phone application are key to ensuring monitoring is supported by local communities.
3.2.4 Innovative low cost data collection	Use of mobile phone technology to collect data. This has some set up costs, but is very cheap to maintain.
3.3.1 No of Initiatives driving improved livelihoods	see 1.2

Impacts on climate mitigation:

The Rufiji Delta mangrove forests are a major carbon sink, Trettin et al. (2016) ⁶ reported ecosystem carbon stock of 5.7 million tons in an area of the northern delta comprising about one third of the total. The project will enhance mangrove standing biomass through (i) restoration of selected degraded mangrove areas. More broadly the project will enhance mangrove management effectiveness, thereby securing the extent and condition of mangroves and their carbon biomass into the future.

⁶ Trettin C, et al. (2016) Assessment of Carbon Stocks in the Rufiji River Delta, Tanzania. US Forest Service and Tanzania Forest Service, Dar es Salaam, Tanzania. 66pp

Impacts on climate adaption:

The project will enhance the condition of coral reef habitats in Mafia Island Marine Park and Songosongo archipelago, and of mangrove forests in Rufiji Delta, by reducing unsustainable, destructive resource-use activities such as seine nets and illegal pole-cutting. As a result of their improved condition, coral reef and mangrove habitats will have increased resilience to climate-related impacts and enhance protection of coastal communities against consequences of extreme weather events. By improving livelihood opportunities for coastal communities we aim to increase the resilience of communities to the impacts of climate change by reducing their reliance on overexploited natural resources.

The project will also contribute to securing and replenishing the world's reefs. Half of the world's coral reefs have already died due to climate induced bleaching leading to one of the biggest losses of biodiversity humanity has experienced. The collapse of these biodiversity "reservoirs" will lead to a rapid decline in fish stocks that will threaten the nutrition, health, and livelihoods of many of the world's most vulnerable coastal communities. Global analysis based on best available science showed that some reefs have demonstrated remarkable resilience during these bleaching events, and are inter-linked by ocean currents which transport coral larvae and fish. These resilient and connected reefs embody the regeneration potential for adjacent reefs once the stresses resulted from climate change have stabilized and are decreasing. Mafia Island reef was identified as being one of those resilient and connected reefs that could play an important role in reef recovery in the Western Indian Ocean.

5. Community engagement

During full proposal development (July-September 2018) consultative meetings were undertaken with 113 individuals from the following groups: local communities, marine researchers and scientists, government agencies like NEMC, MoLFD, Ministry of Natural Resources and Tourism, District Authorities of Mafia and other interested or affected stakeholders like private business, religious leaders and other NGOs. Their views and inputs were integrated into this proposal.

During implementation, there will be various workshops that will draw participants from community level to district and national level. Community participation will be ensured through representatives from village liaison committees (VLCs) in Mafia Island Marine Park, village natural resource committee (VNRCs) in Rufiji Delta Mangrove forests and Beach Management Units (BMUs) in the project area. The workshops will be designed to create awareness on new interventions especially MAB Reserve initiatives at community levels. In line with WWF's social principles, we will also make efforts to involve disadvantaged groups like women, youth and people with disability. The workshops will draw from the stakeholders listed above to help in creating awareness of the project, confirming the theory of change as well as to agreeing on a mutual decision making process.

As part of their role, it is expected that communities through Beach Management Units (BMUs) will carry out monitoring, control and surveillance operations once the project is in full implementation. Operationally this is done through each BMU's Monitoring and Surveillance sub-committee that plans and leads land and sea patrols to prevent illegal fishing. The team reports offenders and details of the infractions including type of offence, gear being used and area of offence. Information is used to plan future surveillances and also passed to the Fisheries Authorities. Further, selected BMU members are trained in data collection using a standardized form designed by the Fisheries Division in collaboration with Tanzania Fisheries Research Institute (TAFIRI) for country-wide use. The data is quality controlled by the Fisheries Officers. As part of the project a mobile application will be developed (activity 2.8.2) and trainings will be undertaken to enable efficient and real-time submission of the data by the community members.

The active participation of communities and other stakeholders like staff from the Ministry of Fisheries, Mafia Island Marine Park, District Councils and NGOs in the project will lead to significant

improvements in capacity, practices, attitudes, delivery and relationships. This will be achieved through various activities such as development of district and village implementation plans, targeted trainings in data collection and management, membership in the Project Implementation Technical Team updating relevant by-laws with communities, working on Man and Biosphere (MAB) reserve designation process, annual review meetings with all stakeholders and joint monitoring using a “score card” system.

All districts have already been part of the consultations in the design of the project. During implementation District Authorities will play key roles in developing the management plans for Mafia Island Marine Park and the Mangrove Forest Reserves. Other roles that they will take up include zonation of the buffer areas, supporting co-management, surveillance and enforcements, local policy formulation, purchase and safe keeping of project assets such as boats. Further they will be represented within the Project Implementation Technical Team which will oversee the overall implementation of the project. The project contributes to the development aspirations of the Districts’ strategic plans particularly on fisheries and mangroves. A number of on-going projects are also complemented by the project including the Tanzania Social Action Fund (TASAF) implemented in each district in Tanzania, the Mangrove Capital Africa, the West Indian Ocean Marine Science (WIOMSA) projects and the World Bank funded South West Indian Fisheries (SWIOFish) programme.

Several NGOs and Community Based Organisations (CBOs) will also be partners in the project. They include; Blue Ventures, Sea Sense, SoZoCoMaE, Tuna alliance, *Pakaya*, *Mwambao*, Village Community Banks (VICOBAs), BMU groups and District CSO networks. Their contributions are specified in the detailed work-plan including joint awareness and advocacy and as beneficiaries of capacity building trainings. In the case of NGOs, they will also participate in the provision of expertise for specialized monitoring surveys and capacity building trainings related to species of concern like whale sharks, dolphins and sea turtles. Sea Sense has experience in carrying out surveys for the above-named species.

To measure progress in effectiveness of management and the project interventions on Mafia Marine Park and the surrounding co-managed areas, the project will use the Management Effectiveness Tracking Tool (METT). METT was developed in 2002 through a WWF-World Bank Collaboration focusing on six key areas for effective MPA management: status and threats; planning; inputs; processes; outputs and outcomes. An adapted version of the METT is currently being initiated by Marine Park and Reserve Unit (MPRU) but with limited funds. The project will foster the application of METT baseline and subsequently, annual assessments to monitor progress and adapt management in MIMP and the Mangrove Forest Reserve. The METT exercises will be undertaken with the key stakeholders including the management of MIMP, staff of Ministry of Fisheries, Local District Authorities as well as members of VLCs, BMUs and CFMAs.

In addition to METT, the project will be supplemented by continuous monitoring, half-year and annual reporting as well as an independent mid-term and end of project evaluations (see section 9) which will also look at the progress on the community/ social development elements of the project. The continuous monitoring of activities, outcomes and impact covering implementation of activities, production of reports and management plans, score cards and population surveys. Lessons learnt will be used to adaptively manage the project and in due time shared more widely.

6. Activities and implementation modalities

Planned field interventions:

The project interventions have been structured as Work Packages 1-4 in light of the project partnership structure, spatial distribution of the work and partners’ historical and current experience with the work packages or geographies involved. Outcomes and outputs have been modelled after Blue Action Fund’s results matrix to enable easier understanding, aid budget allocation, management and reporting of the

project. WWF Germany will provide overall project leadership, supervision and manage donor contact. WWF Tanzania will lead the implementation of work packages 1-3 in Mafia Island Marine Park, on the Man and Biosphere designation as well as co-management activities with CFMAs respectively while Wetland International will lead on work related to the Rufiji Mangrove Forest Reserve (see Table below).

Work package	Area	Lead implementing agency
1	Mafia Island Marine Park	WWF Tanzania
2	Man & Biosphere Reserve in Rufiji-Mafi-Kilwa Seascape	WWF Tanzania
3	Collaborative Fisheries Management Areas	WWF Tanzania
4	Rufiji Delta Mangrove Forest Reserve	Wetlands International East Africa

The following activities will not be implemented by project staff, but rather contracted to third parties as per WWF procurement procedures.

1. Revision of MIMP GMP [1.1.1]
2. KAP Survey (1.2.15)
3. Construction of new ranger posts at Jibondo Island and VLC offices in MIMP [2.2.1]
4. Refurbishment of boundary post at Ras Fikirini & [2.2.1]
5. Demarcation of two no-take zones in MIMP [2.2.2.]
6. Terrestrial demarcation; install 20 signboards at boundary intersections and villages in MIMP [2.2.3]
7. Operationalization of drone technology for remote surveillance in MIMP [2.2.7]
8. Support to TFS for patrol and monitoring of mangrove forest [2.2.8]
9. Capacity-building and operationalization of mobile app for VSL operations [3.1.2]
10. Demand-led entrepreneurship skills training to members of village savings and loans [3.1.3]
11. Ocean circulation study within proposed MAB Reserve area [1.2.1]
12. Larval connectivity study [1.2.2]
13. Zoning and demarcation of proposed MAB [1.2.9]
14. Develop MAB Management Plan [1.2.12]
15. Natural Capital Assessment Study for proposed MAB Reserve [1.2.14]
16. Whale shark monitoring [0.1]
17. Sea turtle monitoring [0.2]
18. Household economics Survey/Livelihood assessments [3.1.4]
19. Fisheries stock assessment (prawns & small pelagics and octopus) [2.6.1]
20. Mapping artisanal fishing patterns for prawns, small pelagics and octopus [1.3.1]
21. Develop local area prawns fisheries management strategy [1.3.2]
22. Develop local area small pelagic fisheries and octopus management strategies [1.3.3]
23. Draft national mangrove management plan [1.4.1]
24. Bird count [1.4.9]
25. Develop national mangrove management strategy [1.4.10]
26. Piloting of mobile app to enhance fish marketing [3.2.1]
27. Livelihoods training in Rufiji Delta mangrove communities [3.3]
28. Baseline socio-economic assessment of mangrove dependent communities [3.3.10]
29. Conducting market study for 3 identified products in previous studies and develop business plan [3.3.11]
30. Conducting bio-rights feasibility study and implement with at least 10 communities [3.3.12]
31. Coral reef and grouper monitoring [0.3]
32. Mid-term evaluation [0.4]
33. Final evaluation [0.5]

Work-Package 1:	Mafia Island Marine Park
Lead implementing agency	WWF Tanzania

Output 1. Management plans and new protected areas established

Activity/Output 1.1. Revision of General management plan (GMP) for Mafia Island Marine Park (MIMP)

MIMP's general management plan will be revised before the end of YR3 [2021]. The GMP was last revised in 2011 and has a validity of 10 years. The revision process will involve two rounds of consultation with stakeholders, one to identify issues and the second to share proposed changes to the existing plan. Consultations will include in-village meetings in MIMP's 14 communities, as well as with district authorities, tourism lodge operators and commercial fisheries sector. Revision of the plan will be primarily focused on strengthening the approach to fisheries co-management within MIMP. A small consultancy team will facilitate stakeholder consultations and will undertake actual drafting of the revised plan, working under the supervision of a small technical team comprised of MPRU and MIMP management staff, which will oversee the overall process and in which WWF will also participate. The final revised plan will be prepared in English, translated into Kiswahili and printed in hard copy for dissemination to all stakeholders.

Output 2. Resources, instruments and capacities for implementation of management plans of MPAs and sustainable use zones are improved

Activity/Output 2.1. Training & capacity-building: Mafia Island Marine Park (MIMP)

The project will support formal training of MIMP staff, focused on the overlap between the main themes of this proposal, and priorities identified during a training needs assessment undertaken by MIMP. Training topics will include fisheries co-management [South Africa short course; 6 pax] [Activity 2.1.1];

Activity/Output 2.2. Cost effective monitoring, control & surveillance in Mafia Island Marine Park (MIMP)

The project will support a portfolio of infrastructure and equipment provision to strengthen monitoring, control and surveillance within MIMP. Activities will include:

- i) construction of new ranger post at Jibondo Island [2.2.1]
- ii) refurbishment of boundary ranger post at Ras Fikirini and procurement of solar units & furniture [2.2.1]
- iii) refurbishment of 10 existing village liaison committees (VLC) offices [2.2.3]

The above 4 items will be bundled as a consolidated works contract and tendered to an external contractor. Terms of reference, design and bill of quantities (BoQ) will be prepared by the Mafia District Engineer with support of the Senior Technician, Mafia Island Marine Park, who will also oversee implementation.

- iv) procurement and operationalization of drone-based remote surveillance capability [Activity 2.2.6]. This will support surveillance effort in two no-take zones located 5-10km from MIMP HQ. Surveillance of such areas has traditionally proven too costly for conventional sea patrolling, as such introduction of cost-efficient drone technology will provide transformational improvement in protection of the two areas. This activity will be tendered to a specialist service provider by WWF Tanzania, supervised jointly by MIMP and WWF. Procurement will include two drone units with camera sensors, and *in-situ* training in drone operations and maintenance.
- v) procurement and installation of 20 marine buoys [Activity 2.2.2] to demarcate two no-take zones in MIMP; procurement will be tendered; installation will be done by MIMP rangers under supervision of MIMP Senior Technician;

- vi) construction and installation of 20 signboards [Activity 2.2.3] at boundary intersections and villages in MIMP; construction will be tendered, installation will be done by local workers under supervision of MIMP Senior Technician.
- vii) procurement of equipment to strengthen MIMP sea patrol capacity including 10x replacement engines for various existing patrol boats ; VHF radio equipment [10 base stations; 10 mobile units]; assorted field equipment [GPS, binoculars, waterproofs, boots, dive-bags. Procurement will be tendered by WWF.

Activity/Output 2.4. Increased community awareness on co-management and no-take zones in MIMP

The project will support a study on impact of no-take zones in CFMAs [2.4.1] and piloting of no-take zones in CFMAs [2.4.2] as well as strengthening monitoring, control and surveillance (MCS) [2.4.3 & 2.4.4] and refurbishment of 28 BMU offices to improve record keeping and reporting.

Output 3. Complementary income-generating activities

Activity/Output 3.1. Increased income from complementary livelihoods in MIMP and CFMA communities

Under the BAF project, 28 new village savings & loans (VSL) groups will be established in 14 villages within MIMP [Activity 3.1.1], engaging approximately 840 community members [30 per group], with minimum 50% women. This builds on 12 years of experience by WWF and district partners supporting village savings and loans [VSL] development in coastal communities in Kibiti, Mafia and Kilwa - villages within MIMP has not hitherto been included. Group establishment and training will be undertaken by existing District VSL supervisors and community-based trainers trained under a previous WWF VSL programme in Mafia District, outside of MIMP. The activity will be overseen by the WWF Microfinance Officer salaried under BAF project. Training will include group constitution and organization, VSL concepts, banking procedures, entrepreneurship, selection, planning & management of business, and conflict resolutions.

A second activity [3.1.2], will be defined with the target group. The introduction of mobile app technology to enhance operations of village savings & loans (VSL) groups in 37 fishing communities will be considered as one potential option. The app was developed by CARE and provide the saving groups members with instant access to financial services.

A third activity [3.1.3] complementing the two above will be provision of demand-led skills training to members of the 28 new village savings & loans (VSL) groups in 14 communities within MIMP (consultancy). At least 250 group members will receive training, supporting them in establishing or strengthening small-scale enterprises of their choice that provide complementary income to fishing. Training will either be through attendance at vocational colleges such as Vocational and Educational Training Agency [VETA] or, where there is group demand for a particular training, through *in-situ* training, contracting a qualified trainer from a recognized institution.

A fourth and final activity [3.1.2] complementing the above enterprise support programme will be ongoing quarterly monitoring and mentoring of VSLA groups, undertaken by an existing network of District VSL supervisors and community-based trainers in the three districts, with oversight by WWF Microfinance officer. This will generate 6-monthly reporting on savings and loans data and will ensure early trouble-shooting of any problems faced by VSL groups.

Workpackage 2:	Rufiji-Mafia-Kilwa Man & Biosphere Reserve
Lead implementing agency	WWF Tanzania

Output 1. Management plans and new protected areas established

Activity/Output 1.2. Designation of Rufiji-Mafia-Kilwa Man & Biosphere (MAB) Reserve

Preparation of an application to UNESCO for designation four districts (Rufiji, Kibiti, Mafia, Kilwa) of the

Rufiji-Mafia-Kilwa seascape as a Man & Biosphere Reserve will be undertaken by WWF in collaboration with the National Environment Management Council [NEMC] of the Vice-President's Office (VPO), Tanzania. NEMC is the national focal institution for UNESCO World Heritage and Man & Biosphere designations and has experience of the MAB application procedure.

The process will be preceded by commissioning of a portfolio of four technical studies, including a livelihoods assessment [Activity 3.1.4]; a natural capital assessment [Activity 1.2.14]; an ocean circulation study [Activity 1.2.1]; and larval connectivity study for selected marine species [Activity 1.2.2]. The purpose of these studies is, in part, to inform and strengthen the justification for MAB designation, but also to serve a broader purpose of articulating the economic and ecological importance of the Rufiji-Mafia-Kilwa seascape in the context of national development decision-making. Thereafter, the process of preparing the MAB application will involve a series of consultative meetings with the MAB Committee at NEMC/VPO to assess and fulfil information needs; an application drafting process including map preparation; assessment of the draft application by the National UNESCO Committee (NUC) for Tanzania; and supporting two Govt. of Tanzania officials' travel to Paris to present the nomination to the MAB International Coordinating Council (ICC) of UNESCO.

If the nomination is approved by UNESCO the project will support a launching event within the proposed MAB Reserve area with appropriate national media coverage. Signboards will be erected at appropriate entry and exit points on the MAB Reserve boundary [i.e. roads, Mafia Island airport and larger settlements]. Thereafter quarterly monitoring will be undertaken by NEMC to assess compliance with terms and conditions of the designation, including compliance relevant conservation measures.

Output 4: Monitoring and evaluation of project impact and outcomes

Activity 4.1. Impact & outcome indicator monitoring

Seasonal monitoring of whale shark population [Activity 0.1] will be conducted during Oct-Dec 2020 [mid-project] and Oct-Dec 2023 [end-of-project] contracted through single-sourcing to Marine Megafauna Foundation which has experience of whale shark census and related research in Mafia Island [including a 6-year database of individual sharks] since 2012. Annual monitoring of sea turtle nests and hatchlings [Activity 0.2] in Mafia will be contracted through single-sourcing to Sea Sense, an NGO with 15 years' experience in turtle monitoring and conservation in Tanzania. Top-predator reef fish biomass and coral reef cover [Activity 0.3] will be measured in 2023 [end-of-project] by a technical team from within MPRU/MIMP; baseline [2018] and mid-term [2020] assessments will be undertaken outside of the BAF project under the GoT/World Bank SWIOFish project. Annual bird counts [waders and mangrove kingfishers] [Activity 1.4.9] will be undertaken in the Rufiji Delta by Wetlands International employing in-house expertise but also involving national counterparts. Mangrove cover and related indicators of mangrove forest condition [Activity 4.1.5] will be measured in 2023 [end-of-project], baseline is being undertaken outside of BAF project during 2018 by USFS/WWF/IMS under USFS SWAMP project. Wetlands International will contract national specialists through a tender process. Combined household economics/knowledge, attitudes and perceptions [KAP] studies [Activity 1.2.15] will be undertaken in 2019 [baseline] and 2023 [end-of-project] to measure change in relevant impact indicators in the results matrix [Indicators 1.2 and 1.3]. WWF will contract suitably qualified national specialists through a tender process. A management effectiveness assessment [Activity 1.1.3] will be conducted for MIMP in 2019 [baseline] and 2023 [end-of-project] using standard Management Effectiveness Tracking Tool [METT] methodology, facilitated by an independent consultant contracted by WWF.

Activity 4.2. Mid-term and final evaluation

A mid-term evaluation will be undertaken before June 2021, and a final evaluation during the latter half of 2023. WWF will contract suitably qualified expert consultants through a tender process.

Workpackage 3:	Community Fisheries Management Areas (CFMAs)
Lead implementing agency	WWF Tanzania

Output 1. Management plans and new protected areas established

Activity/Output 1.3. Revision of management plans for 8 collaborative fisheries management areas (CFMAs)

The first generation of management plans for the eight target collaborative fisheries management areas [CFMAs] in Rufiji-Mafia-Kilwa were prepared between 2008 and 2011. Whilst they provided a working instrument for the first phase of co-management, they lack targeted management measures for particular fisheries and, as such, are not yet an effective tool for sustainable stock management. This reflects a lack of fishery-specific information and analysis available at time of preparation. The aim now is to strengthen the plans by incorporating specific management measures for three priority fisheries [prawns, small pelagics and octopus], consistent with respective national fisheries management plans for those fisheries.

The first step [Activity 1.3.1] will be a technical exercise to map artisanal fishing patterns for the three target fisheries, through consultations with fishers/BMUs in 12 villages where fishing effort for those fisheries is mainly centered [see Table 2, Section 4]. This will be undertaken in collaboration with technical staff from the Tanzanian Fisheries Research Institute (TAFIRI) with GIS mapping capability.

With the output from Activity 1.3.1., the second step will be to develop local area fisheries management strategies, separately for prawn and small pelagic fisheries [Activities 1.3.2 and 1.3.3], that effectively downscale, customize and validate the respective national fisheries management plans, whilst also raising fisher awareness and gaining buy-in and acceptance. These strategies should identify common management measures for each fishery that can then be incorporated into revised CFMA plans. Octopus fishery management measures are relatively simpler and non-controversial so a strategizing process is not required. The process will involve a series of consultations, separately for prawn fisheries [7 villages] and small pelagics [5 villages], comprising:

- i) 1st meeting of a fishery management group [BMU leaders and fisher elders] to agree on process
- ii) in-village consultations with fishers, including presentation of national fisheries management plans
- iii) 2nd meeting of fishery management group to share feedback and agree on key elements of draft strategy
- iv) in-village feedback meetings to validate key elements of the draft strategy
- v) 3rd meeting of fishery management group to finalize strategy

The process for each fishery [prawns & small pelagics] will be facilitated by a consultant who will record consultations and undertake drafting.

The third step [Activity 1.3.3] will be to facilitate a process of revising the eight CFMA management plans, incorporating management measures for three priority fisheries, as generated above. The process in each CFMA will involve:

- i) first 1-day meeting of each CFMA coordinating committee to agree on key management measures for each priority fishery to be presented to BMU assemblies
- ii) a 1- day meeting of each BMU Committee [26] to share feedback from (i) and prepare for (iii) below
- iii) a 1- day meeting of each BMU assembly in 26 villages to discuss proposed management measures and reach consensus

- iv) second 1-day meeting of each CFMA coordinating committee to share feedback from BMU assemblies and agree on acceptable management measures

Meeting facilitation and drafting of the revised CFMA plans will be undertaken by WWF project staff with support from district fisheries officers.

The fourth and final step [Activity 1.3.3] will be to revise relevant village & district bylaws to capture changes in CFMA plans, especially agreed management measures for the three priority fisheries. This will entail the District Legal Officer from each of the three affected districts consulting with the eight CFMA committees to understand the nature of bylaw changes, and then drafting revised bylaws. Thereafter, the project will support half-day meetings of the relevant sub-committees, and full councils, of the three district councils, to review and approve the proposed revised bylaws. Finally the bylaws approved at district council level are presented to the Ministry of Regional Administration and Local Government in Dar Es Salaam by the appropriate district functional officers to obtain Ministry approval.

Output 2. Resources, instruments and capacities for implementation of management plans of MPAs and sustainable use zones are improved

Activity/Output 2.3. Training, capacity-building, lesson-learning & networking in CFMAs

The BAF project will support 3 BMU networks within 8 CFMAs in Mafia, Kilwa and Kibiti districts on lessons learning [Activity 2.3.3]. The purpose will be to ensure good information exchange between related initiatives in Tanzania. District fisheries officers and WWF extension staff will undertake regular 6-monthly mentoring visits [Activity 2.3.2] to the 13 priority villages/BMUs through the course of the project to help in guiding and monitoring implementation of priority fisheries management planning. Finally, annual BMU networking events will be supported [Activity 2.3.3] in each of the three districts, convening BMU leaders to discuss challenges and exchange ideas, as well as rewarding high performing BMUs through an annual award scheme in each district, based on BMU performance monitoring already established by WWF and partner districts under a previous co-management programme.

Output 2.4. Management of 3 target fisheries within CFMAs strengthened

A series of activities will build BMU capacity for implementation of fisheries management measures in revised CFMA plans, including both priority fisheries management strategies developed under Output 1.3 above, and CFMA no-take zones. From YR2 the project will support a 6-monthly meeting of a priority fisheries co-management group [Activity 2.3.1] – for each of prawns and small pelagics – comprised of BMU leaders from the priority fishing villages for each fishery, together with district fisheries officers, WWF and Blue Ventures staff. The objective will be to discuss progress and challenges related to implementation of management measures for each fishery.

A quantitative and qualitative study of compliance with no-take areas in CFMAs [Activity 2.4.1] will be undertaken in collaboration with researchers from TAFIRI or University of Dar es Salaam, to get an update on their status and how they are regarded. This activity is preparation for supporting no-take compliance in the 3 CFMAs through cash-for-work incentives to fishers to comply with no-take zones, paying fishers instead to undertake comparative monitoring of fish stocks inside and outside of no-take zones [Activity 2.4.2] and supporting related BMU surveillance of non-take zone compliance [Activity 2.4.2].

The project will also support BMU surveillance to enforce prawn and small pelagic management measures with 6 priority BMUs with surveillance capacity, over a 2 year period [Activity 2.4.3]. Complementing the above support for BMU surveillance, the project will procure monitoring & enforcement equipment including 3 patrol boats with engines and related safety and field equipment [Activity 2.4.4]. The project will also procure office equipment – basic furniture and document storage – for 30 BMU offices to

improve their record-keeping environment [Activity 2.4.5]. Finally the project will help to facilitate better marketing arrangements for octopus during opening of temporary octopus closures in Kilwa [Somanga and Songosongo] and Mafia [Jojo and Banja] by facilitating negotiations between octopus buyers and fishers.

Output 2.5. Sustainable financing strategies for BMUs and CFMAs

The project will facilitate up to three 1-day seminars [Activity 2.5.1] convening the Ministry of Local Government and Regional Administration (Tawala za Mkoa na Serikali za Mitaa – TAMISEMI), the Ministry of Livestock, Fisheries & Development and Kibiti, Mafia and Kilwa district councils, with the aim of agreeing on secure, long-term revenue-sharing arrangements for BMU financing [see Section 10] and how they can be formalized and/or legislated.

Output 2.6. Monitoring & evaluation MIMP and CFMAs

Stock assessment of prawn, small pelagic & octopus stocks in the project area will be undertaken in 2023 [Activity 2.6.1], through technical collaboration with stock assessment researchers from the Tanzania Fisheries Research Institute [TAFIRI]. This will constitute a repeat of baseline stock assessments being conducted during 2018-19 under the GoT/World Bank SWIOFish project and will generate data for outcome level indicators in the BAF results matrix. An existing mobile app for fisheries catch data collection, developed by WWF and TAFIRI in 2016-17, will be introduced at 4 data collection sites in MIMP to improve efficiency of data management [Activity 2.6.2]. The project will support 6-monthly feedback sessions, from YR2 to YR5, to share analyzed fisheries catch data trends with BMUs and fisher assemblies in 13 priority CFMA villages [Activity 2.6.4] and 4 priority fishing villages in MIMP [Activity 2.6.4], implemented by WWF staff in collaboration with Blue Ventures. The project will also support the procurement of SCUBA equipment for MIMP [6 sets of cylinders, BCDs, regulators, weights, masks, fins and two waterproof cameras] to support coral reef and fish monitoring under Activity 2.6.5.

Output 3. Complementary income-generating activities

Activity/Output 3.1. Increased income from complementary livelihoods

See under Workpackage 1 above.

Activity/ Output 3.2. Increased value added in supply chains

During the development of the project with the target groups, strengthening fisheries business management & marketing for small-scale artisanal fishers was identified to have high potential to increase the revenues of fishers without increasing fishing effort. The concrete measures will be defined in the inception phase with the fishers. One of the options to be assessed is an app to allow direct marketing of catches to local tourism lodges.

Workpackage 4:	Rufiji Delta Mangrove Forest Reserve
Lead implementing agency	Wetlands International

Output 1. Management plans and new protected areas established

Activity/Output 1.4. Preparation of Mangrove Management Plan for Rufiji Delta mangrove forest reserve

The Wetlands International project team will work with Tanzania Forest Services (TFS) to prepare a new mangrove forest management plan for Rufiji Delta, the previous plan having been developed in 1991 with no revision since then. A working group will be constituted to oversee the process, with representatives from TFS, Rufiji and Kibiti District Councils, forestry research institutions, Sokoine University (Morogoro) and Wetlands International. The process will be initiated with a review of the 1991 forest management plan to identify gaps and aspects which need updating. This will be followed by

consultations with stakeholders at community, district and national levels; and then preparation of the draft plan to accommodate concerns raised. The draft plan will then be subjected to a validation and approval process, culminating with the Director of Forestry, who has ultimate authority to approve and adopt the plan. The final plan will contain a detailed zonation plan with maps; describing permitted utilization in each zone, harvesting levels, and conditions of, and procedures for, access. The plan will also include cross-cutting management and protection measures, including roles and responsibilities at different, including TFS, Rufiji and Kibiti District Councils, and communities and village natural resources committees [VNRCs]. Once approved the plan will be translated into Kiswahili. 1000 copies will be printed in English and Kiswahili, and distributed. An abridged version in Kiswahili will also be prepared and printed, for distribution to communities. The process of development of the plan will be as participatory as possible to generate ownership and awareness.

Output 2. Resources, instruments and capacities for implementation of management plans of MPAs and sustainable use zones are improved

Output 2.7. Village natural resources committees, CSOs and authorities strengthened

Village natural resource committees (VNRCs) in Rufiji Delta mangrove forest reserve villages will be instrumental in the development of management plan and further implementation of this. Strengthening of village natural resources committees is therefore of the essence. VNRCs in 19 villages will be reactivated and a coordination unit will be formed at District Level. One meeting for 50 participants will be undertaken. Assessment of their capacity will then be undertaken by a consultant and action plans developed. Further activities, engagement and capacity building will be undertaken as much as possible based on the action plans. For up to 6 VNRCs, offices will then be set up and equipped with furniture. 2 Boats, 2 engines and other equipment (life jackets, first aid kits and VHF radios) will also be availed to the VNRCs to help them in their patrol exercises in the delta. Coordination of BMU's with Village Natural Resources Committees will also be essential so as to reduce conflicts between the 2 entities.

We will focus on developing a good knowledge base including undertaking a biophysical assessment. The bio-physical assessment will assist us in identifying areas that are suitable for restoration. Once these areas are identified, community members will be engaged on a cash-for work basis in planting of mangroves as well as in ecological mangrove restoration (construction of tidal channels or human assisted propagule dispersal where needed). The decision to plant or not to plant will depend on the biophysical assessments. Monitoring of our activities will also be essential and will be undertaken together with the communities. For mangrove monitoring – plots will be marked out and a monitoring protocol put in place. Biodiversity is an important indicator of ecosystem health; birds will be used as important indicators. Bird counts will therefore be organized every year and the data analyzed and used for the project.

Under Mangrove Watch Africa we will develop a mangrove monitoring system that uses state-of-the-art satellite imagery (ALOS-2 and SENTINEL) to track changes in mangrove cover. By combining radar and visual data we will produce high-resolution mangrove distribution maps that are up-to date than the 15 year old global mangrove maps that is currently being used as the baseline. Mangrove Watch Africa offers real life-monitoring data: as new images will be fed into the system every few months we will be able to identify, communicate and react to emerging threats as they become visible on the ground. Mangrove Watch Africa is a partnership consisting of Wetlands International, Aberystwyth University, University of New South Wales and SoloEO. The partners have been collaborating under JAXAs (Japanese Aerospace Exploration Agency) research programme “Global Mangrove Watch” (GMW), in which methodologies for mangrove mapping and monitoring have been developed. Wetlands International Africa will be involved in the on-the-ground validation and monitoring efforts. This will be

done using drones and the data will be fed into mobile phone applications. Ongoing field- and satellite-based monitoring ensures that we can respond to emerging threats and changing field conditions.

The knowledge component is fundamental to all our other activities; information on mangrove values and threats will also be incorporated into training and awareness raising materials. It will also serve as the basis for our policy dialogue, while informing actions on the ground.

Output 3. Complementary income-generating activities

Output 3.3. Sustainable livelihoods promoted in Rufiji Delta mangrove forest communities

Alternative livelihoods will be enabled resulting in greater well-being of mangrove dependent communities including women and cooperatives. Working with CSOs and others, we will help mangrove communities develop sustainable livelihoods and improve markets for mangrove-based commodities. We will identify together with the communities, mangrove-based income generating activities and ensure we train the communities on them. We will work with micro-credit agencies to scale up our efforts

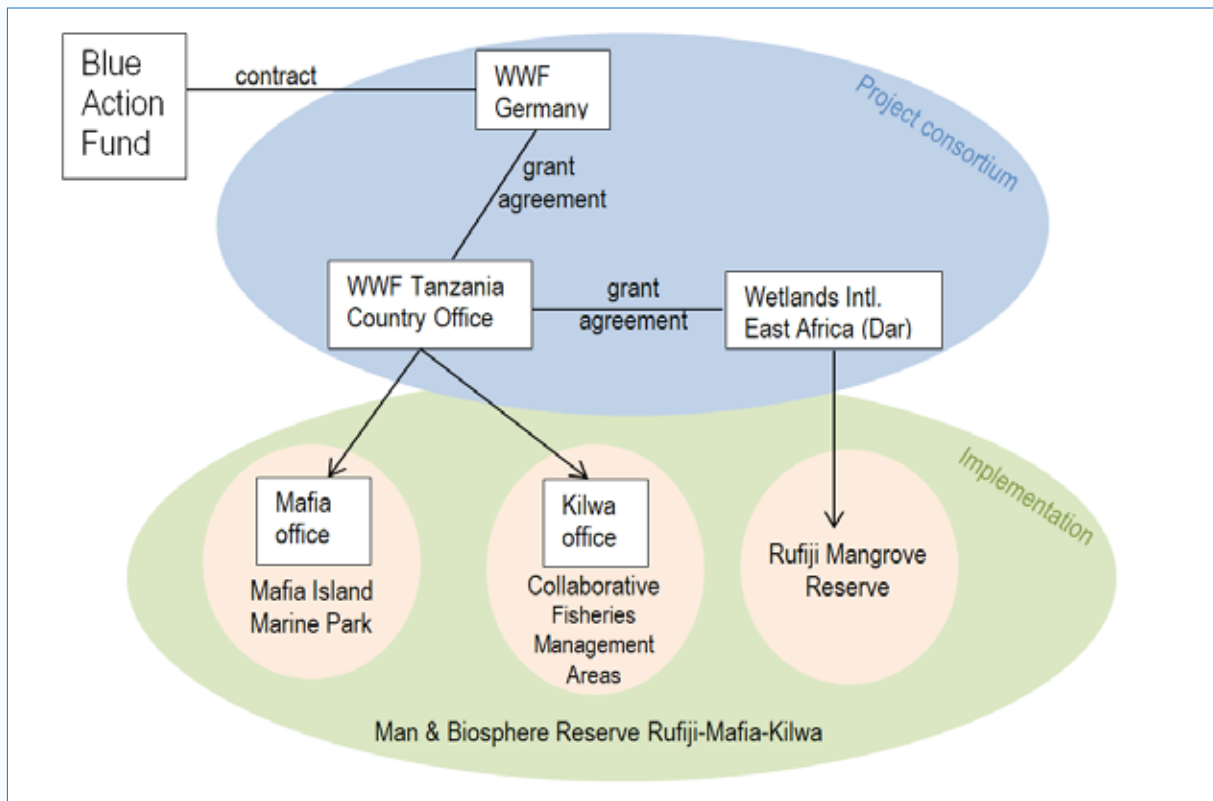
Activities will include:

- Establishment, training and sensitization of community groups in entrepreneurship. We will identify groups to be trained so as to develop skills such as identification of business opportunities, developing budgets and understanding options of acquiring capital and the trade-offs associated with each option.
- Conduct a market study and develop business plans for 3 identified mangrove products. Business plans will then be developed for the 3 products using a consultant
- Stimulate sustainable livelihood alternatives to harmful practices such as sustainable rice farming in non-mangrove areas for 10 groups. This will be done by 3 trainers. Current rice farming practices in the Delta are harmful as they use pesticides. Additionally the practice of clearing mangroves for rice farming then later abandoning these farms is rampant;
- Develop value chains and promote market access by establishing women's groups and/ cooperatives – 15 women groups will be established, the intention is to have at least 1 women's group in each of the 19 villages. The group leaders will received additional training on how to support the women's groups
- Providing equipment for processing and storage of products. During the baseline studies, beekeeping was identified by most of the communities as a viable activity. Beekeeping equipment has been picked up as one we can start with. This will involve training of 20 groups on beekeeping and honey production. It is anticipated that at least 100 community members will received a 3-day training.
- Introduce the Bio-rights approach (conservation agreements) and other financial incentive mechanisms to link livelihoods development and conservation measures. A bio-rights feasibility study will be undertaken, training done and agreements signed with at least 10 communities;

Project Organisation

The project will be implemented in close partnership by WWF Germany, WWF Tanzania Country Office (WWF TCO) and Wetlands International East Africa (WIEA). WWF Germany will be a lead applicant and will be accountable to the Blue Action Fund for implementation and reporting according to the project proposal and Blue action Fund procedures. A project agreement with WWF TCO according to WWF network standards will ensure accountability of WWF TCO to WWF Germany with respect to all project related deliverables. WWF-Germany will provide technical and financial backstopping to WWF-TCO,

supervise and monitor project progress, and support project communication, WIEA is implementing partner of WWF TCO and will be contracted by WWF TCO for implementing all activities related to the Rufiji mangroves as defined in work package 4 according to the work plan and budget. All partners will ensure close coordination through regular calls, written project updates and annual meetings related to project planning and progress tracking. The day to day coordination between WWF TCO and WIEA will be facilitated by the fact that WIEA and WWF TCO share the same office building in Dar es Salaam.



Key collaborating project partners (see also section 7)

Mafia Island Marine Park (MIMP): The Mafia Island Marine Park (MIMP) authority and WWF have collaborated before to strengthen the Park's capacities in enforcement, community liaison, data collection and management and many other aspects of its roles within the seascape. In this project MIMP is one of the key implementing partners (see Result matrix, Fig. 2 & Table 5).

Fisheries Division: is the key partner at sector and Ministry level. It is the main fisheries governing institution in Tanzania. Its main role will be to provide national-level fisheries policies, guidelines, strategic and technical support on fisheries related activities (fisheries data, legislations etc). Fisheries Division, Fisheries Research Institute (TAFIRI) and Western Indian Ocean Marine Science Association (WIOMSA) have prepared the second National State of the Coast Report which will be very useful for this particular project.

National Environmental Management Council (NEMC): Is the focal institution for MAB Reserve design in Tanzania. It will undertake all administrative process and call its national stakeholder team to foresee MAB Reserve process and designation in the seascape. NEMC is also having a network of Integrated Coastal Management (ICM) projects, and established guidelines for Mariculture and Special Areas Management Plans.

South West Indian Ocean Fisheries Governance and Shared Growth Programme (SWIOFish): is a six years (June 2015-2021) investment in coastal marine in Tanzania that is undergoing and expected to

last up to 2021. The lead institutions are the Ministry of Livestock and Fisheries Development (MoLFD) Fisheries Division for mainland Tanzania and the Ministry of Agriculture, Natural Resources, Environment and Cooperatives in Zanzibar (MANREC)'s Department of Fisheries for Zanzibar.

Blue Ventures: The project will also collaborate with Blue ventures whose office is in Zanzibar (Tanzania) in specific activities. Blue venture have long experience in managing small scale fisheries and marine resources through Local Managed Marine Areas (LMMAs).

Three (3) District councils (Kibiti, Kilwa&Mafia)

These three District Councils will be the centres of project planning and implementation in their respective district areas. Close coordination and cooperation at district level will be ensured by regular meetings.

Village Liaison Committees (VLCs): In line with provisions of the Marine Parks & Reserves Act, 1994, villages lying within the boundaries of a marine park may have a village liaison committee whose function is to serve as a liaison between the members of the village [including the village council] and the Warden-in-Charge and other organs of the marine parks authority [MPRU and its Board]. VLC members are elected by the village assembly. On behalf of the village the VLC is expected to participate in all aspects of the development of, or any amendment to, marine park regulations and zoning, and general management plan preparation and implementation. The VLC may also advise the Warden-in-Charge concerning matters relevant to management and conservation of the marine park. The VLCs will be integral to the work packages 1-3 and also receive training and support for fisheries management and livelihood options.

Beach Management Units (BMUs): Beach management units [BMUs] in Tanzania are provided for under the Fisheries Act, 2003 and Fisheries Regulations, 2009, the latter defining their role and functions. A beach management unit [BMU] is a community-level organisation of fishers, fish traders, boat owners, fish processors and other stakeholders who traditionally depend on fisheries activities for their livelihoods. A BMU executive committee is elected by its assembly of members; membership is voluntary. The primary functions of a BMU are to develop fisheries management plans at the level of fish landing sites within their village; collaborate in catch data collection; engage in monitoring, control and surveillance; and support district authorities in issuing fishing vessel licenses including ensuring payment of fees; and to settle fisheries-related disputes. As the primary community fisheries management body BMUs will participate actively in the co-management activities under the project and benefit from training aimed at capacity building and supporting their implementation of management plans in their areas of jurisdiction.

Village Natural Resources Committees (VNRCs): Rooted in the Forest Act, 2002, a VNRC is a group of people elected by the village assembly to be responsible for managing terrestrial natural resources available in the village, on behalf of the entire village. Specific responsibilities of VNRCs include: coordinating forest-related activities such as tree planting, harvesting forest resources and record-keeping; issuing permits for harvesting of forest resources; preventing agricultural or livestock encroachment in forests; preventing forest fires; patrolling against illegal harvesting and forest degradation; boundary clearance; and keeping the whole village informed of events related to forest management, and of their [community] rights and responsibilities, and of any changes on forest management guidelines or laws. The VNRCs will play an active role in workpackage 4 whose focus is improved mangrove management.

7. Governmental partner structures

Ministry of Fisheries and Livestock Development (MoLFD): At the national level, the fisheries portfolio falls under the Ministry of Livestock, Fisheries and Development (MoLFD). But at the local level implementation of fisheries activities fall under the Ministry of Local Government and Regional

Administration (MLGRA), through the District Authorities/Councils, Municipalities and Cities (Local Government Authorities – LGAs) which in turn fall under the President's Office. This duality, mixed objectives and priorities, differing capacities, different reporting lines and lack of joint planning continue to plague the sector (see Figure 2 below). **Fisheries Division (FD):** The Fisheries Division (FD) is within the MoLFD and it is the central governing institution for fisheries sector in Tanzania. The sector is guided by Fisheries Act no 22 of 2003, Fisheries Policy (2015) and Fisheries Legislation (2009). FD is responsible for formulation, implementation of fisheries policies and appropriate legislations. The existing legal and regulatory framework guiding the sector is vested in different legal provisions enacted in a number of legislations including Fisheries Act (CAP 279), Marine Park and Reserve (CAP 146), Deep Sea Fishing Authority (CAP 388), Tanzania Fisheries Research Institute (CAP 280) and other related laws and regulations. The Fisheries Division's responsibility is to make fisheries laws and regulations, provide fisheries catch statistics, undertake Monitoring Control and Surveillances (MCS), ensure fish quality standards and marketing and steer the sector to conform to regional and global fisheries agreements. Other responsibilities are to facilitate fisheries extension services and to decide on the fisheries management regime(s) for the country. WWF Marine programme has been working closely with FD and will continue to do so to enhance effective fisheries Management in MIMP and the buffer zone. Roles of Local Government Authorities (section 4.2.11: i-xv) and local communities (section 4.2.12:1-IV) are also stipulated in the Fisheries Policy. They include proposing areas for conservation, licensing, development and implementation of fisheries aquaculture/mariculture, formulation of bylaws, data collection, enforcement of fisheries legislation, provision of fisheries extension services, revenue collection and community involvement in management and conservation of fisheries resources.

Marine Parks and Reserve Unit (MPRU): The Marine Parks and Reserve Act no 29 of 1994 provides the legislative basis on which to establish Marine Parks and Reserves in Tanzania under the guidance of the Minister responsible for fisheries sector, and the Board of Trustees of Marine Park and Reserves. All Marine Parks and Reserves are coordinated by Marine Park and Reserve Unit (MPRU). MPRU is a semi-autonomous structure for all Parks and Reserves under the MoLFD. The Board of Trustees formulates policies on all Marine Parks and Reserves in the country and directs the MPRU on all matters regarding the designation and management of marine park system. Each Park has a warden in-charge and Advisory Committee (AC) to advise the Board of Trustees. The AC is constituted by representatives of park stakeholders including, local communities, regional and district government, non-governmental agencies, a research institution, and representative from tourism and export fish processing sector within the marine park.

At LGA level, the MPRU manager and Warden in-charge are also accountable to District Authority, community members and other stakeholders. There are two important factors for the MPRU to adhere to this administrative line: (i) District Authority have people through the existing local structures (the Division, the Ward⁷ and villages) to determine for development in their district (ii) Resource governance and administrative procedures are also controlled by districts at local level (e.g. EIA undertakings, law enforcement, issuance of fisheries license etc). WWF TCO will collaborate with MPRU to administer a number of activities (see result matrix and work plan) for its Mafia Island Marine Park (MIMP).

Mafia Island Marine Park (MIMP): Is one of the parks under MPRU. MIMP and WWF have collaborated before to strengthen the Park's capacities in enforcement, community liaison, data collection and management and many other aspects of its roles within the seascape. In this project MIMP is one of the key implementing partners (see Result matrix). The BAF project expects to benefit from MIMPs experience by working closely to serve in the District Advisory Group meetings, PITT meetings and implement programme activities within the park (see results matrix and work plan).

⁷ administrative unit higher than the village which usually contains 4 to 6 villages

President's Office - Regional Administration and Local Government (PORALG)

Local Government Authorities (LGAs): At District level, the Livestock and Fisheries Department has a special section dedicated to fisheries and is responsible to oversee all fisheries matters within their jurisdiction. At Ward level a team of fisheries employees from the District are responsible for all ward and village fisheries resources. Due to inadequate number of staff, some wards within the seascape have Fisheries Extension Officers who are not stationed at Ward level but they visit their duty stations from time to time. At village level, according to the national constitution, all environmental matters are the responsibility of the village government, which comprises a Village Assembly (all adults over 18 years of age) that elects a 25 member Village Government Council as its executive body. From the Village Government Council four statutory committees are designed: Planning and Finance (*Mipango na Fedha*), Peace and Security (*Ulinzi na Usalama*), Education (*Elimu*) and Health and Social welfare (*Afya na Maendeleo ya Jamii*). Other committees can be constituted as and when the Village Assembly requires them often as directed to do so by the Central and Local Government authorities and often in relation to a programme or project. Thus all villages are recommended to have a committee dealing with environmental issues (*Kamati za mazingira*). Most villages within the seascape have such a committee whose establishment is linked to either the Mangrove Forest (Village Natural Resources Committees - VNRCs), the Mafia Island Marine Park (Village Liaison Committees- VLCs) structure, the Fisheries Co-Management projects (BMUs) or other programmes and projects committees. A recent development of fisheries co-management resulted in the formation of Beach Management Units in the seascape's villages. The exact roles and responsibilities of these 'Units' are stipulated in national BMU operational guideline and the Fisheries legislation. Roles of all institutional actors in fisheries and forest/mangrove management are important component of the BAF project. The rules including those for selection of the members, the responsibilities, disciplinary actions on default, have been worked out by the communities and are guided by village bylaws in each village. Eligibility of membership and leadership of the institutions have been stipulated in the guideline.

Fishery areas may be found to be smaller than the lowest legally established administrative unit that is the village, or may straddle more than the one village administrative area. The latter may not fall neatly into a discrete Ward. Therefore a fishery area that straddles more than one village is constituted by more than one BMU appropriate to manage the fishing area. In areas where there is high levels of coral reef fish, CFMA Coordination Committee have been formulated to manage the resources. The 'institutional' situation is compounded by the existence of traditional rights of 'outsiders' (non-residents of the coastal villages) to the fishery. This is particularly relevant in Rufiji delta where inner delta villagers have for centuries allowed coastal villagers to cultivate in the inner delta in exchange for fishing access rights on the coast. The project will work hand-in-hand with existing local institutions to ensure sustainability and continuity.

Ministry of Natural Resources and Tourism (MNRT): Is an independent Ministry responsible for management of natural resources and cultural resources for the development of tourism industry. It has four directorates - Antiquities, Tourism, Wildlife and Forest and beekeeping. **Tanzania Forest Services (FTS)** will be the key implementing partner. It is an agency within the MNRT, responsible for management and conservation of forest resources while Forest and beekeeping division is responsible for policy aspects. The Fisheries Policy (2015) section 4.2.4, asserts the roles of MNRT. They include, promotion of sustainable management and utilization of forestry, wildlife and wetland resources, ensure conservation of forest, wildlife reserves, wetlands and catchment areas and to strengthen mechanism for sustainable utilisation of forest and wildlife reserves.

Vice President' Office: It has two main institutions, the Division of Environment and National Environmental Management Council (NEMC). **NEMC** was established in 1983 under Act No. 19 of 1983. Its broad mandate is to oversee environmental management issues in the country. It also responsibility

to undertake enforcement, compliance, facilitate MAB Reserve establishment in the country, review and monitoring of environmental impact assessment, research, and facilitation of public participation to raise awareness on environmental matters, among other things. NEMC is well experienced with MAB Reserve designation in Tanzania and has successfully undertaken similar initiatives in Serengeti, Lake Manyara, East Usambara, Jozani Choka Bay (Zanzibar) and Gombe in Lake Tanganyika. NEMC is WWF TCO focal institution for all environmental and conservation work in Tanzania as well as the MAB Reserve in Rufiji-Mafia-Kilwa seascape. The table below provides summary for all important government partners in this project.

Table 5: Summary of Government Partners

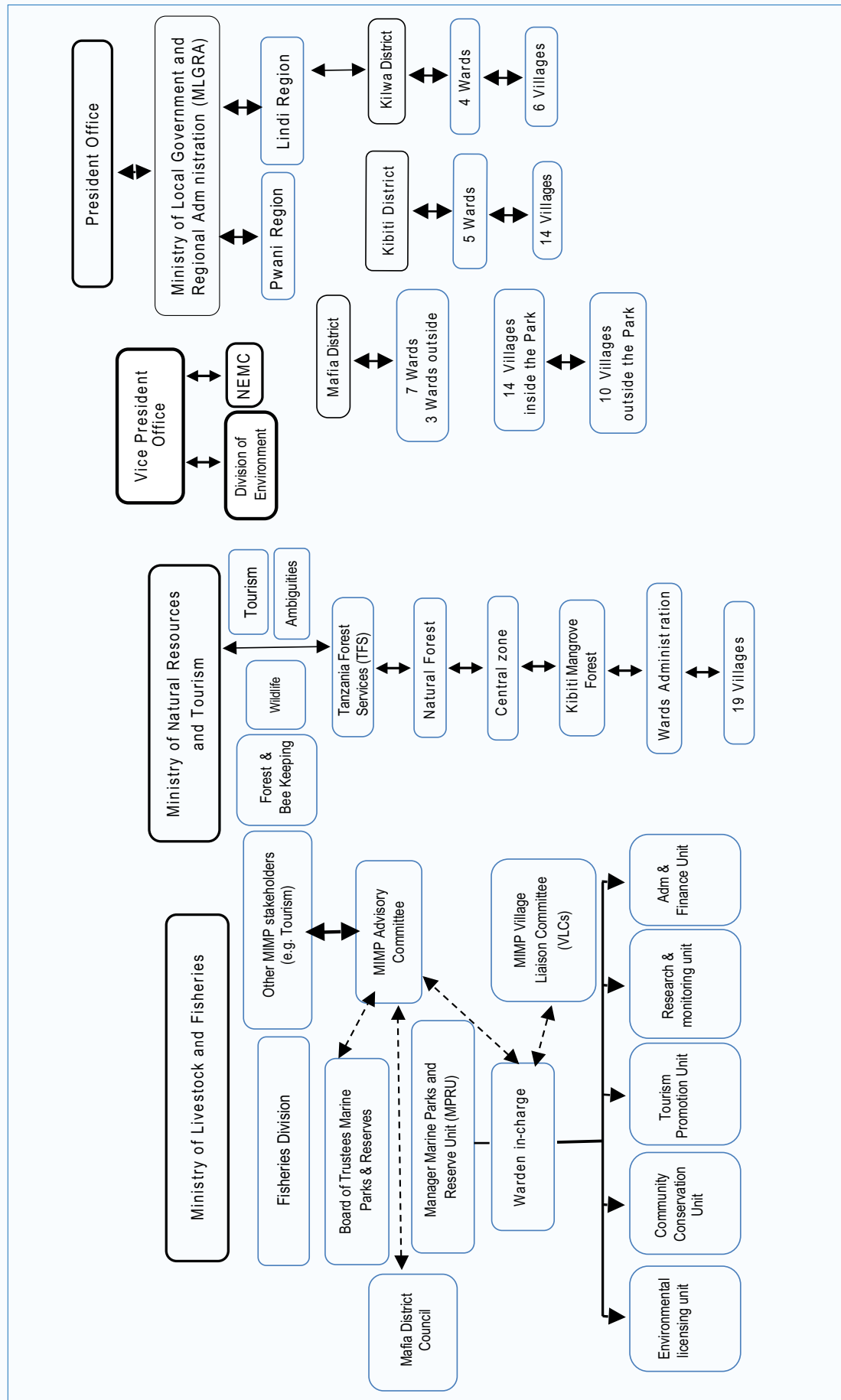
<p>National institutions</p> <p>The <u>Tanzania Forest Service (TFS)</u> is a semi-autonomous executive agency of the Government of Tanzania, responsible for sustainable management of forest resources in mainland Tanzania, including all mangroves.</p> <p>The <u>Ministry of Livestock and Fisheries Development (MLFD)</u> of the Government of Tanzania is responsible for development and management of fisheries resources in mainland Tanzania, including providing policy and capacity-building support to district councils on fisheries co-management.</p> <p>The <u>Marine Parks & Reserves Unit (MPRU)</u> is a semi-autonomous unit under the MLF, governed by its own Board of Trustees. It is responsible for overall management of marine parks and reserves in mainland Tanzania.</p> <p>The <u>Vice-President's Office (VPO)</u> of the Government of Tanzania is the focal Government institution for UN conventions and designations. Specifically the National Environment Management Council (NEMC), which is under the VPO, is the focal institution for UNESCO Man & Biosphere Reserve designation.</p> <p>The <u>Rufiji Basin Water Board (RBWB)</u> as organ of the Ministry of Water is responsible for water resources management and regulation in the Rufiji Basin.</p> <p>District and village-level institutions</p> <p><u>Kibiti, Mafia and Kilwa District Councils</u> are three local authorities in the project area and have been project partners of WWF TCO for more than 10 years. District councils are responsible for local natural resources management, including fisheries.</p> <p><u>Village councils</u> are legally mandated bodies responsible for management of village affairs. As such they are an important partner in all local natural resources co-management initiatives.</p> <p><u>Beach Management Units (BMUs), Village Liaison Committees (VLCs) and Village Natural Resource Committees (VNRCs)</u> are legally mandated village-level co-management entities in fishing communities, villages inside marine parks and villages in the vicinity of forests respectively. As such they are the primary actors in planning and implementing fisheries and mangrove co-management, in collaboration with district authorities.</p>	
<p>Roles and responsibilities of partners:</p>	
Institution	Role
MPRU	Management authority of, and partner in all activities relating to, Mafia Island Marine Park
MLFD	Management authority for, and partner in all activities relating to, fisheries management in MIMP buffers areas/CFMAs

TFS	Management authority and partner in all activities relating to mangrove forest management
NEMC under VPO	Focal institution for, and partner in, preparation and submission of UNESCO Man & Biosphere Reserve application.
RBWB	Participate in activities relating to designation of Rufiji-Mafia-Kilwa seascape as a Man & Biosphere Reserve and sharing information about seascape ecological and economic values.
Kibiti, Mafia and Kilwa District Councils	Partners in planning and implementing project activities in fisheries management areas in MIMP buffer zone; in Rufiji Delta; and related to designation of Rufiji-Mafia-Kilwa seascape as a Man & Biosphere Reserve
Village Councils	Participate in all co-management related planning through selected representatives
BMUs, VLCs; VNRCs	Taking a lead role in fisheries and mangrove resources co-management including; planning, implementation, monitoring and reporting
<p>Insurance of necessary government support:</p> <p>Regarding proposed creation of a MAB Reserve, consultations have been held by WWF Tanzania with the national focal point for UNESCO, NEMC, Tanzania Forest Service (TFS) and Marine Parks and Reserves (MPRU). All have warmly endorsed the proposal to prepare an application for Man & Biosphere Reserve designation for the Rufiji-Mafia-Kilwa seascape.</p>	

The following key activities will be undertaken to strengthen the District Authorities:

- Capacity building to engage District Authorities in fisheries co-management (MIMP and outside MIMP), community participation in mangrove restoration activities, data collection and analysis, livelihood enterprise development, CFMA management and MAB reserve initiatives in Kibiti, Mafia and Kilwa Districts, among others (details, see Results matrix & work plan).
- Alignment of resource management regimes, models and plans such as co-management initiatives, 'community access rights', CFMAs, the MAB Reserve processes and plans and mangrove management plans in each district strategic plans. It is important to note that the implementation of all activities will be planned jointly, executed and shared with all key implementing partners - WWF, Fisheries Division, NEMC, TFS, MIMP, Wetland International and District Local Authorities.

Fig. 2: Governmental Partner Structure



8. Environmental and social risk screening

A system for Environmental and Social Safeguards based on the social policies mentioned below is currently being developed within WWF Germany. Therefore, for the time being, the proposed project will be fully adhering to the IUCN ESMS guidelines. A summary of the key environmental and social issues of the proposed project and how these will be addressed within further project development can be found in **Annex B** - Environmental and Social Scoping Report. An Access Restriction Mitigation Framework and the updated ESMS questionnaire are attached to this full proposal. **(Annex F)**.

WWF Germany and WWF Tanzania commit to WWF's Umbrella Framework on Social Policies established in 2010. These policies are: Indigenous Peoples (1996), Conservation Initiative on Human Rights Framework (2009), Poverty and Conservation (2009), Gender (2011).

The WWF Network social policies stipulate how the organisation works with indigenous communities, promotes pro-poor conservation, human rights and gender equity and obtains free, prior and informed consent with local communities. Along with these policies a clear complaints system that has been in existence since 2016 and all projects clearly communicate that with beneficiaries. Complaints received are responded to in 10 days by the Projects Complaints Officer and the organisation does not tolerate any retaliation to complainants.

The indigenous people's policy recognises the role of indigenous populations as important stewards and partners for conserving Earth's natural resources. Consequently the organisation is committed to respecting indigenous and traditional people's human and development rights and cultures.

WWF is also dedicated to a pro-poor conservation approach which addresses not only physiological deprivation but also social deprivation such as lack of access to natural resources, discrimination, lack of voice and power. The organisation aims to understand poverty-environment linkages to develop appropriate strategies.

Further WWF recognises that human rights are central to achieving effective and equitable conservation and development outcomes. A human rights approach is therefore fundamental meaning that values of good governance, human rights and civil society engagement are primary in projects that WWF undertakes.

The organisation also has gender policy that appreciates the differences and inequities existent between men and women in their access of and control over natural resources and decision making in relation to environmental resources. Cultural sensitivity to these socially constructed roles is adopted in order to ensure social change towards just, equitable and fair communities is achieved.

In Tanzania there are related policies, practices and governance framework complementing and supporting the ESMS. E.g. Gender policy, information disclosure policy, accountability framework, risk management framework and results management frameworks, among others. There are health and safety protocols for WWF TCO staff set out in the WWF Field Operations Manual, Social Security Pension Funds (mandatory), Occupational Health and Safety Authority (OSHA) under the Occupational Health and Safety Act (2003), health insurance and operating procedures. Wetlands International will also operate within the protocols set out in the Operations Manual as well as the Safety and Security Standard Protocols.

There are also national accredited entities to ensure 'Environmental and Social Policy' commitments and principles in managing environment (incl. fisheries) and social risks and impacts for enhancing sustainability performance and outcomes. For the ESMS to be effective as an operational framework, it must be able to harness the resources and existing policies. In this proposal, the ESMS will be linked and implemented in accordance with the existing relevant policies and practices. A good example of

the Tanzania related policies to this proposal to ensure the national guidelines/policies are gathered are described below. Environmental Impact Assessment (EIA) is an example which refers to a set of standards that specifies the desired outcomes and specific requirements to achieve outcomes through means that are appropriate to the nature and scale of the activity and commensurate with the level of environmental and social risks and/impacts.

Environmental Impact Assessments are required by several national policies and laws e.g. National Environmental Policy (1997), National Forest Policy (1998), National Policy for National Parks in Tanzania (1994), Marine Parks & Reserves Act No. 29 of 1994. National Land Policy (1995): The management of coastline “Coastline land development shall be done after an environmental impact assessment (EIA) study has been carried out” (Chapter 7:pg. 26)

The FAO Code of Conduct for Responsible Fisheries (CCFR, 1995) and FAO Voluntary Guidelines for Small Scale Fisheries (VGSSF, 2015) and Environmental and Social policies (E&S) and safeguard have been included in the design of this proposal (see Annex A: Result matrix & activities). During project inception, training will be provided to project and partner staff on relevant FAO guidelines including: Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security (FAO 2012); Code of Conduct for Responsible Fisheries (FAO 1995); and Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (FAO 2015).

Table 6: Major risks to the project's success, Type, likelihood and mitigation measure.

Risk	Likelihood	Possibility to influence	Mitigation measures
Contextual risks			
District or village leaders failing to support fisheries and mangrove management measures, or actively interfering in them, due to sectoral/personal vested interests in resource harvesting or illegal land conversion into agriculture.	Low	High	<ul style="list-style-type: none"> -Co-management approach and related communications to engender transparency and promotion of awareness of leadership responsibilities and accountability -Livelihood incentives delivered through small-scale enterprise development e.g. access to micro-finance
Increased fish competition in local, regional and international markets in response to demand for fish in local, regional and global markets.	High	Medium	<ul style="list-style-type: none"> -Engage export processing factories owners, large and medium fish traders and collectors as part of the stakeholders -Promote value additions for customer satisfaction within the product line to reduce pressure in fishing -Information-sharing, advice and advocacy regarding sustainable yields, biomass and the status of the stock

Small-scale fishers, especially those not resident in the target area not complying with fisheries and mangrove control rules	Low	High	<ul style="list-style-type: none"> -Strengthen capacity for surveillance and enforcement by BMU & VNRC -Capacity building and awareness on fisheries information, catch & effort trends will help to inform fisheries management strategies -CFMAs for Octopus fisheries will motivate and demonstrate actual practice to adapt sustainable fishing
Programmatic risks or risks to staff			
BMUs and VNRCs failing to articulate fisheries resources management measures	Low	High	<ul style="list-style-type: none"> -Build capacity and awareness on fisheries information and stock health and catch trends, including application of mobile phone fisheries information system -FAO staff from Africa region will be invited to train FAO Code of Conduct for Responsible Fisheries (CCRF) and FAO Voluntary Guidelines for Small Scale Fisheries (VGSSF) to project staff, District fisheries staff, central government fisheries representative and BMUs. The team will help to impart skills and knowledge throughout the Seascope.
Conflicts on overlapping of demarcations between MPAs and CFMAs (communities which are already practicing co-management) within the buffer zones	Medium	High	<ul style="list-style-type: none"> -Stakeholders 'consultative meeting with all on resource use and management approach harmonization between the two. -Benefits accrued from CFMAs will motivate the community members
Implementation risk			
<ul style="list-style-type: none"> -Catastrophic climatic or environmental event e.g. Drought/floods which leads to socio-economic stress -Food insecurity/food shortage: sustainable management systems will be abandoned as people struggle to survive. 	Low	High	<ul style="list-style-type: none"> -Improve delivery of accurate and timely climate information to District Authorities, partners, NGOs & CBOs, national policy makers, technical officers and local communities -Achieve sustainability of the new systems (MAB Reserve) of fisheries and mangrove management to improve ecosystem health and services

Risks for sustainable operations after project completion			
Upstream developments in the Rufiji Basin affecting environmental flows, in the wider catchment area may negatively influence the environmental flows to the Rufiji delta and accelerate degradation trends in the delta			

9. Data, monitoring and evaluation

The **results matrix** (Annex A) proposed here is modelled along the BAF Results Matrix articulating indicators for expected project impact, outcomes and outputs. During the inception phase of the project the project partners will confirm these and together begin to work on a progress monitoring matrix. The progress monitoring matrix will clearly set milestones for implementation progress for each project activity that will be tracked and assessed on a quarterly basis, supervised by a full-time M&E Officer at WWF Tanzania. This will generate semi-quantitative progress data and reporting to project management staff in the three implementing agencies. In addition to the quarterly progress reporting, the project will benefit from WWF's half yearly and annual reporting cycles.

The reporting will provide a basis for adaptive management that will feed into quarterly project management discussions; quarterly consultations with Government partner institutions, donor reporting, and joint annual work planning. To ensure full stakeholder engagement, joint annual meetings will be conducted throughout the whole project period. In addition, a mid-term evaluation of the project will enable adaptive changes to be made in order to achieve the objectives set out and the final evaluation (see Table 7) will provide adaptive management for next phase of planning.

Data availability:

WWF Tanzania has been working in the Marine sector since 1997 with interventions in Mafia Island. The initial programmes paved the way to designate the Marine Park in 2003 and then followed by collaborative fisheries management in 2006 to-date. As a result this project will build on the data generated from past work as well as infrastructure and partner relationships built from there. For example, the following list of data are available for establishing baselines for the project:

- Small-scale fisheries catch data from selected landing sites in Mafia Island Marine Park and CFMAs since 2008, but with some temporal gaps;
- Field ecological surveys of Rufiji Delta mangrove forests from 2008-10, and time-series remote sensing study for 1990 to 2010 [Nindi et al. 2014; Mangrove Watch Africa, WWF-D & USFS ongoing];
- Coral reef status monitoring reports – approx. biannual from 1999 to 2016;
- Baseline data for endangered marine species including whale sharks (2012-2017) and nesting turtle populations (annual since 2001);

- Baseline livelihoods data for selected communities in MIMP (2003, i.e. out-of-date) and in CFMA buffer zones (2008 and 2011);
- Bird counts for 2017.

Missing baseline information and proposed collection:

Besides availability of the information listed above, some of the information required for baseline includes the following;

- Repeat field ecological surveys of Rufiji Delta mangrove forests in process during 2018;
- Baseline livelihoods data for Rufiji Delta communities in process during 2018 ;
- Updated livelihoods baseline for fishing communities in MIMP and CFMA buffer zones, potentially to be done as part of full proposal preparation if resources are available;
- Ocean circulation trends at the beginning of the project;
- Larval connectivity at the beginning of the project; and,
- Natural capital situation at the beginning of the project.

Contribution to long term data collection for effective MPA and fisheries management:

Data management in terms of collection, tools, analysis, presentation, storage and use will aim at improving effectiveness of MPAs and fisheries management. Below is a list of contributions by the project on long term data collection;

- application of mobile phone collaborative fisheries information system will strengthen catch monitoring in MIMP and in buffer zone CFMAs,
- ecological and remote-sensing (satellite & drone-based) monitoring of mangroves in Rufiji Delta mangrove forest reserve under Wetland International's Mangrove Watch Africa;
- project will support length-frequency data collection for stock assessment of target fisheries (prawns, small pelagics, medium pelagics, two selected reef species);
- the project will support coral reef status monitoring in MIMP and Songosongo Islands

Table 7: Support Monitoring and Evaluation Tool for the project

Action	Purpose	Responsible	Timeline
Baselines of the project	Determination of the initial situation of the project to identify the main indicators to monitor the results at the Goal, Outcome and output level.	WWF TCO and Wetlands International	First 6 months of project implementation
Partners Progress Reports	Report the progress with the activities implementation (Output) in relation to the main results achieved (Outcomes and Impacts), including sharing of lessons, Effective Implementation of Workplans and Budgets, Challenges and Strengths Affecting Performance and Adaptive Management	WWF TCO and Wetlands International and other partners	Quarterly

Semi-annual Technical Progress Report (TPR)	Report the progress of activity implementation (Output) in relation to the main results achieved (Outcomes and Impacts), including sharing of learned lessons, Effective Implementation of Workplans and Budgets, Challenges and Strengths Affecting Performance and Adaptive Management.	WWF TCO and Wetlands International	Annually (31 January)
Annual Technical Progress Report (TPR)	Report the progress of activity implementation (Output) in relation to the main results achieved (Outcomes and Impacts), including sharing of learned lessons, Effective Implementation of Workplans and Budgets, Challenges and Strengths Affecting Performance and Adaptive Management. Also, the monitoring report requires the project team (and key partners/stakeholders where possible) to systematically review and discuss data/information, and identify against planned goals and objectives, using associated indicators. This analysis should help the team assess the progress of the strategy, and enables adaptive action. Data collected during the year is part of ongoing project management; this data is the key ingredient for the monitoring report.	WWF TCO and Wetlands International	Annually (31 July)
Meetings/ Workshops	Share information and discuss the progress of the project with the team and partners by presenting the partial results of the Result Matrix indicators for improving planning, learning process and informing decision-making.	WWF TCO and partners	Quarterly
Field monitoring visits	Direct observation on the progress of the project on the ground, dialogue with implementation partners, cross-refer the data provided by the partners, and identify problems and propose corrective measures.	WWF TCO and WWF Germany	Every 6 months

Mid-term Evaluation	Assess the progress of a project against its own stated goals and objectives (effectiveness), with respect to the objectives and targets set out in the Results Matrix, in line with the Results Chain. Identify possible deviations, challenges and propose corrective measures / adaptive management (Fig. 1, Theory of change)	Blue Action Fund (External Evaluator)	Mid third year of the project
Final Evaluation	Evaluate the overall project performance and efficiency, effectiveness in obtaining results, performance of the different actors involved, internal and external factors that affected the project, possible sustainability of the interventions and lessons learned to enhancing accountability, credibility, and transparency with respect to investment; and promote learning at project level and organisation.	Blue Action Fund (External Evaluator)	End of the project

Table 8: Logical Framework Analysis (LFA)

Intervention Logic	Indicator	Baseline				Monitoring periodicity
		Data available	Data missing	When will data be collected	How will data be collected	
Goal: By 2023, the long-term ecological integrity, resilience and biological productivity of the Rufiji-Mafia-Kilwa seascape has been conserved as an internationally important biodiversity hotspot supporting climate-resilient livelihoods of natural resource-dependent communities.	Indicator 1.1 Biomass, population size or percentage covers of selected marine umbrella species in MIMP, Rufiji Delta mangrove forest reserve and buffer zones.	1.1.1.1. <u>Whale sharks</u> <i>Base Value:</i> 74 [2017] ¹	None	N/A	Conducting research by a partner <i>Marine Mega Fauna</i>	Project start, midterm, end
		1.1.1.2. Green & Hawksbill turtles (i) no. nests/yr and (ii) no. hatchlings/yr <i>Base Value:</i> (i) 194 [2015-17] ² (ii) 14,582 [2015-2017] respectively	None	N/A	Recording number of nests and hatchlings by a partner <i>Sea sense</i>	Annually
		1.1.1.3. Fish: top-predator reef-associates <i>Base Value:</i> to be assessed during inception	biomass kg/ha (all species combined) at 5 MIMP sites	Project inception	Collecting biomass of all species combined - kg/ha at 5 MIMP sites	Annually
		1.1.1.4. Mangrove kingfisher <i>Base Value:</i> to be assessed during inception	Number of individuals/km [Rufiji Delta]	N/A	Collecting the number of individuals/km [Rufiji Delta]	Annually
		1.1.1.5. <u>Waders</u> <i>Base Value:</i> 12,337 [2018] ³	None	N/A	Collecting number of individuals/km [Rufiji Delta]	Annually
		1.1.1.6. <u>Hard corals</u> <i>Base Value:</i> In progress October 2018 ⁴	On progress	N/A	Recording measurements on corals and calculating percentage cover hard coral [all spp] at 5 sampling sites within MIMP	Annually
		1.1.1.7 (a) <u>Mangrove cover</u> Unit of measurement: <i>Base Value:</i> under way in 2018 ⁵	Under way in 2018	N/A	Measuring total mangrove cover [ha]	Annually
		1.1.1.7 (b) <u>Mangrove density [all 10 species aggregated]</u> <i>Base Value:</i> 89.31 ± (Northern); 95.21 ± (Central); 52.77 ± (Southern)	None	N/A	Recording basal area m ² /ha	Annually

	<p>Indicator 1.2 Livelihood status in beneficiary households engaged in project livelihood interventions, in project areas.</p>	<p>1.2.1. Household material style-of-life <i>Baseline value:</i> to be quantitatively sampled during inception 1.2.2. Household food security(additional) <i>Base value:</i> to be quantitatively sampled during project inception</p>	<p>Frequency of selected household assets/ expenditures: Percentage of households in project area reporting food insecurity above a target threshold.</p>	<p>Project inception Project inception</p>	<p>Conducting household economics survey of selected household assets/ expenditures (and repeat survey) Conducting household economics survey</p>	<p>Project start, midterm, end Project start, midterm, end</p>
	<p>Indicator 1.3 Community members in target communities with positive attitude towards protection of coastal and marine biodiversity.</p>	<p>1.3.1 Attitude <i>Base Value:</i> to be assessed during inception</p>	<p>percentage of respondents [disaggregated by age, gender, occupation] with positive attitude towards relevant management measures</p>	<p>Project inception</p>	<p>Conducting KAP Survey (and repeat survey)</p>	<p>Project start, end</p>

Outcome 1: Improved management of marine protected areas in Rufiji-Mafia-Kilwa Seascape with a total area of 5,500 km ² , including Mafia Island Marine Park; Rufiji Delta mangrove forest reserve and 8 collaborative fisheries management areas, integrated under the umbrella of a UNESCO Man and Biosphere (MAB) Reserve.	Indicator 2.1 (BAF) Creation of new, or expansion of existing, MPAs	<i>Base Value:</i> MIMP (822 km ²) and Rufiji mangrove forest reserve (532 km ²)	None	N/A	Measuring area under designation (km ²)	Project end
	Indicator 2.2 Management effectiveness of target marine protected areas <i>Base value:</i> to be assessed during project inception	None	METT scores for MIMP and Rufiji Delta mangrove forest reserve	Project inception	METT assessment	Annually
	Indicator 2.3 Small pelagic, octopus and prawn fisheries within Rufiji-Mafia-Kilwaseascope operate within maximum sustainable yield.	<i>Base value:</i> in process during 2018-19 under SWIOFISH Tanzania project	None	NA	Selected MSY reference point appropriate to each fishery (stock biomass, total effort or total production) to be determined through stock assessments ongoing under GoT/World Bank SWIOFish Tanzania project.	mid and end year
	Indicator 2.5 New effective management instruments to reduce key direct threats to marine biodiversity are under implementation	<u>2.5.1. Mafia Island Marine Park (MIMP):</u> <i>Base Value:</i> to be assessed during YR1 <u>2.5.2. Rufiji Delta mangrove forest reserve:</u> <i>Base Value:</i> to be assessed during YR1 <u>2.5.3. Collaborative fisheries management areas (CFMAs):</u> <i>Base Value:</i> to be assessed during YR1	None None None	N/A N/A N/A	direct threat incidents per hour of surveillance effort, disaggregated by type of threat direct threat incidents per hour of surveillance effort, disaggregated by type of threat direct threat incidents per hour of surveillance effort, disaggregated by type of threat	Annually

Outcome 2: Community livelihood built through diversified skills and opportunities.	Indicator 2.4.1 (additional) Community members with improved access to micro-finance.	Base value: zero	None	Project inception	total value of loans secured by new VSL members in MIMP/ number of beneficiaries	Annually
	Indicator 2.4.2. (additional) Households generating additional income as a result of project livelihoods interventions	Base value: zero	None	Project inception	Number of beneficiary households generating > EUR 100 per year of additional income as a direct result of project livelihoods interventions	Annually

Output 1: Management plans and new protected areas established	Indicator 3.1.1 & 3.1.2 (BAF adapted) Effective planning documents incorporating climate change mitigation and adaptation, and appropriate harvest control rules, in place and approved:	3.1.1 (a) Mafia Island Marine Park (MIMP) <u>General Management Plan:</u> Base Value: not yet revised	None	Project Inception	status of MIMP general management plan	midterm, end
		3.1.1 (b) Rufiji Delta mangrove forest <u>reserve management plan:</u> Base Value: no active management plan	None	Project Inception	status of management plan Rufiji Delta mangrove forest reserve	
		3.1.1 (c) CFMA management plans: <u>Base Value:</u> not yet revised	None	Project Inception	status of eight CFMA management plans	
	Indicator 3.1.3 (additional) Community participation in management planning	3.1.3 (a) Mafia Island Marine Park (MIMP): <u>Base Value:</u> n/a	N/A	Project Inception	Number and gender disaggregation of community members consulted during general management plan revision	Project start, midterm, end
		3.1.3 (b) Rufiji Delta mangrove forest <u>reserve management plan:</u> Base Value: n/a	N/A	Project Inception	Number and gender disaggregation of community members consulted during Rufiji Delta mangrove management plan preparation	
		3.1.3 (c) CFMA management plans: <u>Base Value:</u> n/a	N/A	Project Inception	Number and gender disaggregation of community members consulted during 8x CFMA management plan revisions	
	Indicator 3.1.4 (additional) Man and Biosphere Reserve designation	Base Value: n/a	N/A	Project Inception	status of MAB application to UNESCO	

Output 2: Resources, instruments and capacities for the implementation of management plans of marine protected areas and sustainable use zones are improved	Indicator 3.2.1 (BAF) Maximum of three years after the inception of the project, at least 50% of measures planned in management or operational plans have started implementation.	3.2.1 (a) <u>Mafia Island Marine Park (MIMP)</u> Base value: to be determined during inception 3.2.1 (b) <u>Rufiji Delta mangrove management reserve</u> Base value: zero (currently no management plan) 3.2.1 (c) <u>Collaborative fisheries management areas (CFMAs)</u> Base value: to be determined during inception	N/A N/A N/A	Project Inception Project Inception Project Inception	percentage of management measures started to be implemented percentage of management measures started to be implemented percentage of management measures started to be implemented	3 rd year
	Indicator 3.2.2 (BAF adapted) Fisheries and mangrove no-take areas outside of MIMP are gazetted in district or village bylaws	3.2.2 (a) <u>Rufiji Delta mangrove management reserve</u> Base value: zero 3.2.2 (b) <u>Collaborative fisheries management areas (CFMAs)</u> Base value: zero	N/A N/A	Project Inception Project Inception	percentage of no-take areas gazetted in bylaws percentage of no-take areas gazetted in bylaws	Project end
	Indicator 3.2.3 (BAF) Cost-effective monitoring, control and surveillance techniques to prevent illegal fishing/ use of unsustainable practices successfully adopted	3.2.3 (a) <u>Mafia Island Marine Park (MIMP)</u> Base value: zero 3.2.3 (b) <u>Rufiji Delta mangrove management reserve</u> Base value: zero 3.2.3 (c) <u>Collaborative fisheries management areas (CFMAs)</u> Base value: to be determined during inception	N/A N/A N/A	Project Inception Project Inception Project Inception	no. of aerial drone surveillance flights per month (6m average) no. of community surveillance patrols/month in 20 delta villages (6 month average) no. patrols undertaken in 8x CFMAs per month (6 month average)	Annually

	Indicator 3.2.5 (BAF adapted) Realistic strategies for sustainable financing of MPAs developed and started implementation.	3.2.5 (a) <u>Sustainable financing of village natural resource committees (VNRCs) in Rufiji Delta mangrove forest reserve</u> <i>Base value: 0</i> 3.2.5 (b) <u>Sustainable financing of collaborative fisheries management areas</u> <i>Base value: 6</i>	N/A None	Project Inception N/A	number of VNRCs receiving at least US\$ 200/yr revenue from forest product revenue collection on behalf of District Council or TFS number of Beach Management Units (BMUs) receiving at least US\$ 200/yr revenue from respective district council	3 rd year
	Indicator 3.2.6 (additional) Number of MPA management staff and community natural resources managers whose skills and knowledge is enhanced by project training and capacity-building interventions	3.2.6 (a) <u>Mafia Island Marine Park (MIMP)</u> <i>Base value: zero</i> 3.2.6 (b) <u>Rufiji Delta mangrove forest reserve</u> <i>Base value: 0</i> 3.2.6 (b) <u>Collaborative fisheries management areas</u> <i>Base value: 0</i>	N/A N/A N/A	Project Inception Project Inception Project Inception	number of MIMP staff and community leaders within MIMP number of Tanzania Forest Service/ Kibiti District staff and community leaders within Rufiji Delta mangrove forest reserve number of district fisheries staff and BMU leaders	3 rd year

Output 3: Sustainable livelihoods are promoted	Indicator 3.3.1 (BAF adapted) Initiatives to strengthen livelihoods by improving access to complementary sources of income generation	<p>3.3.1 (a) <u>Mafia Island Marine Park (MIMP)</u> Base value: zero</p> <p>3.3.1 (b) <u>Rufiji Delta mangrove forest reserve</u> Base value: 0</p>	<p>N/A</p> <p>N/A</p>	<p>Project Inception</p> <p>Project Inception</p>	<p>number of villages / households benefiting > US\$ 50/yr from livelihood interventions</p> <p>number of villages / households benefiting > US\$ 50/yr from livelihood interventions</p>	<p>Mid term project end</p>
	Indicator 3.3.2 BAF Number of initiatives to increase value added in supply chains	<p>Baseline: zero</p>	<p>N/A</p>	<p>Project Inception</p>	<p>number of villages/ communities where value addition project interventions are implemented</p>	<p>Mid term, project end</p>
	Indicator 3.3.3 BAF Increase number of women in leadership positions and benefiting from economic empowerment	<p>3.3.3 (a) <u>Mafia Island Marine Park (MIMP)</u> Base value: to be assessed during inception / zero</p> <p>3.3.3 (b) <u>Rufiji Delta mangrove forest reserve</u> Base value: to be assessed during inception / zero</p> <p>3.3.3 (c) <u>Collaborative fisheries management areas (CFMAs)</u> Base value: to be assessed during inception / zero</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>Project Inception</p> <p>Project Inception</p> <p>Project Inception</p>	<p>percentage women on village liaison committees (VLCs) / percentage of project livelihood beneficiaries that are women</p> <p>percentage women on village natural resources committees (VNRCs) / percentage of project livelihood beneficiaries that are women</p> <p>percentage women on BMU executive committees / percentage of project livelihood beneficiaries that are women</p>	<p>Mid term, project end</p>

10. Sustainability

The project will ensure long-term plans through engagement of government agencies and partner organisations. Long-term financial sustainability is often the most challenging and several ideas for addressing it have been considered.

MIMP financial sustainability: The project will not contribute directly to the financial sustainability of MIMP. Although there are challenges in that regard, they do not appear to be resolvable by any NGO-led intervention under a project of this kind. MIMP already raises significant tourism revenue of around US\$ 400,000 per year, stable for the past 5-6 years, which is two-thirds of MPRU's entire revenue. Dar Es Salaam Marine Reserves (DMRs) generate the other third, around US\$ 200,000 per year. In addition MPRU staff costs are supported separately by National Treasury. Of MIMP's revenue of US\$ 400,000, 30% is directly shared with Mafia District [20%] and local communities [10%], the remaining 70% is channelled to the MPRU Conservation & Development Fund, from which MIMP receives back only around 25% of its original gross revenue. That is because the income from MIMP and DMRs is pooled and collectively also supports MPRU HQ, the Tanga Coelacanth Marine Park (TACMP) and Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP). The latter two parks currently do not generate any significant revenue, which is the main problem underlying MPRU and MIMP's financial situation. There is ongoing consultancy work under the GoT/World Bank SWIOFish Project to prepare a business plan for MPRU which will hopefully identify solutions to the mentioned issues, it is not clear what other intervention could further the situation for the time being.

Collaborative Fisheries Management Areas (CFMAs) and BMU financial sustainability: Two studies were commissioned in the past by WWF to examine BMU financial sustainability in Rufiji-Mafia- Kilwa seascape. A main proposal has long been that BMUs be contracted to collect licensing and other fisheries-related revenue, at their respective fish landing sites, on behalf of district councils, which have limited collecting capacity themselves, thereby generating revenue through commission. Through WWF support, all BMUs in Kibiti have been awarded a tender to collect revenue related to fisheries, mangroves and other products on behalf of Kibiti District Councils. To a lesser extent there has been similar progress in Mafia [2 BMUs have been contracted] and Kilwa [4] Districts. In other villages, tenders for revenue collection have been given to private individuals who outbid the BMUs. In 2017, a total of TZS 41,905,184 [approx. US\$ 18,600] was collected by 30 BMUs, an increase of 36% compared to 2016. Of the total collected by each BMU, 10% is paid to the BMU collecting officers; 10% is retained for BMU operations; 10% is retained by the village government and the remaining 70% goes to the district council. This means the average amount generated for BMU operations is only US\$ 62 per year, though this varies widely. BMU operations typically require around US\$ 1,000 to 1,500 per year; in practice only 4-5 BMUs are collecting a significant proportion of that amount under the above arrangements, whilst many BMUs are getting nothing. So whilst these arrangements are a good starting point for a few BMUs, it is by no means yet satisfactory. Other potential sources of BMU revenue include district councils sharing of a portion of gross district fisheries revenues directly with BMUs, or districts or BMUs imposing fish landing fees through district or village bylaws.

Under this proposed BAF project an activity has been included to facilitate Ministry of Local Government and Regional Administration (Tawala za Mikoa na Serikali za Mitaa – TAMISEMI) and Ministry of Livestock and Fisheries Development to reach a formal solution by formalizing a requirement for District Authorities to allocate a minimum percent of fisheries revenue to cater for (a) fisheries management within the district and (b) BMU activities. This is a dialogue that has been ongoing, with WWF facilitation, for several years but which, up to now, has not reached a firm conclusion, although there is willingness on both sides. Legal and operational processes to increase the levels of local fisheries revenue collection, fish landing and camping levies and allocation to further local fisheries and mangrove management intervention will also be considered. A permanent, formal solution to BMU

revenue-generation will ensure that core BMU functions are secured, including monitoring, control and surveillance; data collection and management oversight.

Rufiji Delta mangrove forest reserve: The project will empower local communities for longer-term sustainable management of their fisheries and natural mangrove resources by raising awareness about fisheries and mangrove values in the Delta area, improving their financial capacities, offering them training on management plans and working with them to restore degraded mangrove areas. The livelihood activities will include, introducing innovative approaches such as more fuel-efficient stoves and less nature-damaging livelihoods techniques to allow the communities to have longer term livelihoods that reduces their dependence to fisheries and mangrove products. Building important networks of mangrove experts via multi-level capacity building and awareness raising and education will be implemented. The project will also ensure coordination and exchange of information between different national organisations and between countries. Network members will exchange data, information and knowledge about mangroves and hence contribute to a deepening and sustainable knowledge base related to mangrove management. Establishing Global Mangrove Watch Africa, a user-friendly, semi-automated, online system providing mangrove distribution maps and information about the causes of mangrove degradation will be undertaken. We plan to look at strategies to make this knowledge tool self-funding so as to avoid being dependent on donor or foundation support for each and every activity. Working with partners throughout this project, will ensure fisheries and mangroves resources in the Delta area are implemented by all relevant parties and that they are committed to the long-term restoration, sustainable management and protection of mangroves for their inherent values for present and future generation. Mangrove Capital Africa (MCA) is a 10 years project in the Rufiji Delta with funds to support operation of CSOs including CFMAs, BMUs and VLRCs through small contractual arrangements. Therefore, the support will continue even after 5 years of implementation of BAF project

Maintenance of created infrastructure and procured equipment

Maintenance of infrastructure and equipment procured on behalf of Government partner institutions (principally Mafia Island Marine Park); community management entities (VLCs, BMUs and VNRCs) or resource-user CSOs (e.g. livelihood or micro-credit groups) will be the responsibility of the latter beneficiaries. Explicit written acknowledgement of such responsibility will be formalised in handing over ceremony and documentation signed by respective parties. Facilitating community management entities to secure sources of sustainable financing by which to undertake such maintenance (amongst other things) will itself be a project output. The legal provisions for local management and control of financial and equipment will be enshrined in village and district bylaws and approved by the District Council.

During the implementation process, the project will also examine how the seascape communities can attract funds from Tanzania Social Action Fund (TASAF) and other internal and external sources (NGOs, Bilateral donors, WIOMSA community small grants and private sector e.g. export processing factories). WWF and partner organisations will provide technical skills to help district authorities, CSO, MIMP and communities members on fund mobilization aspect. Community and District level staff's capacity to negotiate lobby and represent the fisheries and environmental sector will be strengthened such that their fisheries, mangrove management and forest reserve concerns will be better understood and gain greater attention from higher executive and political authorities.

Integration in Tanzania's sustainable development policies

The country has developed a strategy for 'inclusive growth programme 2016 – 2021'. The overarching goal is to accelerate inclusive economic growth with a focus on poverty reduction, job creation and **environmental sustainability**, in line with the principal objectives set out in the Tanzania Development

Vision 2025, which aim to eradicate extreme poverty, and promote high quality livelihoods and a competitive and diversified economy. The strategy primarily contributes to the achievement of Sustainable Development Goals (SDGs): Goal 1 (No poverty), Goal 2 (Zero Hunger), Goal 5 (Gender Equality), Goal 8 (Decent Work and Economic Growth), Goal 9 (Industry, innovation and infrastructure) and Goal 10 (Reduced Inequality). It also conforms to the United Nations Development Assistance Plan II (UNDAP II) for 2016-2021, in its vision on inclusive growth toward achieving the following outcomes: Increased economic transformation for greater poverty reduction, competitiveness and increased opportunities for decent and productive employment; enhanced equitable and inclusive access to quality basic education and lifelong learning; and, increased coverage of comprehensive and integrated social protection for all, especially the poor.

The strategy includes strengthening the partnership with partners such as the National Service Corporation and the Tanzania Social Action Fund (TASAF) to reach a large number of beneficiaries through the already existing national structures. Other strategies will be to continue the close collaboration with CSOs and research institutions to document and disseminate results, and to provide technical assistance to Local Government Authorities (LGAs) and key ministries such as the Ministry of Finance and Planning, and the Ministry of Agriculture, Ministry of Natural Resources and Tourism, Livestock and Fisheries to integrate good practices in national and local development plans and budgets.

Replication and dissemination of good practices and experiences

The Rufiji, Kibiti-Mafia-Kilwa Districts can be seen as a pioneer seascape area in terms of co management of protected areas for artisanal fisheries. The lessons learned from this project will be shared with other MPAs in the country, which are relatively younger than MIMP and thus can benefit from the project experiences, e.g. in terms of raising revenues and integrated co management approaches. The fisheries co management approach within and outside of the park is also relatively advanced compared to other areas in Tanzania, where CFMAs exist, but are often not really operational. Lessons learned from catch data collection and catch management will be disseminated to other areas. Also the octopus management through temporary closures is applicable in other coastal areas. The effective co management of the mangroves through livelihood incentive-based approaches can be replicated in other coastal areas, not only in Tanzania, but in the East African coast and WIO States.

11. Budget

Cost			Financing (EUR)			
Description	Total Amount (EUR)	% of total	Requested from Blue Action	%	Matching Funding	%
1 Direct costs	3.400.135 €	85,0%	2.761.261 €	92,0%	638.874 €	63,9%
1.1 Field implementation	2.052.808 €	51,3%	1.731.053 €	57,7%	321.754 €	32,2%
Field investments	559.280 €	14,0%	480.690 €	16,0%	78.590 €	7,9%
Training and capacity development	248.680 €	6,2%	168.840 €	5,6%	79.840 €	8,0%
Consulting services	310.996 €	7,8%	270.698 €	9,0%	40.298 €	4,0%
Awareness and communication	162.299 €	4,1%	148.799 €	5,0%	13.500 €	1,4%

Other marine conservation activities	621.552 €	15,5%	512.026 €	17,1%	109.526 €	11,0%
Contingency	150.000 €	3,8%	150.000 €	5,0%	0 €	0,0%
1.2 Project management	1.347.327 €	33,7%	1.030.207 €	34,3%	317.119 €	31,7%
Project staff	1.005.080 €	25,1%	773.933 €	25,8%	231.147 €	23,1%
Travel staff	87.115 €	2,2%	72.513 €	2,4%	14.602 €	1,5%
Operating costs of project	235.132 €	5,9%	168.761 €	5,6%	66.371 €	6,6%
External auditing	20.000 €	0,5%	15.000 €	0,5%	5.000 €	0,5%
2. Indirect costs	599.865 €	15,0%	238.739 €	8,0%	361.126 €	36,1%
2.1 Indirect costs	599.865 €	15,0%	238.739 €	8,0%	361.126 €	36,1%
Total	4.000.000 €	100,0%	3.000.000 €	100,0%	1.000.000 €	100,0%
Field implementation output „new MPA“	771.574 €	19,3%	4.000.000 €			
Field implementation output „Effectiveness“	1.000.456 €	25,0%				
Field implementation output „Livelihoods“	383.560 €	9,6%				
Field implementation output „Management & Operation“	1.844.410 €	46,1%				
Total	4.000.000 €	100,0%				

Annexes to the Full Proposal Template

Annex A: Project Results Matrix

Overall objective (impact)	Indicator 1.1 (BAF, adapted)	
By 2023, the long-term ecological integrity, resilience and biological productivity of the Rufiji-Mafia-Kilwa seascape has been conserved as an internationally important biodiversity hotspot supporting climate-resilient livelihoods of natural resource-dependent communities.	<p>Biomass, population size or percentage cover of selected marine umbrella species in MIMP, Rufiji Delta mangrove forest reserve and buffer zones.</p> <p>1.1.1. <u>Whale sharks (<i>Rhincodon typus</i>)</u>: <i>Metric</i>: Estimated number individuals/year (modelled) <i>Base Value</i>: 74 [2017]⁶ <i>Target Value (2023)</i>: equal to or greater than baseline</p> <p>1.1.2. <u>Green & Hawksbill turtles (<i>Chelonia mydas/ Eretmochelys imbricata</i>)</u>: <i>Metric</i>: (i) no. nests/yr [3-yr mean] (ii) no. hatchlings/yr [3-yr mean] in Mafia <i>Base Value</i>: (i) 194 [2015-17]⁷ (ii) 14,582 [2015-2017] <i>Target Value (2023)</i>: equal to or greater than baseline</p> <p>1.1.3. <u>Fish: top-predator reef-associates (<i>Epinephelus spp., Cheilinus undulatus, Caranx melampygus, Sphyræna spp., Scomberomorus spp.</i>)</u> <i>Metric</i>: biomass kg/ha (all species combined) at 5 MIMP sites <i>Base Value</i>: to be assessed during inception <i>Target Value (2023)</i>: equal to or greater than baseline</p> <p>1.1.4. <u>Mangrove kingfisher (<i>Halcyon senegaloides</i>)</u> <i>Metric</i>: Number of individuals/km [Rufiji Delta] <i>Base Value</i>: to be assessed during inception <i>Target Value (2023)</i>: equal to or greater than baseline</p> <p>1.1.5. <u>Waders [<i>Calidris ferruginea, Dromas ardeola, Xenus cinereus, Charadrius leschenaultia, C mongolus, Gelochelidon nilotica, Thalasseus bengalensis, Sterna saundersi</i>]</u> <i>Metric</i>: Number of individuals/km [Rufiji Delta] <i>Base Value</i>: 12,337 [2018]⁸ <i>Target Value (2023)</i>: equal to or greater than baseline</p> <p>1.1.6. <u>Hard corals [<i>Scleractinia</i> - approx. 285 species]</u> <i>Metric</i>: percentage cover hard coral [all spp] at 5 sampling sites within MIMP <i>Base Value</i>: In progress October 2018⁹ <i>Target Value (2023)</i>: equal to or greater than baseline</p>	<p>Annual survey reports from Marine Megafauna Foundation</p> <p>Annual survey reports from Sea Sense</p> <p>Survey reports from Mafia Island Marine Park [MIMP]</p> <p>Baseline & end-line survey reports from Wetlands International</p> <p>As above</p> <p>2018 and 2020 survey reports from MPRU under GoT/WB SWIOFish project. End-line survey report from MPRU</p>

	<p>1.1.7 (a) <u>Mangrove cover [all 10 species aggregated]</u> Unit of measurement: total mangrove cover [ha] Base Value: under way in 2018¹⁰ Target Value: baseline at least maintained or increased</p> <p>1.1.7 (b) <u>Mangrove density [all 10 species aggregated]</u> Unit of measurement: basal area m²/ha Base Value: 89.31 ± (Northern); 95.21 ± (Central); 52.77 ± (Southern) Target Value: baseline at least maintained or increased</p> <p>Indicator 1.2 (BAF adapted & expanded) Livelihood status in beneficiary households engaged in project livelihood interventions, in project areas.</p> <p>1.2.1. <u>Household material style-of-life</u> Metric: Frequency of selected household assets/ expenditures Baseline value: to be quantitatively sampled during inception Target Value (2023): change in beneficiary households >10% higher than control households.</p> <p>1.2.2. <u>Household food security(additional)</u> Metric: Percentage of households in project area reporting food insecurity above a target threshold. Base value: to be quantitatively sampled during project inception Target value (2023): change in beneficiary households >10% higher than control households.</p> <p>Indicator 1.3 (BAF, adapted) Community members in target communities with positive attitude towards protection of coastal and marine biodiversity.</p> <p>Metric: percentage of respondents [disaggregated by age, gender, occupation] with positive attitude towards relevant management measures Base Value: to be assessed during inception Target Value: (2023): > 75% of respondents, across all strata, with positive attitude</p>	<p>USFS technical report, 2018 and Wetlands Ecological Survey, 2018 [baseline] Wetlands International survey report 2023 [end-of-project] under BAF project</p> <p>BAF project household survey/ attitudes reports 2019 [baseline] and 2023 [end-of-project]</p> <p>As above</p> <p>As above</p>
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Summary	Success indicators	Verification sources	Assumption/ risks
Outcome 1 Improved management of marine protected areas in Rufiji-Mafia-Kilwa with a total area of 5500 km ² , including Mafia Island Marine Park; Rufiji Delta mangrove forest reserve and 8 collaborative fisheries management areas, integrated under the umbrella of a UNESCO Man and Biosphere (MAB) Reserve.	<p>Indicator 2.1 (BAF) Creation of new, or expansion of existing, MPAs <i>Metric:</i> area under designation (km²) <i>Base Value:</i> MIMP (822 km²) and Rufiji mangrove forest reserve (1,055 km²) <i>Target value:</i> Approx 5,500 km² designated as Man & Biosphere Reserve (IUCN cat. 6), inclusive of existing MIMP and Rufiji Delta mangrove forest reserve</p> <p>Indicator 2.2 (BAF) Management effectiveness of target marine protected areas <i>Metric:</i> METT scores for MIMP and Rufiji Delta mangrove forest reserve <i>Base value:</i> to be assessed during project inception <i>Target value (2023):</i> at least 10% above baseline for each area</p> <p>Indicator 2.3 (BAF, adapted) Small pelagic, octopus and prawn fisheries within Rufiji-Mafia-Kilwa seascape operate within maximum sustainable yield. <i>Metric:</i> selected MSY reference point appropriate to each fishery (either stock biomass, total effort or total production) to be determined through stock assessments ongoing under GoT/World Bank SWIOFish Tanzania project. <i>Base value:</i> in process during 2018-19 under SWIOFISH Tanzania project <i>Target value (2023):</i> Selected reference point for each fishery to be within MSY level.</p> <p>Indicator 2.5 (BAF adapted) New effective management instruments to reduce key direct threats to marine biodiversity are under implementation 2.5.1. Mafia Island Marine Park (MIMP): <i>Metric:</i> direct threat incidents per hour of surveillance effort, disaggregated by type of threat <i>Base Value:</i> to be assessed during YR1 <i>Target Value (2023):</i> blast-fishing maintained at zero; other non-compliance reduced by > 25%;</p> <p>2.5.2. Rufiji Delta mangrove forest reserve: <i>Metric:</i> direct threat incidents per hour of surveillance effort, disaggregated by type of threat <i>Base Value:</i> to be assessed during YR1 <i>Target Value (2023):</i> reduced by > 25%</p> <p>2.5.3. Collaborative fisheries management areas (CFMAs): <i>Metric:</i> direct threat incidents per hour of surveillance effort, disaggregated by type of threat <i>Base Value:</i> to be assessed during YR1 <i>Target Value (2021):</i> blast-fishing maintained at zero; others reduced by > 25%;</p>	<p>Official notification from UNESCO to Govt. of Tanzania and WWF project reporting to BAF</p> <p>METT assessment reports [2019] and [2023] under BAF project</p> <p>TAFIRI stock assessment reports [2019] under SWIOFish project</p> <p>TAFIRI stock assessment reports, [2023] under BAF project</p> <p>Routine MIMP patrol reports; Annual MIMP reports; WWF reporting to BAF</p> <p>VNRC patrol reports; Wetlands International annual reporting; WWF reporting to BAF</p> <p>BMU patrol reports; BMU reporting to district councils; WWF reporting to BAF</p> <p>Tanzania Blast-Monitoring Network [TBMN] reporting and website</p>	<p>Downstream ecological and livelihood impacts in Rufiji Delta and Mafia are adequately taken into account in environmental and social impact assessments for major development projects in the Rufiji Basin affecting environmental flows in the Rufiji River; and adequate mitigation measures are taken [e.g. dam discharge regimes are well formulated; irrigation off-take is controlled etc.]</p> <p>Current political will at Vice President's Office on maintaining integrity of nationally important environmental assets is maintained</p> <p>Co-management measures designed to control in-migration of mangrove and fisheries resource-users and rice farmers are backed-up by district and national authorities</p> <p>Mangrove forests, coral reefs, fish stocks and other marine habitats and resources in Rufiji-Mafia-Kilwa remain broadly resilient to extreme climate-related events</p> <p>Market demand for fisheries, mangrove and tourism products and services does not become so excessive as to overwhelm co-management capacities</p>

<p>Outcome 2 Community livelihoods built through diversified skills and opportunities.</p>	<p>Indicator 2.4.1 (additional) Community members with improved access to micro-finance.</p> <p><i>Metric:</i> total value of loans secured by new VSL members in MIMP/ number of beneficiaries' <i>Base value:</i> zero <i>Target value:</i> total loan value of EUR 420,000/ > 840 beneficiaries</p> <p>Indicator 2.4.2. (additional) Households generating additional income as a result of project livelihoods interventions</p> <p><i>Metric:</i> Number of beneficiary households generating > EUR 100 per year of additional income as a direct result of project livelihoods interventions <i>Base value:</i> zero <i>Target value:</i> >200</p>	<p>VSL group quarterly reporting; WWF reporting to BAF</p> <p>WWF VSL annual progress reports; WWF reporting to BAF</p>	<p>Global and national macro-economic situation remains stable and there are not significant exogenous economic disturbances affecting livelihoods in Rufiji-Mafia-Kilwa; market demand for fisheries, mangrove and tourism products and services remains robust</p> <p>More secure, diverse livelihoods in the target area enable local communities to comply with natural resources management regimes whilst still meeting basic welfare requirements</p>
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Summary	Success indicators	Verification sources	Assumption/ risks
Output1 Management plans and new protected areas established	<p>Indicator 3.1.1 & 3.1.2 (BAF adapted)</p> <p>Effective planning documents incorporating climate change mitigation and adaptation, and appropriate harvest control rules, in place and approved:</p> <p>3.1.1 (a) Mafia Island Marine Park (MIMP) General Management Plan: Metric: status of MIMP general management plan</p> <p>Base Value: not yet revised Target Value (2021): revised MIMP GMP approved by Board of Trustees of Marine Parks & Reserves</p> <p>3.1.1 (b) Rufiji Delta mangrove forest reserve management plan: Metric: status of management plan Rufiji Delta mangrove forest reserve</p> <p>Base Value: no active management plan Target Value (2021): management plan prepared and approved by local stakeholders and Director of Forestry, Tanzania Forest Service</p> <p>3.1.1 (c) CFMA management plans: Metric: status of eight CFMA management plans Base Value: not yet revised Target Value (2021): revised management plans prepared and approved by district councils and Director of Fisheries</p> <p>Indicator 3.1.3 (additional)</p> <p>Community participation in management planning</p> <p>3.1.3 (a) Mafia Island Marine Park (MIMP): Metric: Number [gender disaggregated] of community members consulted during general management plan revision</p> <p>Base Value: n/a Target Value (2021): 10% of adults engaged with >20% women</p> <p>3.1.3 (b) Rufiji Delta mangrove forest reserve management plan: Metric: Number [gender disaggregated] of community members consulted during Rufiji Delta mangrove management plan preparation</p> <p>Base Value: n/a Target Value (2021): 10% of adults engaged with >20% women</p> <p>3.1.3 (c) CFMA management plans: Metric: Number and gender disaggregation of community members consulted during 8x CFMA management plan revisions</p> <p>Base Value: n/a Target Value (2021): 10% of adults engaged with >20% women</p>	<p>Approved revised GMP; WWF reporting to BAF</p> <p>Approved management plan; WWF reporting to BAF</p> <p>Approved CFMA management plans available; WWF reporting to BAF</p> <p>MIMP GMP consultant's report; WWF reporting to BAF</p> <p>Wetlands International activity reporting; WWF reporting to BAF</p> <p>WWF activity reporting; WWF reporting to BAF</p>	<p>Designation of Rufiji-Mafia-Kilwa seascape as a UNESCO Man & Biosphere Reserve effectively raises the profile and recognition of the target area amongst sectoral and national decision-makers.</p> <p>Management plans are well designed with meaningful management measures that accurately address threats to stock/resource status</p> <p>Management plans have sufficient community participation and community acceptance of management measures</p> <p>There are sufficient resources available to support implementation: Mafia Island Marine Park receives sufficient portion of its revenues back from Conservation & Development Fund; National and District authorities support co-management financing measures</p>

<p>Output 2: Resources, instruments and capacities for the implementation of management plans of marine protected areas and sustainable use zones are improved</p>	<p>Indicator 3.2.1 (BAF) Maximum of three years after the inception of the project, at least 50% of measures planned in management or operational plans have started implementation.</p> <p><u>3.2.1 (a) Mafia Island Marine Park (MIMP)</u> <i>Metric:</i> percentage of management measures with implementation started <i>Base value:</i> to be determined during inception <i>Target value (2021):</i> > 50%</p> <p><u>3.2.1 (b) Rufiji Delta mangrove management reserve</u> <i>Metric:</i> percentage of management measures with implementation started <i>Base value:</i> zero (currently no management plan) <i>Target value (2021):</i> > 50%</p> <p><u>3.2.1 (c) Collaborative fisheries management areas (CFMAs)</u> <i>Metric:</i> percentage of management measures with implementation started <i>Base value:</i> to be determined during inception <i>Target value (2021):</i> > 50%</p> <p>Indicator 3.2.2 (BAF adapted) Fisheries and mangrove no-take areas outside of MIMP are gazetted in district or village bylaws</p> <p><u>3.2.2 (a) Rufiji Delta mangrove management reserve</u> <i>Metric:</i> percentage of mangrove no-take areas gazetted in bylaws <i>Base value:</i> zero <i>Target value (2021):</i> 100%</p> <p><u>3.2.2 (b) Collaborative fisheries management areas (CFMAs)</u> <i>Metric:</i> percentage of no-take areas gazetted in bylaws <i>Base value:</i> zero <i>Target value (2021):</i> 100%</p> <p>Indicator 3.2.3 (BAF) Cost-effective monitoring, control and surveillance techniques to prevent illegal fishing/ use of unsustainable practices successfully adopted</p> <p><u>3.2.3 (a) Mafia Island Marine Park (MIMP)</u> <i>Metric:</i> no. of aerial drone surveillance flights per month (6m average) <i>Base value:</i> zero <i>Target value (2023):</i> > 10/month</p> <p><u>3.2.3 (b) Rufiji Delta mangrove management reserve</u> <i>Metric:</i> no. of community surveillance patrols/month in 20 delta villages (6 month average) <i>Base value:</i> zero</p>	<p>MIMP annual reporting; WWF reporting to BAF</p> <p>Wetlands International annual reporting; WWF reporting to BAF</p> <p>BMU reporting; WWF annual technical progress reports; WWF reporting to BAF</p> <p>Minutes of Kibiti, Rufiji, Mafia & Kiwa District Council meetings; Minutes of village council meetings; Wetlands International annual reporting; WWF annual technical progress reports; WWF reporting to BAF</p> <p>MIMP annual reporting; WWF reporting to BAF</p> <p>VNRC reporting; Wetlands International annual reporting; WWF reporting to BAF</p> <p>BMU quarterly reports; MLF BMU performance database; WWF annual technical progress reports; WWF reporting to BAF</p> <p>VNRC reporting; Wetlands International annual reporting; WWF reporting to BAF</p> <p>BMU quarterly reports; MLF BMU performance database; WWF annual technical progress reports; WWF reporting to BAF</p> <p>MIMP annual reporting; WWF annual technical progress reports; WWF reporting to BAF</p> <p>Wetlands International annual reporting; WWF reporting to BAF</p> <p>MIMP annual reporting; WWF annual technical progress reports; WWF reporting to BAF</p>	<p>Local politicians do not politicise, misrepresent and/or undermine support for natural resources management to serve short-term electoral interests</p> <p>Local community resource-users perceive self-interest in complying with fisheries and mangrove management measures so as to secure their family livelihoods; and have sufficient livelihood security to do that.</p> <p>Staff and leaders of national [MIMP, TFS], district and community [BMUs, VN-RCs] management bodies who receive training and capacity-building are not transferred or removed from their posts to the extent that such inputs fail to impact on management effectiveness</p> <p>Funds generated or allocated for co-management are not misused to the extent that management effectiveness and operations are significantly undermined</p>
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Target value (2023): > 40/month

3.2.3 (c) Collaborative fisheries management areas (CFMAs)

Metric: no. patrols undertaken in 8x CFMAs per month (6 month average)

Base value: to be determined during inception

Target value (2023): >4 per month per CFMA

Indicator 3.2.5 (BAF adapted)

Realistic strategies for sustainable financing of MPAs developed and started implementation.

3.2.5 (a) Sustainable financing of village natural resource committees (VNRCs) in

Rufiji Delta mangrove forest reserve. Metric: number of VNRCs receiving at least

US\$ 200/yr revenue from forest product revenue collection on behalf of District

Council or TFS

Base value: 0

Target value (2023): 10

3.2.5 (b) Sustainable financing of collaborative fisheries management areas

Metric: number of Beach Management Units (BMUs) receiving at least US\$ 200/yr

revenue from respective district council

Base value: 6

Target value (2023): 15

Indicator 3.2.6 (additional)

Number of MPA management staff and community natural resources managers whose skills and knowledge is enhanced by project training and capacity-building interventions

3.2.6 (a) Mafia Island Marine Park (MIMP)

Metric: number of MIMP staff and community leaders within MIMP trained

Base value: zero

Target value (2023): 10 MIMP staff and 100 community leaders

3.2.6 (b) Rufiji Delta mangrove forest reserve

Metric: number of Tanzania Forest Service; Kibiti District staff; and community leaders within Rufiji Delta mangrove forest reserve trained

Base value: 0

<p>Output 3: Sustainable livelihoods are promoted</p>	<p>Target value (2023): 10 TFS/Kibiti District staff and 200 community leaders</p> <p><u>3.2.6 (b) Collaborative fisheries management areas</u></p> <p>Metric: number of district fisheries staff and BMU leaders trained</p> <p>Base value: 0</p> <p>Target value (2023): 9 district staff & 260 BMU leaders</p>		
<p>Indicator 3.3.1 (BAF adapted)</p> <p>Initiatives to strengthen livelihoods by improving access to complementary sources of income generation</p>	<p><u>3.3.1 (a) Mafia Island Marine Park (MIMP)</u></p> <p>Metric: number of households with additional income > EUR 100/yr from participation in VSL, skills training & offshore fishing</p> <p>Base value: zero</p> <p>Target value (2023): 14 villages > 700 households</p>	<p>WWF activity reports; WWF annual technical progress reports; WWF reporting to BAF</p>	<p>Improvements in livelihood security, including increased financial independence of women ensuring household finances are better-managed, makes it easier for resource-users to comply with natural resources management regimes</p>
<p><u>3.3.1 (b) Rufiji Delta mangrove forest reserve</u></p> <p>Metric: number of villages / households benefiting > EUR 100/yr from Wetlands livelihood interventions</p> <p>Base value: 0</p> <p>Target value (2023): 9 villages/ > 450 households</p>	<p>Indicator 3.3.2 BAF</p> <p>Number of initiatives to increase value added in supply chains</p> <p>Metric: number of villages/communities where value addition project interventions are implemented</p> <p>Baseline: zero</p> <p>Target: Rufiji Delta (10; MIMP (1)</p>	<p>Wetlands International annual reporting; WWF reporting to BAF</p>	<p>Increased access-to-credit and increased household income is not channelled into increased or unsustainable resource extraction effort.</p>
<p>Indicator 3.3.3 BAF</p> <p>Increase number of women in leadership positions and benefiting from economic empowerment</p>	<p><u>3.3.3 (a) Mafia Island Marine Park (MIMP)</u></p> <p>Metric: percentage women on village liaison committees (VLCs) / percentage of project livelihood beneficiaries that are women</p> <p>Base value: to be assessed during inception / zero</p> <p>Target value (2023): to be proposed during inception / >50%</p>	<p>WWF activity reports; WWF annual technical progress reports; WWF reporting to BAF</p>	<p>Increased representation of women on co-management bodies helps to ensure that co-management serves the interests of the whole community</p>

<p>3.3.3 (b) Rufiji Delta mangrove forest reserve <i>Metric:</i> percentage women on village natural resources committees (VNRCs) / percentage of project livelihood beneficiaries that are women <i>Base value:</i> to be assessed during inception / zero <i>Target value (2023):</i> to be proposed during inception / >50%</p> <p>3.3.3 (c) Collaborative fisheries management areas (CFMAs) <i>Metric:</i> percentage women on BMU executive committees / percentage of project livelihood beneficiaries that are women <i>Base value:</i> to be assessed during inception / zero <i>Target value (2023):</i> to be proposed during inception / >50%</p>	
<p>Key activities</p> <p>Key activities contributing to Output 1</p> <ul style="list-style-type: none"> § Revise Mafia Island Marine Park (MIMP) General management plan § Submit nomination for Rufiji-Mafia-Kilwa Man & Biosphere (MAB) Reserve § Develop local area fisheries management strategies for prawns and small pelagics; use as basis to revise management plans for 8 collaborative fisheries management areas (CFMAs) § Prepare Mangrove Management Plan for Rufiji Delta mangrove forest reserve <p>Key activities contributing to Output 2</p> <ul style="list-style-type: none"> § Train MIMP staff on fisheries co-management; monitoring control & surveillance; and maritime skills § Construct (1) and refurbish (1) MIMP ranger posts; construct ranger accommodation at MMP HQ; refurbish 10 village liaison committees (VLC) offices § Procure and install buoys to demarcate two no-take zones in MIMP; 20 signboards at boundary intersections and villages in MIMP; procure MCS equipment § Procure and operationalise drones for remote surveillance of no-take zones § Conduct exchange learning visit for VLC leaders & fisher representatives to Kenya; produce participatory film; and use to undertake community awareness sessions on no-take replenishment zones § Train village & BMU leaders on priority fisheries management; regular extension & mentoring with 13 priority BMUs; support district BMU network lesson-learning and performance awards: 	

<p>§ Promote no-take zone compliance in 3 x CFMAs</p> <p>§ Facilitate negotiations for marketing of octopus during opening of closures</p> <p>§ Support BMU surveillance to enforce prawn/small pelagic management measures; procure monitoring & enforcement equipment for BMUs - boats, engines, life jackets, emergency kits [x3 sets]; cameras; field equipment</p> <p>§ Facilitate formalisation of sustainable financing/ district revenue-sharing mechanisms for beach management units</p> <p>§ Undertake endline stock assessment of prawns, small pelagics & octopus in project area</p> <p>§ Introduce mobile app for fisheries catch data collection within MIMP; facilitate feed-back on catch data to BMUs, VLCs, and fisher assemblies in MIMP and buffer zone fishing communities</p> <p>§ Mobilise Village Natural Resources Committees in mangrove villages and form district level coordination unit</p> <p>§ Train VNRC members in mangrove ecology, forest law and prosecution, conflict resolution, survival at sea,</p> <p>§ Build VNRC offices and equip with VHF radios, furniture, field equipment, transport equipment in 6 villages</p> <p>§ Train TFS and district staff in mangrove ecology, drone application, GIS, and legal training, conflict resolution</p> <p>§ Procure equipment for TFS and district management, surveillance drone, 2 boats & engines, GIS software</p>	
<p><u>Key activities contributing to Output 3</u></p> <p>§ Establish and train village savings & loans (VSL) groups in 14 villages in MIMP</p> <p>§ Operationalise mobile app technology in 290 village savings & loans (VSL) groups in 37 communities</p> <p>§ Provide demand-led entrepreneurship and skills training to members of new VSL groups in MIMP</p> <p>§ Promote market-led offshore artisanal fishing trials in Mafia; gear training; safety-at-sea training; market facilitation</p> <p>§ Operationalise mobile app to strengthen fisheries marketing and fisher business management at Utende in MIMP</p>	

§ Support diverse livelihood support in Rufiji Delta mangrove communities including: sustainable rice farming in non-mangrove areas; bee-keeping and honey production in mangrove areas including value added packaging; crab- fattening in mangrove areas; village savings & loans; capacity building on cashew production; improved cassava production.

Key activities contributing to Output 4 [monitoring & evaluation]

- § Whale shark population monitoring
- § Sea turtle nest monitoring
- § Coral reef & top-predator reef fish monitoring
- § Annual Rufiji Delta bird count
- § End-of-project Rufiji Delta mangrove ecological survey
- § Household economics/knowledge, attitudes & perceptions [KAP] baseline and endline studies
- § Management effectiveness [METT] assessment for MIMP
- § Mid-term project evaluation
- § Final project evaluation

Annex B: Environmental and Social Scoping Report

The ESMS questionnaire has been updated during full proposal development and is attached to this full proposal. (Annex F). There are no significant environmental risks associated with the project. The IUCN standard on indigenous people is not being triggered by the project.

The IUCN Standard on Involuntary Resettlement and Access Restrictions was triggered. Therefore an initial Access Restriction Mitigation Process Framework in line with this standard is also attached in Annex F.

Key social issues identified are:

The project sites in the Rufiji Mafia Kilwa Seascape are Mafia Island Marine Park (MIMP), the surrounding Community Fisheries Management Areas (CFMAs) and the Rufiji Mangrove Forest Reserve. In these areas no new restrictions are implemented through the project. However, improved management and strengthened enforcement may lead to decreased income temporarily which will be mitigated through complementary income generating activities. This may lead to increased social conflict at community level, e.g. between village-level fisheries management entities (BMUs) and fishers, and between resident and non-resident fishers, as a consequence of strengthened implementation of fisheries regulations or introduction of new harvest control rules to manage fishing effort.

The household survey/attitudes reports in 2019 will serve as a baseline and to identify critical social effects of project measures to be monitored during project implementation. Regular consultations with affected communities will provide the data basis for the monitoring of these critical social issues. The household survey/attitudes reports in 2023 will serve as evaluation of these critical social issues. In addition the conflict resolution mechanisms will be used to identify urgent issues that need to be dealt with.

Annex C : Information on Implementing Partners

Co-ordination, roles and responsibilities

The proposed project will be implemented by a consortium of three implementing partners as outlined below. Other Government institutional partners are already described in Section 2 above.

i) **WWF Germany:**

WWF Germany's role in the consortium will be to: (a) provide overall co-ordination of the consortium; (b) oversee overall project implementation and grant management; (c) co-ordinate production of, and submit, reports to the donor and (d) be the primary point of contact with the donor

ii) **WWF Tanzania Country Office:** The WWF Tanzania Country Office (WWF TCO) is the registered national office in Tanzania of WWF International, an international non-governmental organisation (NGO) with headquarters in Gland, Switzerland and a presence in over 100 countries around the world. WWF TCO's vision is: 'By 2030, Tanzania's outstanding and globally significant natural wealth and biodiversity are sustained, and support local livelihoods and national economic development for present and future generations'. WWF TCO implements a conservation programme in Tanzania guided by its country strategy for 2015-2020, covering six thematic areas: marine & fisheries; forests; freshwater resources; wildlife management in Selous-Ruvuma Landscape; elephants and rhino conservation; and sustainable energy. Details of WWF TCO's personnel capacity and financial turnover are given in 4.2 below.

WWF TCO's role in the project will be: (a) to oversee co-ordination and implementation of the project within Tanzania; (b) directly to implement all components of the project in Mafia Island Marine Park (MIMP), fisheries management areas (CFMAs) in the MIMP buffer zone; (c) to lead on activities relating to Man & Biosphere designation for the Rufiji-Mafia-Kilwa seascape, in association with Wetlands International and relevant Government partners; (d) to undertake financial management and technical and financial reporting for [b] and [c] above;

iii) **Wetlands International:** Wetlands International is the only global not-for-profit organisation dedicated to the conservation and restoration of wetlands. Its head office is based in the Netherlands and it has a network of offices around the world; these are often independent entities committed to implementing a common Strategy. Wetlands International works at the field level to develop and mobilise knowledge, and use its practical experience to advocate for better policies. Wetlands International co-ordinates, or is a partner in, a number of global mangrove management initiatives aligned with the Global Mangrove Alliance, including: Mangrove Watch-Global; Mangrove Capital Africa and Mangroves for the Future. Wetlands International operates in Tanzania through a Memorandum of Understanding with the Tanzania Forest Service, and is currently hosted at the WWF Tanzania Country Office.

Wetlands International's role in the project will be: (a) to directly implement all components of the project in Rufiji Delta mangrove forest reserve; (b) to undertake financial management and technical and financial reporting for the same; and (c) to participate in activities relating to Man & Biosphere designation for the Rufiji-Mafia-Kilwa seascape, in association with WWF TCO and relevant Government partners.

The overall project budget [including matching funds] will be divided approximately as follows:

- **7% WWF Germany**
- **68% WWF Tanzania Country Office**
- **25% Wetlands International**

The organisation	
Name of organisation	WWF Deutschland (WWF-DE)
Project management	The International WWF-Centre for Marine Conservation in Hamburg (part of WWF Germany, Biodiversity division) will be responsible for the project. The project manager, an expert in Marine Conservation & Development is based in this department and is responsible for overall project coordination during project development and implementation. The Project Finance and Administration Manager, based in the Finance and Operations division will be responsible for the financial administration of the project. A public sector partnership coordinator based in the biodiversity division will support during project development.
Start of operations in the proposed country(ies)	January 2019
Total number of staff in the organisation	Total staff number 283 (March 2018) 100% staff in non-ODA countries; 25 % of administrative staff
Number and location of offices in the country(ies)	Head office in Berlin, offices in Hamburg, Frankfurt, Stralsund, Dessau, Husum, Ratzeburg.
Staff numbers in the proposed country(ies) (national/international)	0
Annual budget in EUR for each of the last three years	<p>Total budget and % of budget implemented in the project region for each of the last three years:</p> <p>FY 17: 77 Mio. €</p> <p>FY 16: 68,2 Mio. €</p> <p>FY 15: 66,8 Mio. €</p> <p>Budget implemented in the region (Kenya, Tanzania, Mozambique, Madagascar):</p> <p>FY 17: 1.313.279,53 €</p> <p>FY 16: 986.834,00 €</p> <p>FY 15: 775.474,00 €</p>
Financial management	<p>Besides an accounting department with seven staff members, WWF Germany employs two financial controllers and has a project finance management unit with 17 staff members.</p> <p>Internal controls ensure that: 1) financial transactions are approved by authorized persons and are consistent with applicable laws, regulations and WWF Germany's policies; 2) assets are maintained safely and controlled; and 3) accounting records are complete, accurate and maintained on a consistent basis. Additionally, WWF Germany is externally audited annually by certified chartered accountants and publishes the annual financial statement. Since 2016, WWF Germany is also certified by TÜV Thüringen according to the project management standards 3330/290/18.</p>

E&S Policy and/or provisions/ guidelines/standards for E&S management of projects including Stakeholder Engagement Plans (for lead organisation)	<p>WWF Germany commits to WWF's Umbrella Framework on Social Policies established in 2010. These policies are: Indigenous Peoples (1996), Conservation Initiative on Human Rights Framework (2009), Poverty and Conservation (2009), Gender (2011).</p> <p>The WWF Network has social policies that stipulate how the organisation works with indigenous communities, promotes pro-poor conservation, human rights and gender equity and obtains free, prior and informed consent with local communities. Along with these policies a clear complaints system has been in existence since 2016 and all projects clearly communicate that with beneficiaries. Complaints received are responded to in 10 days by the Projects Complaints Officer and the organisation does not tolerate any retaliation to complainants.</p> <p>The indigenous people's policy recognises the role of indigenous populations as important stewards and partners for conserving Earth's natural resources. Consequently the organisation is committed to respecting indigenous and traditional people's human and development rights and cultures.</p> <p>WWF is also dedicated to a pro-poor conservation approach which addresses not only physiological deprivation but also social deprivation such as lack of access to natural resources, discrimination, lack of voice and power. The organisation aims to understand poverty-environment linkages to develop appropriate strategies.</p> <p>Further WWF recognises that human rights are central to achieving effective and equitable conservation and development outcomes. A human rights approach is therefore fundamental meaning that values of good governance, human rights and civil society engagement are primary in projects that WWF undertakes.</p> <p>The organisation also has gender policy that appreciates the differences and inequities existent between men and women in their access of and control over natural resources and decision making in relation to environmental resources. Cultural sensitivity to these socially constructed roles is adopted in order to ensure social change towards just, equitable and fair communities is achieved.</p>
Is the organisation legally authorised to receive charitable funds?	yes
Contact person	<p>Name: Katharina Lang</p> <p>Telephone: +49 30 311 777 271</p> <p>Email: katharina.lang@wwf.de</p>
Website	http://www.wwf.de/

Key Staff

Please use the following table to provide information on key staff members of the organisation implementing the project. At the very least, please provide information for the Country Director, Project Manager, key sector experts (only for sectors relevant to the project, including the technical expert for construction and experts for E&S Impact Assessments), and key support staff (e.g. Head of Support, Head of Finance, Head of Procurement).

Name of key staff	Relevant expertise	Years of relevant professional experience	Number of years with the organisation	Type of contract	Location where based	% of time working on the project
Uwe Johannsen: Consortium coordinator and overall project management lead	Management and coordination of German donor-funded projects, small scale fisheries management and coastal habitat conservation (mangroves, coral reefs)	22	11	Permanent	Hamburg	30 (of a full-time equivalent)
Catherine Gicquel	Public law (administrative law, public grants and contracts) economics, inter-culturally (studies and experience, of this 5 years collaboration with WWF-MCO)	10	5	Permanent	Berlin, Germany	25% (of a full-time equivalent)

Key Experiences

Please use the following table to summarise up to five projects the organisation has implemented within the last five years, which are relevant to the project at hand. In particular, it should become apparent how far infrastructure/equipment/investment measures have been implemented within the project (e.g. rough budget share).

Name of project	Start and end date	Donor	Country, specific location and MPA	Budget (million EUR)	Activities relevant for the proposed intervention (max. 100 words per project)
Mangrove management Ambaro Bay	01/2014 – 12/2017	BMZ	Madagascar	0.801	Mangrove and fisheries management, alternative livelihoods, energy saving
Fish For Life	07/2013 – 06/2015	BMZ	Senegal	0.663	MPA management and poverty alleviation, improving working conditions in fish processing plants
Mangrove conservation in Senegal	01/2012 – 12/2015	BMZ	Senegal	0.815	Implementation of sustainable mangrove management and reforestation of the mangrove stands in three project areas in Senegal
Partnership programme towards sustainable tuna fisheries	01/2011 – 12/2017	DEG - PPP	Philippines	2.600	Develop management plans for sustainable fisheries, strengthen fisher organisations at local and national level, combat illegal fishing, promote transparency
Monitoring and support for sustainable management of waterfowl and their habitats in the marine protected areas of the Warner Region	08/2008 – 09/2010	Common Wadden Sea Secretariat	Senegal, Mauritania, Guinea Bissau	0.180	MPA Management, Monitoring, Awareness Raising

1 Your organisation	
Name of organisation	WWF Tanzania Country Office
Project management	<p>The WWF Tanzania Country Office (WWF TCO) is the registered national office in Tanzania of WWF International, established in 1991. The WWF TCO headquarters are in Dar es Salaam.</p> <p>WWF TCO's Marine Programme will be responsible for this project, and currently the programme employs 10 full time technical staff including 4 specializing in community engagement on fisheries as well as one full-time communications and one M&E specialist, though some of this team will come to the end of their current contracts by the end of 2018 owing to completion of existing projects. The proposed BAF project will contribute to the salary of four staff from this Marine Programme team as well as one from the Finance Dept.</p> <p>The WWF TCO Marine Programme Coordinator will be responsible for this BAF project, reporting to the WWF TCO Country Director through the WWF TCO Conservation Manager.</p> <p>WWF Tanzania has four major programmes; marine, forestry, wildlife and sustainable energy. The proposed project falls under marine programme which includes other marine projects like sustainable tuna fisheries, community actions against blast fishing, promoting sustainable prawn fisheries and whale shark monitoring. Marine programme is one of the major programmes that profiles TCO. The Marine Programme Coordinator has an overall responsibility to oversee management and delivery of the proposed project. The Coordinator reports to the Conservation Manager. There will be three Project Executants in Rufiji (now Kibiti), Mafia and Kilwa and their major role is to oversee execution of site specific activities including maintaining partnership with stakeholders at the site. Project Executants report to the Project Coordinator. Project Executants have a role to manage field offices and support staff at the sites e.g. accountant, drivers and office assistants. The programme has dedicated Monitoring, Evaluation and Learning Officer; and Communications and Awareness Officer. The two officers reports to the Programme Coordinator. Programme accountants are responsible to monitor budgets and report finances to the programme and TCO. Monitoring, Evaluation and Learning Officer has a role to track and report progress in implementing work plans vs monitoring plan. Communications Officer is responsible in production of materials for awareness, profiling and maintaining visibility. The officer is responsible to manage communications platforms e.g. social media, radio and TV engagements. There is one Enterprise and Micro Loans Officer who coordinates entrepreneur; and credits and savings activities. The Enterprise Officer reports to the Programme Coordinator.</p>
Start of operations in the proposed country(ies)	January 2019

Total staff of the organisation	<p>WWF TCO currently employs 71 staff (all Tanzanian nationals).</p> <p>Technical staff are 26 making 37% of all staff</p> <p>Administrative staff are 20 making 28% of all staff</p> <p>Supporting staff are 25 making 35% of all staff</p>
Number and location of offices in the country(ies)	The WWF TCO has headquarters in Dar Es Salaam with five field offices in Kilwa and Mafia on the coast, and three others upcountry (Iringa region, Mara region and Tunduru- Ruvuma region).
Staff number in the proposed country(ies) (national / international)	71 staff
Annual budget in EUR for each of the last three years	<p>Total budget and % of budget implemented in the project region for each of the last three years (exchange rate TZS to EUR as of 12/04/2018):</p> <p>Year</p> <p>Overall budget</p> <p>Marine budget</p> <p>%</p> <p>FY15</p> <p>4.889.330 EUR</p> <p>1.038.800 EUR</p> <p>21%</p> <p>FY16</p> <p>5.657.900 EUR</p> <p>1.414.470 EUR</p> <p>25%</p> <p>FY17</p> <p>4.710.800 EUR</p> <p>1.507.460 EUR</p> <p>32%</p>
Financial management	<p>The WWF TCO Finance Department employs nine full time finance professionals overseeing expenditure across the Tanzania programme averaging US\$ 6-7m per year. There are well documented financial management policies and procedure for financial management in the WWF TCO financial procedures manual. The department will be responsible for the financial management for this project. The office is externally audited annually.</p> <p>The organisation uses oracle system whereby every donor is assigned a specific number to monitor transactions. The organisation has a clear procedure on how to approve payments. The request is initiated by the field officer, checked by the Accountant, signed by the head of department, counter signed by the Finance Manager and approved by the Country Director.</p>

Environmental and Social Policy and/or provisions/guidelines/ standards for environmental and social management of projects including Stakeholder Engagement Plans (For lead organisation)	<p>The WWF Network has social policies that stipulate how the organisation works with indigenous communities, promotes pro-poor conservation, human rights and gender equity and obtains free, prior and informed consent with local communities. Along with these policies a clear complaints system has been in existence since 2016 and all projects clearly communicate that with beneficiaries. Complaints received are responded to in 10 days by the Projects Complaints Officer and the organisation does not tolerate any retaliation to complainants.</p> <p>The indigenous people's policy recognises the role of indigenous populations as important stewards and partners for conserving Earth's natural resources. Consequently the organisation is committed to respecting indigenous and traditional people's human and development rights and cultures.</p> <p>WWF is also dedicated to a pro-poor conservation approach which addresses not only physiological deprivation but also social deprivation such as lack of access to natural resources, discrimination, lack of voice and power. The organisation aims to understand poverty-environment linkages to develop appropriate strategies.</p> <p>Further WWF recognises that human rights are central to achieving effective and equitable conservation and development outcomes. A human rights approach is therefore fundamental meaning that values of good governance, human rights and civil society engagement are primary in projects that WWF undertakes.</p> <p>The organisation also has gender policy that appreciates the differences and inequities existent between men and women in their access of and control over natural resources and decision making in relation to environmental resources. Cultural sensitivity to these socially constructed roles is adopted in order to ensure social change towards just, equitable and fair communities is achieved.</p>
Is your organisation legally authorized to receive charitable funds?	Yes
Contact Person	<p>Name: Severin Kalonga</p> <p>Telephone: +255 22 2772455/ 5346</p> <p>Mobile: +255 789 207 109</p> <p>Email: skalonga@wwftz.org</p>
Website	http://wwf.panda.org/who we are/wwf offices/tanzania/

WWF Tanzania Country Office – Key staff

Name of key staff	Relevant expertise	Years of relevant professional experience	Number of years with the organisation	Type of contract	Location based	% of time working on the project
Amani Ngusaru: Country Director	Oceanography, fisheries management, organisation development	28	14	Permanent	Dar es Salaam	5
Marine Programme Coordinator	Overall strategic oversight, fisheries management, MPAs	10	-	Permanent	Dar es Salaam	20
Project Manager – Policy/ research lead	Marine biology, fisheries management, project management	10	-	Permanent	Kilwa/Mafia	100
Jumanne Mohammed: Project Officer – technical officer in field	Fisheries, aquaculture, collaborative fisheries management	8	3.5	Fixed term	Mafia/Kilwa	100
Elia Sabula: M&E Officer	Monitoring, Evaluation and Learning	9	1.75	Fixed term	Dar es Salaam	75
Thomas Chale	Coastal livelihoods, micro-credit, community development	18	15	Fixed term	Kilwa	100
Paul Kugopya	Fisheries management	20	10	Fixed term	Mafia	100
Geofrey Kamugisha	Collaborative fisheries management	7	3	Fixed term	Kilwa	75
Renatus Rwamugira	Finance and Accountant	7	4	Permanent	Kilwa	75
Amani Moshi: Project Accountant	Finance and accounts	16	15	Permanent	Dar es Salaam	75
Neema Fredrick: Finance Manager	Finance and accounts	7	1	Permanent	Dar es Salaam	5
Lucason Maiga: Operations Manager	Operations, logistics and procurement	10	6	Permanent	Dar es Salaam	5
Swaumu Swalihi	Office Assistance	21	21	Permanent	Mafia	75
Brighton Mutiganzi	Driver	11	5	Permanent	Kilwa	75
Boaz Marungi	Driver	25	21	Permanent	Mafia	75
Sudi Malle	Driver	17	13	Permanent	Dar es Salaam	75

Key Experiences – WWF Tanzania

Name of project	Start and end date	Donor	Country, specific location and MPA	Budget (million EUR)	Activities relevant for the proposed intervention (max. 100 words per project)
Building effective long term fisheries co-management in five coastal districts in Tanzania and promoting cost-wide Learning On the same	Jan 2013 to Dec 2017	(80% EU; 20% WWF UK)	Tanzania – Rufiji/Kibiti, Mafia, Kilwa, Mtwara, Kigamboni	3	<p>Objective: by 2017, communities in coastal fishing villages in coastal districts are empowered to implement long-term fisheries co-management systems that generate optimal, sustainable & equitable livelihood benefits, and which provide a source of lesson-learning for other coastal communities. Actual outcomes:</p> <ol style="list-style-type: none"> 1) Artisanal fisheries more effectively managed in 16 collaborative fisheries management areas covering 3,600km², with 67 community beach management units having effective, self-sustaining operations; 2) Livelihoods strengthened in 67 coastal communities: 252 village community banks established with 6,695 members generating over 8,500 micro-loans with total value of US\$ 1.6 million. 3) Policy and legislative environment improved.
Community action against blast fishing in mainland Tanzania	April 2017 to October 2018	Indian Ocean Commission (IOC)	Kibiti, Kilwa, Mafia, Kigamboni,	0.15	<p>Objective: to reduce incidence of blast-fishing at ten selected locations on the Tanzania mainland coast by at least 50%, thereby lowering pressure on coral reef biodiversity resources and securing related fisheries-based livelihoods. Expected results:</p> <ol style="list-style-type: none"> 1) Collective commitment to taking action against blast-fishing is strengthened in 10 target communities and respective local authorities, through lesson-sharing and planning; 2) Effective action against blast-fishing is taken by beach management units (BMUs) in 10 target areas, in collaboration with district authorities; 3) Data on incidence of blast-fishing in 10 target areas is available for prompting and planning enforcement actions and assessing their effectiveness.

Promoting community-based forestry resources management	2014-2017	WWF Finland	Kibiti, Kilwa, Ruvuma Landscape	0.87	<p>Objective: Inclusive platforms for multi-stakeholder dialogue on forests & investments are established, strengthened and functional in Tanzania. Actual outcomes:</p> <ol style="list-style-type: none"> 1) Zanzibar Declaration on Illegal Trade in Timber and other Forest Products signed by five countries in Eastern Africa region 2) Area under sustainable forest management in four districts (Rufiji, Kilwa, Tunduru & Namtumbo) increased by 95,446 ha 3) Area of forest audited & registered under Tanzanian FSC Certificate Group Scheme in Kilwa and Rufiji districts increased by 25% from 107,101 ha to 133,679 ha 4) EUR 209,000 generated from sale of FSC-certified timber for village land forest reserves (VLFs)
Promoting sustainable tuna fisheries	2010-2016	NORAD, Sida, WWF UK	Tanzania	0.6	<ol style="list-style-type: none"> 1) Promoting sustainable tuna fisheries in Coastal East Africa 2) Harmonized regional fisheries policies developed to guide foreign nations engagement in migratory fish fishing permissions 3) Deep sea fishing policy and regulations reviewed 4) Civil societies capacitated to advocate for sustainable fisheries

Your organisation	
Name of organisation	Wetlands International
Project management	<p>Wetlands International is a Network Organisation headquartered in the Netherlands. We have 16 offices around the world and presence in about 100 countries – all offices share the vision and mission and are led by a Strategic Intent with 5 distinct Strategic Pillars.</p> <p>The Project falls under the Coasts and Delta Pillar, which is headed by a Team Leader at the Head Office who offers strategic guidance to all Wetlands International team. Within the Eastern Hub, the Programme Manager is responsible for strategic guidance and coordinates all programmes and ensures synergy. Tanzania falls within the Eastern Africa Hub. The MCA Project is an Eco-Region Project and implementation at country level lies with the Project Manager and the Mangrove Specialist.</p> <p>There are teams in the Headquarters, Africa Office and other offices who we can reach out to for technical support and guidance for specific components like Building with Nature and Mangrove Watch Africa</p>
Start of operations in the proposed country(ies)	2017
Total staff of the organisation	51 (70% staff in non-ODA countries; 29% staff in East Africa countries; 12% administrative staff)
Number and location of offices in the country(ies)	1 (Tanzania, hosted within offices of WWF Tanzania)

Staff number in the proposed country(ies) (national / international)	2 (National) 1 (Regional)
Annual budget in EUR for each of the last three years	7,652,000 EUR (2017) As Mangrove Capital Africa operates only since 2017 in Tanzania, no figures for the previous year can be provided.
Financial management	Financial Management is undertaken at various levels – at the Eastern Africa Level we have a Finance Associate then at the Africa Level we have the Regional Finance and Administration Officer. They are guided by an Operations Manual which details regulations regarding financial management. Audits are undertaken yearly for each country office
Environmental and Social Policy and/or provisions/ guidelines/standards for environmental and social management of projects including Stakeholder Engagement Plans (For lead organisation)	Wetlands International has various policies in place. This includes a Gender Policy (which is due to be revised to take into account current trends). Also in place is a Complaints Procedure as well as an Ethical Policy, which states that we respect traditional values and knowledge. It also clearly establishes the fact that we work in a transparent and accountable way. In our operations we also act in an environmentally and ethically responsible way. Wetlands International also has a Partnership Policy that clarifies our partnership principles. Wetlands International is also a signatory to the Conservation and Human Rights Framework that recognises that conservation of nature is closely related to the rights of people to secure their livelihoods, enjoy healthy and productive environments and live with dignity.
Is your organisation legally authorized to receive charitable funds?	yes
Contact Person	Name: Julie Mulonga Telephone: +254 707 366395 Mobile: +254 722 525480 Email: jmulonga@wetlands-africa .org
Website	www.wetlands.org/en

Wetlands International – Key staff

Name of key staff	Relevant expertise	Years of relevant professional experience	Number of years with the organisation	Type of contract	Location based	% of time working on the project
Julie Mulonga, Eco-Region Lead	Programme Coordination and Management, Biologist	20	5	Fixed term	Nairobi	22.5%
Pieter van Eijk, Team Leader, Coasts and Deltas	Ecological Mangrove Restoration, Biodiversity assessments	15	8	Fixed term	Netherlands	8.8%
Lilian Nyaega, Programme Officer	Community Development, Environmental management	10	4	Fixed term	Nairobi	22.5%
Programme Manager	Programme Coordination and Management, Environmental management	15	-	Fixed term	Dar-es - salaam	100%
Ismail Saidi, Project Manager	Aquaculture, community development	10	1	Fixed term	Nyamisati	13.25%
Emmanuel Japhet, Mangrove Specialist	Mangrove Ecology	10	1	Fixed term	Nyamisati	13.25%
To be recruited, Finance Officer	Financial management, accounting, logistics	8	4	Fixed term	Dar-es-salaam	26.5%
To be recruited, Community Development Officer	Community Development, community engagement and mobilisation	10		Fixed term	Nyamisati	100%
Driver	Driving, Logistics, Vehicle maintenance and care	10	-	Fixed term	Dar-es-salaam, Nyamisati	22%

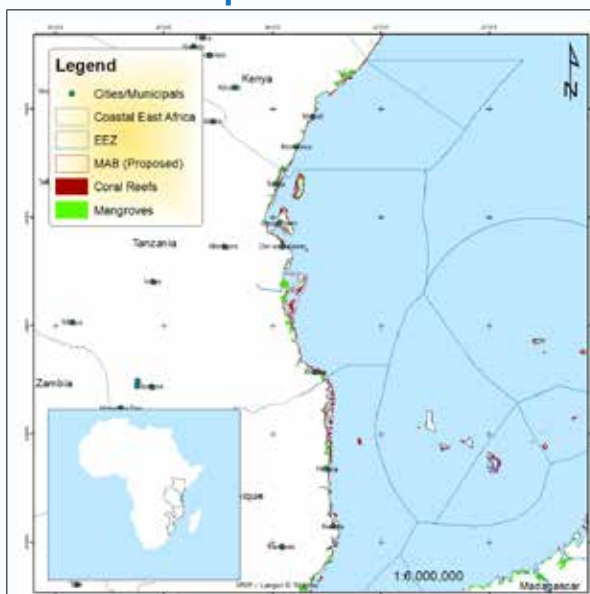
Key experiences – Wetlands International

Name of project	Start and end date	Donor	Country, specific location and MPA	Budget (million EUR)	Activities relevant for the proposed intervention (max. 100 words per project)
Mangrove Capital Africa	01/01/2017 – 31/12/2027	DOB Ecology	Kenya, Tanzania, Madagascar, Mozambique	10,000,000	Mangrove Capital Africa, a 10 year continental scale mangrove conservation initiative that will work in 10 mangrove countries in West and East Africa. Based on a regional knowledge-base we will help policy makers integrate mangrove conservation in their strategies and plans. With park managers, communities and other local stakeholders we will implement conservation and sustainable development actions on the ground, while developing financial mechanisms for upscaling of this work. Local NGOs and research institutes will play a key role in the implementation of the initiative. We will facilitate them by establishing a regional mangrove community that allows members to share knowledge and experience, to coordinate policy activities and design conservation activities on the ground. Through a small grants facility we strengthen grassroots organisations.
Protection of carbon pool and sinks within wetlands and protected areas of Panama	03/2013 to 02/2018	IKI (Germany) and UNDP	Panama	2, 600,000	The project provides information and raises awareness on mangrove ecosystems as part of risk management that takes into account climate change – both in reducing the extent of and adapting to the impacts in response to dwindling carbon stocks in the region. The capacity of a core group of conservation managers from national to local level was enhanced through trainings and learning by doing exercises. Authorities are now able to integrate climate change adaptation and mitigation into their landscape management planning and regulations. At the national level, regulations and best practices have been disseminated from implementation in the 70,177 hectares of mangroves within the National System of Protected Areas and as well as Special Management Zones. A comprehensive communication strategy has also helped in raising awareness of mangroves importance for climate and promote the awareness involvement of different audiences including women's groups in mangrove conservation

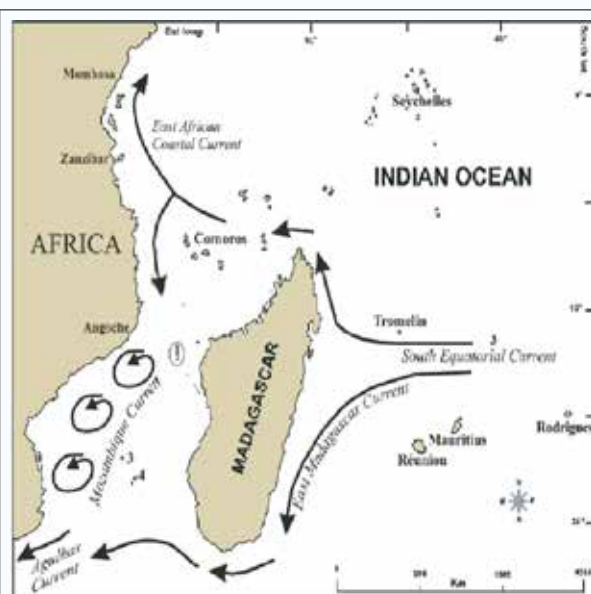
Empowerment of communities in Kipini for Restoration and Management of Mangroves	01/09/2014 to 11/09/2015	Ecosystem Alliance (Dutch Ministry of Foreign Affairs) and Techjeve	Kenya	50,000	Baseline studies documenting the extent, productivity, biodiversity and resilience of coastal mangroves in the project area, including their role in ameliorating effects of climate change and their importance to local fisheries and forest economies were conducted. These informed restoration actions. In consultation with key stakeholders, community based mangrove strategies for restoring and conserving the mangrove systems and promoting sustainable use of mangrove resources were identified. This led to the implementation of apiculture as an alternative livelihood activity and restoration of degraded areas by planting at least 3000 mangroves. Awareness creation activities were undertaken so as to build an understanding of the values of mangrove ecosystems. The initiative worked closely with the Kenya Forest Service and the Kenya Marine and Fisheries Agency and other government agencies.
Mangrove Capital: Securing resilience through mangroves along vulnerable coasts	01/01/2012 to 31/09/2014	Adessium Foundation	Indonesia	1,100,000	At the national level, the project worked with government working groups on climate change adaptation, disaster management and with mangroves in general to improve policies related to coastal protection, fisheries, forests and aquaculture development. Regionally the project facilitated mangrove solutions in coastal defence policies by identifying new strategies for coastal defence which combine mangrove restoration with convention protection measures such as mud nourishment. The project promoted the use of hybrid engineering measures in coastal protection policies. Locally there was improved sustainability of local aquaculture economies by addressing the most important local driver of mangrove loss – shrimp farming. This was done through dialogues with the shrimp sector through the roundtables on shrimp certification to make the case for criteria on mangrove services. See:

					<p>www.indonesia.buildingwithnature.nl</p> <p>https://buildingwithnatureindonesia.exposure.co/building-with-nature-indonesia</p> <p>https://www.iadc-dredging.com/ul/cms/terraetaqua/document/4/9/1/491/491/1/article-building-with-nature-sustainable-protection-of-mangrove-coasts-144-1.pdf</p> <p>Similar initiatives are under development in Panama, Suriname, Malaysia and the Philippines.</p> <p>Wetlands International is also currently promoting improved restoration practice, based on Ecological Mangrove Restoration principles amongst others through a global communications campaign. See for example: https://www.wetlands.org/publications/mangrove-restoration-to-plant-or-not-to-plant/</p>
Mangroves for the Future	01/10/2013 to 31/07/2015	DANIDA	Indonesia	396,178	<p>As an institutional partner of the Mangroves for the Future initiative, Wetlands International supports regional implementation of the initiative. We host the secretariat of the programme in Indonesia. Through the MFF Small Grant Facility (SGF), local community actions for restoration and management of coastal ecosystems and their services were supported. Apart from providing direct environmental and livelihood benefits locally, the project also offered tangible models which inspired policy making in Indonesia. Moreover the project contributed concrete measures to ensure participation, gender equity and secure livelihoods for marginalized groups. Local capacity to implement sustainable development strategies and creating local ownership was an integral part of the project.</p>

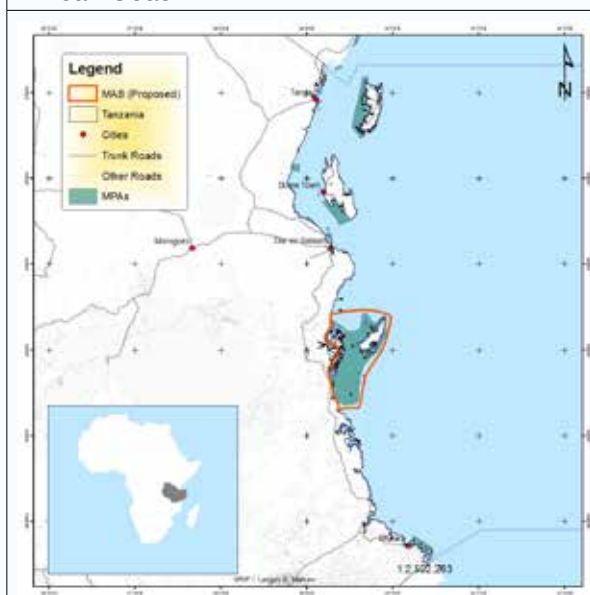
Annex D: Maps



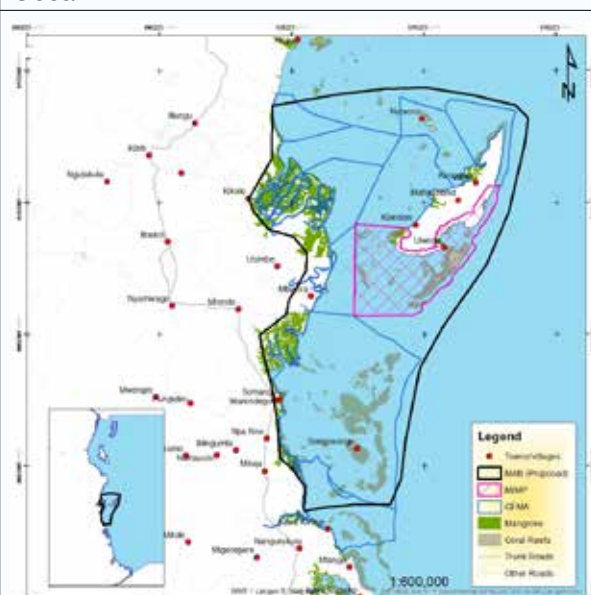
Map1: Coral Reefs and Mangroves at the East African Coast



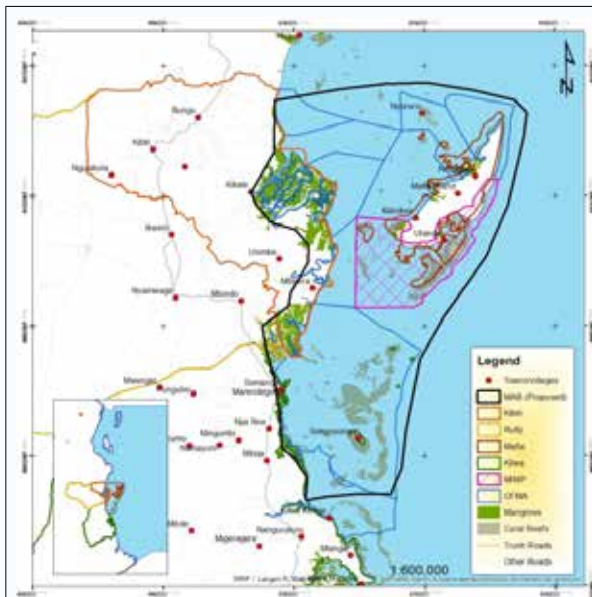
Map 2: Ocean currents in the South East Indian Ocean



Map 3: Marine Protected Areas in Tanzania



Map 4: Rufiji-Mafia-Kilwa project area



Map 4a District in the Rufiji-Mafia –Kilwa project area

Annex E Workplan

See separate excel sheet (Budget and Workplan).

Annex F: Environmental and Social Management System

- a. **Description of the project and of access restrictions**
- b. **Past consultation process and results achieved**
- c. **Future assessment and planning process**
- d. **Conflict resolution and grievance**
- e. **Schedule and milestones**

a. Description of the project and of access restrictions

Main types of natural resources	Current use and importance for the livelihoods of	Current use rights	Planned restrictions and changes in use and management regimes
<p><i>Man and Biosphere Reserve (MAB)</i></p> <p>- <i>To be established -</i></p>	<p>MAB Reserves consist of Core zones and Transition zones. In the core zone no natural resources are allowed to be harvested while in transition zone some specification can be made for community to harvest the natural resources. However, through this project and the MAB nomination no further restrictions are expected as the existing core zones of MIMP and the Mangrove Forest Reserve will serve as the core zones.</p> <p>Indirect effects must be considered and will be assessed. MAB very sensitive to conflicts, MAB and management plan revision.</p>		
<p><i>Man and Biosphere Reserve (MAB)</i></p> <p>- <i>To be established -</i></p>	<p>MAB Reserves consist of Core zones and Transition zones. In the core zone no natural resources are allowed to be harvested while in transition zone some specification can be made for community to harvest the natural resources. However, through this project and the MAB nomination no further restrictions are expected as the existing core zones of MIMP and the Mangrove Forest Reserve will serve as the core zones.</p> <p>Indirect effects must be considered and will be assessed. MAB very sensitive to conflicts, MAB and management plan revision.</p>		

Marine Resources	
<p><i>Mafia Island Marine Park (MIMP)</i></p>	<p>Fisheries communities, fishery constitutes 36% of livelihood, equally important as farming. (household survey Rufiji seascape¹¹).</p> <p>93.9% communities depend on fish both for food and income directly and indirectly which was mostly found along coastal areas (KAP studies, Tungaraza et al, 2015). In 2018, this was confirmed.</p> <p>Women are mostly engaged in: octopus fishery (intertidal), sea cucumber (Women are the main collectors in some parts of Mafia) and about 88% of women are involved in seaweed farming.</p> <p>Traditionally, octopus was caught by women and children in intertidal and shallow sub-tidal waters using spears (illegal gear). In recent years, and especially after establishment of seasonal closure in CFMAs the catches and size of Octopus has gone up and men are increasingly involved in Octopus fishery. Lucrative prices and high catches have attracted more men in this fishery.</p>
	<p>Only MIMP-Residents can fish within MIMP.</p> <p>No new restrictions, but strengthened enforcement may lead to decreased income temporarily which will be mitigated through complementary income generating activities.</p> <p>Sea cucumber: Signs of over harvesting emerging. Intensive collection off south Rufiji /north Kilwa including Somanga reef area. However, the government has imposed the ban on sea cucumber collection in recent years.</p> <p>(NOTE: This is not only on MIMP but also in other areas)</p>

<p><i>Community Fisheries Management Areas (CFMAs)</i></p>	<p>Octopus fisheries: Very active activity for both men and women. For instance in Mafia (Jibondo) and Kilwa (Somanaga and Songosongo) women do actively participate in octopus fishing. The activity picked up after establishment of CFMAs (2006/7) particularly in Kilwa.</p> <p>Women process the fish</p>	<p>Fishers must be licensed to fish by the respective district authority. Fishers can fish in different CFMAs of the same district using license of that district. Fishers going to fish in CFMAs of other districts will be required to pay license fee for that district</p> <p>However, for a fisher to fish in another CFMA he also needs approval from one of the Beach Management Units (BMUs) in that CFMA. The BMUs within a given CFMA may decide to restrict the number/type of external fishers they allow in [i.e. as part of their CFMA management plan], which could in principle mean excluding all external fishers. Though in practice it might be unlikely that any CFMA would be that extreme, especially if they rely on reciprocal access from a neighbouring CFMA during certain seasons</p> <p>Octopus: Community members deliberately agree to close for a period of 3-4 month and they then open and fish for 3-4 days consecutively. It is a community management plan. Non-resident fisheries are not allowed to fish during the opening period. Fishing households know each other very well, plan patrols and monitoring of their resources.</p> <p>In recent years migrants have been controlled and BMU are restricting them to fish in their area unless they prove that they will not cause any illegalities and destruction in their area. The issue came in because of increased pressure in the fisheries sector (traditional and non-traditional fishers) because of high demand of fish resources – locally, regionally and globally.</p> <p>The BMU sub-committees are constituted of 30 members, of those at least five are supposed to be women. Experience from the coastal area is that the number is barely filled by women and those present lack the freedom to speak.</p>	<p>No new restrictions, but strengthened enforcement may lead to decreased income temporarily which will be mitigated through complementary income generating activities.</p>
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<i>Mangrove Reserve</i>	<i>Forest</i>	<p>Fisheries communities.</p> <p>There has been dramatic decrease in prawn's fishery industry in the mangrove area. Agricultural encroachment into mangroves is becoming an issue in parts of the Rufiji delta where land is cleared and agricultural pesticides become a problem.</p>	Licensed.	
Freshwater				
CFMAs/Mangrove Forest Reserve		<p>Within the seascape the worst served area in terms of water and sanitation is the Rufiji delta. Several small island communities in particular lack any ground water.</p>		
Timber/ Construction materials				
<i>MIMP</i>			<p>There are restrictions in cutting trees, burning trees and forest shrubs and other vegetation cover</p>	
<i>Mangrove Reserve</i>	<i>Forest</i>	<p>Mainly in Rufiji where local cutters supply to orders from agents of dhow owners and buyers of poles for export to other towns (Mafia, Zanzibar, Dar Es Salaam, Pwani, Mtwara)</p> <p>reliance is very high, houses, boats, solid construction, trade of timber (illegal)</p>	<p>Currently illegal, unless permission for domestic use. No permission to trade or export.</p> <p>There is tacit recognition that local villagers have traditional rights to use mangrove forests in a sustainable manner.</p>	<p>Combat illegal harvesting through bylaws, more enforcement, and resource zones designation. Impact on livelihoods currently assessed (socio-economic assessment by Wetlands International)</p>

Fuel wood				
Mangrove Reserve	Forest	reliance is very high	It is legally authorized to collect dead fallen mangrove and not cutting mangroves plants for drying	Enforcement to combat cutting of mangroves plants for drying fire woods
Grazing livestock				
Mangrove Reserve	Forest	grazing is increasing, dry season in the delta, greener than outside, people come from outside, illegal	grazing in the mangroves reserve is illegal	At the moment there is little enforcement
Medicinal plants				
Mangrove Reserve	Forest	Seeds from <i>Xylocapusgranatum</i> are used to cure Hernia and stomach ache	Its legally authorized	
Bushmeat / wild game				
Mangrove Reserve	Forest	Hippo occasionally	illegal	Enforcement
Tourism				
MIMP		Tourism: 10 lodges within MIMP: Kifurukwe, Meremeta, Mikoko beach, Didimiza, Mafia lodge, Kinase, Big Blue, Shambakikole, Salphate, and Cholemjini. Outside the park 3: Mbuyuni hotel, Whale-shark and Butiama.		

<i>Mangrove Forest Reserve</i>	<p>Tourism: None in Rufiji, but attempts by Mangrove management project of the MNRT to introduce eco-tourism was initiated in 2000's and is still underway.</p> <p>Tourist hotels in Kilwa located near Kilwa World Heritage site 6: Kimbilio, Pakaya, Kilwa dreams, Kilwa safaris, Mwangaza hide away, and Bandari lodge.</p> <p>Out of World Heritage Site 1: Coastal Fanjovi.</p>	
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2. Past consultation process and results achieved

WWF Tanzania has been engaged with stakeholders in the Mafia Island Marine Park since 1995 and with stakeholders in the three district councils and buffer CFMAs since 2005- through two successive European Union (EU) funded projects. As a consequence we have extensive working knowledge and strong relationships with relevant national, district and community stakeholders.

In December 2017 representatives of the stakeholders participated in a strategy workshop to develop the ideas contained in this project proposal.

During full proposal development (July-September 2018) consultative meetings were undertaken with 113 individuals from following groups: local communities, marine researchers and scientists, government agencies like NEMC, MoLFD, Ministry of Natural Resources and Tourism, District Authorities of Mafia and other interested or affected stakeholders like private business, religious leaders and other NGOs. Their views and inputs were integrated into this proposal. One main point is that octopus fisheries seem to receive positive feedback for closings and restrictions. Community members also seem to be encouraged to increase the CFMA areas.

District	District	People consulted	Number
Chunguruma village	Mafia Island	Fishers, fish traders,	12
Kilindoni village	Mafia Island	BMU representatives and VICOBA Representatives	10
	Mafia Island	VICOBA- Mshikamano group	18
	Mafia island	BMU groups (Kilindoni, Ndagani, Banja and Jojo communities)	10
	Mafia island	Fisheries officers (2), Acting District executive director (1), Planning officers (2), cooperative officers (3), community development officers (3)	12
	MIMP mafia island	MIMP staff	3
Maparoni village	Rufiji Delta (Kibiti District)	Prawn fishers and traders, rice farmers	15
Dar es salaam	Dar Es salaam	Researchers/scientist: sea sense, TAFIRI , University of Dar es Salaam, Fisheries managers from Fisheries Division	18
Dar es salaam	Dar Es salaam	NEMC	2
Marine Park Unit (MPRU)	Dar Es salaam	MPRU	2
Other official consultations			
Vice president office	Dodoma (for endorsement letter as well)	VPO	2

TFS – Tanzania forest services	Dar es Salaam (for endorsement letter as well)	TFS	2
Sea sense (NGO)	Dar es Salaam		2
Wiomsa secretary general	Dar es Salaam (for endorsement letter as well)		1
District Administrative secretaries	Kibiti, Mafia Island, Kilwa, Rufiji Districts (for endorsement letters)		4
Total			113

Furthermore the project approach builds on extensive existing relationships and applies lessons learnt from the previous EU funded project.

Potential project impacts on livelihoods in the mangrove forest reserve are currently assessed in a socio-economic study conducted by Wetlands.

In terms of the proposed MAB designation, whilst national institutional stakeholders have been consulted, wider consultation of community stakeholders will be done during the detailed project preparation in order to gain complete interest and support of the proposed actions.

3. Future assessment and planning process

During the inception phase of the project further assessments of the impact of any potential access restrictions will be conducted. These will be discussed within a fully participatory process. Stakeholders will be encouraged to agree among themselves on the rules for access and whether such restrictions are temporary or spatially limited to achieve a balance between long term ecological gains and sustainable use.

Gender disaggregation will be a central feature in the project approach to both co-management and to livelihoods. The distinct role women have in certain fisheries practices (e.g. in intertidal octopus fisheries and as fish buyers and fryers) and usage of mangrove resources will be taken into account in identifying areas for livelihood enhancement, for example through improving access to credit and enterprise skills.

Activity 1.2.1 “Conducting livelihoods baseline profile of non-delta communities & impact assessment of proposed fisheries harvest control rules” will have a strong focus.

4. Conflict resolution and grievance

The following conflicts are possible as a consequence of strengthened implementation of fisheries regulations/mangroves management or introduction of new harvest control rules to manage fishing effort / mangroves:

- Increased social conflict at community level, e.g. between village-level fisheries management entities (BMUs) and fishers, and between resident and non-resident fishers (migrant)
- Increased conflict between village-level fisheries management (BMUs)/LVCs including their members) and village or district authorities, especially where the latter have invested in illegal fishing gears

- Increased social conflict at community level. E.g. between village-level mangrove management bodies (VNRCs) and mangrove users, both resident and external;
- Mangrove cutters/harvesters, especially those not resident in the target area, not complying with mangrove harvest control rules.
- Migrant fishers: BMUs/Villagers and the owners of migrant fisher's camps where the latter invest in illegal practices and degrade mangrove environment (cutting mangrove poles for camping).

The primary approach to conflict resolution will be to identify and mitigate risks of conflict before they arise. This will be achieved by [i] project partners employing experienced extension staff familiar with coastal culture and politics; and [ii] ensuring that stakeholders and different levels of authority [including different resource user groups; influential community leaders [informal]; village councils; MIMP management; district councils and national authorities] are continuously consulted in advance of activities being implemented.

At community level the project team will develop conflict resolution mechanisms jointly with opinion leaders, community change agents, elders, religious leaders, village leaders, village peace and security sub-committee and Community Based Trainers (CBTs) to reduce conflicts. Engagement of high officials such as those from the sector responsible (Minister, Permanent Secretary), District and Regional Commissioners and Parliamentary members will be made for critical conflicts. Different types of methods such as meetings, group and individual discussions, community village assembly, special workshop and seminars will be arranged to resolve conflicts.

During the development of the access restriction mitigation framework it will be assessed if these mechanisms are sufficient especially considering the participation of vulnerable people or if an additional grievance mechanism must be established.

5. Schedule and milestones

Consultations based on FPIC⁸ principles with affected communities will be held until end of project month 3 to develop Action Plan to mitigate impacts from access restriction. Action Plan to mitigate impacts from access restriction finalized and made publicly available till end of project month 4.

ESMS Questionnaire & Screening Report - for field projects

This template has been designed for field projects. Another template using a simplified version of the ESMS Questionnaire is available for non-field projects such as projects which support policy making, strategy development or upstream planning processes or provide knowledge through capacity building or knowledge products. Very small projects such as organizing workshops, meeting or conferences, position papers, scientific paper, reports, preparation of scientific materials for subsequent use in conferences or communication are outside the scope of the ESMS and don't require the completion of the ESMS Questionnaire.

Project Data

2 The fields below are completed by the project proponent

Project Title:	Strengthening protected area management in Rufiji-Mafia-Kilwa seascape, Tanzania
Project proponent:	WWF Germany (WWF DE) WWF Tanzania Country Office (WWF TCO)
Executing agency:	WWF Tanzania
Funding agency:	Blue Action Fund

⁸ free, prior and informed consent

Country:	Tanzania	Contract value (add currency):	€4,000,000
Start date and duration:	01 January 2019 , 5 years	Amount in CHF:	
Has a safeguard screening or ESIA been done before?	<input type="checkbox"/> yes <input type="checkbox"/> no	Provide details, if yes:	

3 Step 1: ESMS Questionnaire

4 The fields below are completed by the project proponent; the questionnaire is presented in Annex A

	Name and function of individual representing project proponent	Date
ESMS Questionnaire completed by:	Severin Kalonga, Partnerships and Development Manager, WWF TCO Katharina Lang, Program Officer Policy and Public Sector Partnership, WWF DE	13/04/2018 05/10/2018 (Revision)
ESMS Screening is (tick one of the three options)	1. required because the project budget is \geq CHF 500,000 2. required – despite being a small project (< CHF 500,000) the project proponent has identified risks when completing the ESMS Questionnaire 3. not required because the project budget is < CHF 500,000 <u>and</u> the project proponent confirms that no environmental or social risks have been identified when completing the ESMS Questionnaire	

5 Step 2: ESMS Screening

6 To be completed by IUCN ESMS reviewer(s); only needed when the options 1 or 2 above (marked in red) are ticked

	Name	IUCN unit and function	Date
IUCN ESMS Reviewer:			
	Title		Date
Documents submitted at Screening stage:			

ESMS Screening Report¹²

Risk category:	<input type="checkbox"/> low risk <input type="checkbox"/> moderate risk <input type="checkbox"/> high risk	
Rationale: Summarize findings from the questionnaire and explain the rationale of risk categorization <i>See the following sections of the questionnaire for details:</i> section A for findings about the stakeholder engagement process, Section B on the 4 Standards, Section C on other E&S impacts and Section D on risk issues related to Climate change		
Required assessments or tools	<ul style="list-style-type: none"> • Full Environmental and Social Impact Assessment (Full ESIA) • Partial Environmental and Social Impact Assessment (Partial ESIA) • Social Impact Assessment (SIA) • Environmental and Social Management Plan (ESMP) • Environmental and Social Management Framework (ESMF) • Other: 	
Required actions for gender mainstreaming		
ESMS Standards	Trigger	Required tools or plans
Involuntary Resettlement and Access Restrictions (see section B1 for details)	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> TBD	<input type="checkbox"/> Resettlement Action Plan <input type="checkbox"/> Resettlement Policy Framework <input type="checkbox"/> Action Plan to Mitigate Impacts from Access Restriction <input type="checkbox"/> Access Restrictions Mitigation Process Framework
Indigenous Peoples (see section B2 for details)	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> TBD	<input type="checkbox"/> Indigenous People Plan <input type="checkbox"/> Indigenous People Process Framework
Cultural Heritage (see section B3 for details)	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> TBD	<input type="checkbox"/> Chance Find Procedures
Biodiversity Conservation and Sustainable Use Natural Resources (see section B4 for details)	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> TBD	<input type="checkbox"/> Pest Management Plan

7 Annex A: ESMS Questionnaire

7.1 Project summary

The project will strengthen management effectiveness in Mafia Island Marine Park (822km²) and the Rufiji Delta mangrove forest reserve (450km²), as well as in eight fisheries management areas (3,750 km²) in the buffer zone between the two. Collectively these three adjacent management areas comprise the Rufiji-Mafia-Kilwa seascape, the most biologically productive and diverse marine area in Tanzania. The area includes 25% of Tanzanian mainland's nearshore waters supporting substantial fisheries production; 26% of its coral reef habitat (625 km²); and over 50% of its mangrove forest (532 km²). Marine resources within the seascape support the livelihoods of over 100,000 coastal residents and there are significant challenges from unsustainable fishing and mangrove harvesting practices. In addition, the seascape lies downstream of the Rufiji River Basin (177,420 km²) which drains 20% of the country through East Africa's largest river, the Rufiji. The basin is a focus for major national development initiatives in the agriculture and energy sectors which in turn negatively affect environmental flows into the Rufiji Delta and adjacent marine ecosystems.

Over-arching goal: conserving the long-term ecological integrity, resilience and biological productivity of the Rufiji-Mafia-Kilwa seascape as an internationally important biodiversity hotspot supporting the livelihoods of natural resource-dependent communities.

Project objective: Marine protected areas and associated buffer zones within the Rufiji-Mafia-Kilwa seascape are more effectively managed to maintain and improve ecological value and livelihoods for nature and people.

The project objective will be achieved through delivery of three high-level outcomes:

a) Improved management effectiveness in Mafia Island Marine Park, Rufiji Delta mangrove forest reserve and MIMP buffer zones covering approx. 5,500 km²:

- MIMP has improved management effectiveness through enhanced implementation of co management and improved monitoring
- Loss and degradation of mangroves in the Rufiji Delta mangrove forest reserve is significantly decreased by improved management effectiveness and reforestation
- Fisheries management areas buffering MIMP have improved management effectiveness (by defining and implementing sustainable harvest control rules and building the capacity of stakeholders to effectively implement co-management measures)

b) Target coastal communities in the coastal area have improved livelihood security and resilience to changes in environmental flows by sustainable use of natural resources and diversifying livelihoods. The approach taken to strengthening complementary livelihoods in MIMP and CFMA fishing communities under this project will enhance access to credit, build enterprise skills and provide access to diverse, demand-led skills training. The approach is not to target any particular livelihood practice, but rather to provide a package of measures that nurtures small-scale enterprise, individual entrepreneurship and diversification of income-sources.

c) Seascape level management and profile strengthened:

- Improved co-ordination & integration of management efforts in Rufiji-Kibiti-Mafia-Kilwa including seeking designation for UNESCO Man & Biosphere (MAB) Reserve;
- Seascape values are better integrated into national and Rufiji Basin-level development decision-making.

The primary implementing organisations will be:

- i) WWF Germany
- ii) WWF Tanzania Country Office
- iii) Wetlands International

The primary implementation partners will be:

- Ministry of Livestock & Fisheries; Marine Parks & Reserves Unit/Mafia Island Marine Park
- Ministry of Natural Resources & Tourism (MNRT); Tanzania Forest Service (TFS)
- 4 District Councils (Rufiji, Kibiti, Mafia and Kilwa)
- Approximately 40 coastal communities
- Vice President's Office (VPO)

Activities that will be undertaken in the project will include:

- Assessing management effectiveness including the collection of data and implementing assessment tools
- Developing management plans for protected areas and co-managed areas
- Advocating for and preparing for Man and Biosphere Reserve designation
- Supporting infrastructure development in Mafia Island Marine Park including sign boards, ranger accommodation and office refurbishment
- Equipping rangers
- Providing support for new small-scale enterprises including training
- Supporting the formation, training and monitoring of Village savings and loans (VSL) groups in 14 communities within Mafia Island Marine Park
- Developing artisanal offshore fishery in Mafia Island Marine Park
- Dropline gear training and trials
- Developing safety-at-sea protocol
- Providing, training and related equipment provision
- Improving in capture-to-landing handling and quality control
- Facilitating links with an existing fisheries processing and cold storage facility on Mafia Island
- Livelihood and small-scale enterprise support in 19 mangrove communities, pending recommendations from a livelihoods baseline study currently under way

- Carrying out mangrove restoration & surveillance through replanting, ongoing ecological and remote sensing surveys
- Implementing Cash-for-work incentives for fisheries replenishment
- Building capacity of beach management units (BMUs)
- Supporting BMUs with the required field equipment
- Running a BMU performance award scheme.
- Development of a data collection tool
- Setting up a data analysis and sharing platform
- Conducting fisheries stock assessments
- Monitoring indicator species such as whale shark monitoring
- Conducting relevant studies like coral reef regeneration
- Mid-term and final evaluation

7.2

A. Process of stakeholder engagement during project conceptualization	
<p>1. Stakeholder Analysis: Has a project stakeholder analysis been carried out and documented – identifying not only stakeholders’ interests in the project and their influence but also whether they might be affected by the project? Does the stakeholder analysis differentiate between women and men, where relevant and feasible? It is recommended to add the stakeholder analysis to the documents submitted at screening stage.</p>	
To be completed by project proponent	
See Annex F Access Restriction Mitigation Framework	
IUCN ESMS Reviewer	
<p>2. Stakeholder Consultation: Has information about the project – objectives, activities, sites and potential risks – been shared with stakeholders? Have consultations been held with relevant groups to discuss the project concept and risks? Provide details about the groups involved. Were women involved or consulted separately? Did the consultations involve stakeholders that might be negatively affected by the project? Were consultations conducted in a culturally appropriate way? Have results of the consultations been documented? Were results used to inform project design?</p>	
To be completed by project proponent	
See Annex F Access Restriction Mitigation Framework	
IUCN ESMS Reviewer	

B. Potential impacts related to ESMS standards				
B1: Standard on Involuntary Resettlement and Access Restrictions				
		Project proponent		IUCN ESMS Reviewer
		Yes, no, n/a, TBD	Answer question, provide further detail where relevant	Comments, additional considerations
	1. Will the project involve resettling peoples or communities? if yes, answer a-b below	NO	Shaded cells do not need to be filled out	
	a. Describe the project activities that require resettlement?			
	b. Have alternative project design options for avoiding resettlement been rigorously considered?			

2.	<p>Does the project include activities that might restrict peoples' access to land or natural resources?</p> <p>Please consider the following activities: establishing new protected areas (PA) or extending the area of an existing PA, improving enforcement of PA regulations (e.g. training guards, providing monitoring and/or enforcement equipment , providing training/tools for improving management effectiveness), constructing physical barriers that prevent people accessing certain places; changing how specific natural resources are managed – to a management system that is more restrictive); if yes, answer a-h below</p>	<p>yes</p>	<p>While we are not primarily proposing to expand the MPA, we are proposing to increase management effectiveness in the Mafia Island Marine Park, the Rufiji delta mangrove forest reserve as well as the collaborative fisheries managed areas (CFMAs) adjacent to the protected areas. This may result in increased restricted access. For example, as improved catch data are collected it may become evident that harvest control rules need to be strengthened to ensure sustainable management of key fisheries resources. If this is the case, changes will be made in consultation with relevant community stakeholders to explain the evidence, rationale and expected outcome from such action. Any action taken will ultimately be aimed at securing long-term benefit for the community over short term over-exploitation.</p> <p>In the co-managed areas this is already a well-accepted approach and the resource users themselves are part of the monitoring mechanism for such rules. From past and current work in the project area there is evidence that fishers and communities have become more keenly aware of the benefits of applying exclusion on fisheries areas to enable recovery of target populations such as octopus.</p> <p>A similar approach will be undertaken with regard to the mangrove forest area. In further concretization of the project design, collaboration with organisations promoting complementary options like renewable energy (to reduce cutting of mangrove trees for charcoal/fuelwood generation) will be considered.</p> <p>Although the protected areas are by law entitled to execute access restriction, both Mafia Island Marine Park and Tanzania Forest Service as entity in charge of the Rufiji delta mangrove forest reserve accept the need to work with communities towards some sustainable offtake. This commitment is key to making sure that the vital support for the protected areas is maintained among the resident communities.</p>
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	Answer only if you answered yes to item 2		
	<p>a. Describe project activities that involve restrictions and the respective resources to be restricted.</p>		<p>The project activities that will involve some restriction include:</p> <ul style="list-style-type: none"> • Reducing levels of illegal and unsustainable fishing in Mafia Island Marine Park and Songosongo archipelago. As part of this set of activities, rangers and BMU members will patrol areas with restriction. • Improving management of gears and fishing effort in prawn and pelagic fisheries in Rufiji Delta and Mafia Channel. Illegal gear leads to overfishing and often by-catch of vulnerable and endangered species like whale sharks, other sharks & rays and dugong. These specific actions to eliminate usage of illegal gear and to reduce by-catch may include confiscation of illegal gear. • Reduce levels of illegal and unsustainable mangrove exploitation leading to improved condition and ecological functions of Rufiji mangrove forest. Project-induced incentives such as 'Cash for work' are meant to encourage people to resist from cutting down mangrove trees.
	<p>b. Has the legal framework regulating land tenure and access to natural resource been analysed, broken down by different groups including women and ethnic/indigenous groups? Are customary rights for land and natural resources recognized? Are there any groups at the project site whose rights are not legally recognized?</p>		<p>Mangroves in Tanzania are designated as forest reserves. During the country's occupation by Germany the economic importance of mangroves was recognised and an ordinance was promulgated to reserve the Rufiji mangroves for logs to be exported. Subsequent to that, the British expanded the reserves and after independence mangroves were given protected status.</p> <p>This means that it is currently illegal to cut down mangroves or change their use in any way e.g. to rice paddies. However the government has not managed mangroves as such compared to forests reserves on land. While the Director of Forests may use a statutory notice to exempt certain parts of reserves from non-use restrictions this has never been done. However over the years use is rampant and no one has been prosecuted for that.</p>

		<p>There seems to be a tacit acceptance that villagers have traditional rights to mangroves if they use them in a sustainable manner. That means that men and women have equal access to mangrove resources for domestic use. However commercial utilisation is not permitted</p> <p>There are no ethnic/ indigenous groups in the area and the nation building ethos of Tanzania adopted since independence limits any special recognition of one ethnic group.</p>	
<p>c. Have the implications of access restrictions on people's livelihoods been analysed? Explain who might be affected and describe impacts. Distinguish social groups (incl. vulnerable groups, indigenous peoples) and men and women.</p>		<p>A baseline livelihood study is currently underway for 19 communities in the Rufiji Delta by Wetlands International. It is expected that the results will clearly indicate status, equity and power dynamics among different social groups including women and men, disabled and any other vulnerable groups.</p> <p>The World Bank-funded SWIOFish project is also undertaking a study of livelihoods in communities involved in Rufiji Delta prawn fisheries. The study is examining the implications on livelihoods of (i) re-opening the industrial prawn trawl fishery and (ii) various options for controlling artisanal prawn fishing effort, especially the use of illegal small-mesh nets. Both these will be used to inform the finer design of the project.</p> <p>In addition to the above, lessons learnt from WWF Tanzania's on-going work with BMUs and VSL groups in the co-managed areas along the coast will be used. Efforts through that work have been directed at ensuring that disabled, poor, women and men are not further excluded but active participants in the project and management of coastal resources.</p>	
<p>d. Have strategies been considered to avoid restrictions by making changes to project design?</p>		<p>Consideration of the implications of restrictions have been integrated into the design of the project by ensuring that co-management, alternative livelihood options and access to credit and savings are integral to the theory of change and implementation of the project. The explicit and fundamental involvement of local communities and other groups like fishermen in decision- making will ensure mutually agreed positions.</p>	

		<p>Where access is restricted, efforts will be made to avail support for alternative livelihoods options, credit and training to minimise adverse impacts. Because fishermen are most likely to be impacted, the project includes support to artisanal offshore fishing specifically in case some of the affected do not accept new alternative livelihood options.</p> <p>These will be discussed within a fully participatory process. Stakeholders will be encouraged to agree among themselves on the rules for access and whether such restrictions are temporary or spatially limited to achieve a balance between long term ecological gains and sustainable use.</p>	
<p>e. If it is not possible to avoid restrictions, will the project include measures to minimize or compensate for impacts from loss/ restrictions of access? Please describe the measures.</p>		<p>As indicated in (d) above, the envisaged measures include development of new livelihood options, village credit and savings, enterprise training and development support.</p> <ul style="list-style-type: none"> • <u>Village savings and loans (VSL) groups</u> will be established and trained in 14 communities within Mafia Island Marine Park (MIMP). VSL group members save together and give loans at affordable rates for their needs such as businesses. A mobile handset app technology will be introduced, both to new VSL groups and to existing VSL groups in 24 communities outside MIMP, to improve security of money transfers and to link VSL groups to mobile money providers and secondary sources of credit. • <u>Development of artisanal offshore fishery</u> in MIMP. This will enable improved access to offshore pelagic & demersal fish stocks involving fishers in four fishing communities within MIMP. • <u>Livelihood and small-scale enterprise support</u> in mangrove communities. Selected livelihood projects will be supported in 19 mangrove communities, pending recommendations from a livelihoods baseline study currently under way by Wetlands International (WI). WI's experience elsewhere in Africa suggests this might include improved beekeeping practices and honey marketing and mangrove oyster production. <u>Cash for mangrove restoration</u>: mangrove replanting will be supported in selected areas, based on results of ongoing ecological and remote- sensing surveys conducted by Wetlands International and WWF Germany 	

			during 2018, and a mangrove management plan to be supported by the project during 2019. The cash-for-work scheme should provide an option and be in itself a complementary livelihood support mechanism to any restrictions imposed.	
	f. Are eligibility criteria established that define who is entitled to benefits or compensation? Are they transparent and fair (e.g. in proportion to their losses and to their needs if they are poor and vulnerable)?		The population on the coast is generally poor and so the project does not intend to impose any eligibility criteria. This ensures that the project is seen as fair and transparent. Past and on-going work in the area has always been implemented with sensitivity to the poorest, women, the disabled and other vulnerable groups. This will be maintained.	
	g. Are measures culturally appropriate and gender inclusive? Does the geographical scale of the measures match the scale of the restrictions (e.g. will measures be accessible to all groups affected by the restrictions)?		In line with WWF Policies the project will apply measures that engender cultural and gender inclusivity. These will be applied across the whole geographical scope of the project.	
	h. Has a process been implemented or started to obtain free, prior and informed consent (FPIC) from groups that are likely to be negatively affected by restrictions? Please describe the process (who has been consulted and how).		Further consultations based on FPIC principles with affected communities will be held until end of project month 3 to develop Action Plan to mitigate impacts from access restriction.	
	3. Will/might the project require the acquisition of land for project purposes (e.g. infrastructure development)? If yes, describe the current legal status of the land (private/ public, occupied/ unoccupied); will this impact people's livelihood or access to resources?	No		

	4. Has any of the project partners involved in activities related to forced eviction, resettlement or access restrictions in the past been? If yes, specify.	No		
	Conclusion of ESMS Reviewer¹³ on the Standard on Involuntary Resettlement and Access Restrictions			
	Standard triggered? Yes / No / TBD <i>What are the main risk issues? If possible indicate their probability (unlikely, likely, almost certain) and impact (minor, moderate, major).</i>			
	<i>Are assessments required to better understand the impacts and identify mitigation measures? What specific topics are to be assessed?</i>			
	<i>Have measures for avoiding impacts already been considered? Are they sufficient?</i>			
	B2: Standard on Indigenous Peoples¹⁴			
	Project proponent			IUCN ESMS Reviewer
		Yes, no, n/a, TBD	Answer question, provide further detail where relevant	Comments, additional considerations

1. Is the project site in an area inhabited by or important to indigenous peoples, tribal peoples or other traditional peoples? If yes, answer questions a-j	No	No indigenous people, in the strict sense of the definition, live in the project area. However the coast is mainly home to traditional Muslimpeople. Because of Tanzania's strong nation building ethos since independence the rights of the local communities are equally acknowledged as any other in the country. Even though the mangrove forest area is under national protection and therefore doesn't allow for settlements and usage, the Tanzanian Government acknowledged the right and presence of the traditional villages located within the mangrove area.	
2. Even if indigenous groups are not found at the project sites, is there still a risk that the project could affect the rights and livelihood of indigenous peoples? If yes, answer questions a-j	No		
Answer only if you answered yes to 1 or 2 above.			
a. Name the groups; distinguish, if applicable, the geographical areas of their presence (including the areas of resource use) and how these relate to the project's area of influence.			
b. What are the key characteristics that qualify the identified groups as indigenous groups? Do these groups identify themselves as indigenous?			
c. How does the host country's Government refer to these groups (e.g., indigenous peoples, minorities, tribes etc.)?			

	d. Is there a risk that the project affects their livelihood through access restrictions ? While this is covered under the Standard on Involuntary Resettlement and Access Restrictions, if yes, please specify the indigenous groups affected.			
	e. Is there a risk that the project affects their livelihood in some other means? E.g. by affecting their self-determination, cultural identity, values and practices, social cohesion, or by providing inequitable benefits?			
	f. Does the project intend to promote the use of indigenous peoples' traditional knowledge?			
	g. Are indigenous groups living in voluntary isolation? Is there a risk that these groups might be affected by project activities?			
	h. Explain whether and how legitimate representatives of indigenous groups have been consulted to discuss the project and better understand potential impacts upon them?			

i. Explain whether a process has been implemented or started to achieve free, prior and informed consent (FPIC) of indigenous peoples to activities relevant to them?			
j. Explain whether opportunities are considered to provide benefits for indigenous peoples? If yes, is it ensured that this is done in a culturally appropriate and gender inclusive way?			
Conclusion of ESMS Reviewer on the Standard on Indigenous Peoples			
Standard triggered? Yes / No / TBD What are the main risk issues? If possible indicate their probability (unlikely, likely, almost certain) and impact (minor, moderate, major).			
Are assessments required to better understand the impacts and identify mitigation measures? What specific topics are to be assessed?			
Have measures for avoiding impacts already been considered? Are they sufficient?			
B3: Standard on Cultural Heritage¹⁵			
	Project proponent	IUCN ESMS Reviewer	
	Yes, no, n/a, TBD	Answer question, provide further detail where relevant	Comments, additional considerations

1. Is the project located in or near a site officially designated or proposed as a cultural heritage site (e.g., UNESCO World Cultural or Mixed Heritage Sites, or Cultural Landscapes) or a nationally designated site for cultural heritage protection? if yes, answer a-c below	Yes	The Shirazi Era ruins at Kilwa Kisiwani and Songo Mnara include a 12th-13th century mosque, the palace of the Kilwa Sultanate and a little fort, and are a designated World Heritage site. The ruins lie outside to the south of the proposed target area. The project activities won't take place anywhere near the ruins. None of the project activities are expected to have a direct or indirect impact on these sites.	
2. Does the project site include important cultural resources such as burial sites, buildings or monuments of archaeological, historical, artistic, religious, spiritual or symbolic value? if yes, answer a-c below	YES	There are archaeological remains of historic interest on Mafia Island.	
3. Does the project area site include any natural features or resources that are of cultural, spiritual, or symbolic significance (such as sacred natural sites, ceremonial areas, or sacred species)? if yes, answer a-c below	NO		
a. Will the project involve development of infrastructure (e.g. roads, dams, slope restoration, landslides stabilisation) or construction of buildings (e.g. visitor centre, watch tower)?	No	The project will not build any major infrastructure such as roads that may cause physical changes likely to impact the ruins nor any archaeological remains in Mafia Island. Further the distance of the Ruins from the project area is about 125km. It is highly unlikely that any building construction may have an impact on them. The proposed activities will not have any impact on these sites at all.	
b. Will the project involve excavation or movement of earth, flooding or physical environmental changes (e.g., as part of ecosystem restoration)?	No	The proposed activities will not have any impact on these sites at all.	

c. Is there a risk that physical interventions described in items a. and b. might affect known or unknown (buried) cultural resources?	No	The proposed activities will not have any impact on these sites at all.	
4. Will the project restrict local users' access to cultural resources or natural features/sites with cultural, spiritual or symbolic significance?	NO		
5. Is there a risk that the project might affect cultural values, norms or practices of local communities?	NO		
6. Will the project promote the use of (or development of economic benefits) from cultural resources or natural features/sites with cultural significance?	NO		
Conclusion of ESMS Reviewer on the Standard on Cultural Heritage			
Standard triggered? Yes / No / TBD What are the main risk issues? If possible indicate their probability (unlikely, likely, almost certain) and impact (minor, moderate, major).			
Are assessments required to better understand the impacts and identify mitigation measures? What specific topics are to be assessed?			
Have measures for avoiding impacts already been considered? Are they sufficient?			

B4: Standard on Biodiversity Conservation and Sustainable Use of Natural Resources				IUCN ESMS Reviewer
Project proponent		Yes, no, n/a, TBD	Answer question, provide further detail where relevant	Comments, additional considerations
1. Is the project located in or near areas legally protected or officially proposed for protection including reserves according to IUCN Protected Area Management Categories I - VI, UNESCO Natural World Heritage Sites, UNESCO Biosphere Reserves, Ramsar Convention on Wetlands? If yes, provide details on the protection status and answer questions a-c		Yes	<p>The Mafia Island Marine Park (822 km²) is a category VI protected area and will form part of the project area.</p> <p>Secondly, the Rufiji Delta mangrove forest reserve (532km²) is also a category IV protected area although functionally it has been not been managed as such.</p> <p>8 Collaborative Fisheries Management Areas/Locally Managed Marine Areas (3,750 km²)</p> <p>Moreover, a significant part of the project area is already designated as RAMSAR area (5,969 km²) including buffer area in Rufiji Delta</p> <p>Part of the project goal is to achieve designation of the Rufiji-Mafia-Kilwa seascape area as a UNESCO Man and Biosphere Reserve. This would contain an area of approximately 5,500km².</p>	
2. Is the project located in or near to areas recognised for their high biodiversity value and protected as such by indigenous peoples or other local users? If yes, provide details and answer questions a-c		Yes	<p>Mafia Island Marine Park is an important marine protected area in Tanzania and the Rufiji Delta Mangrove Forest Reserve contains about 50% of the key mangrove in country. The already established BMUs aim to establish sustainable fishing and therefore contribute to the protection of the area's biodiversity.</p>	

3. Is the project located in/near to areas which are not covered in existing protection systems but identified by authoritative sources for their high biodiversity value ¹⁶ ? If yes, provide details and answer questions a-c	Yes	The project aims to entrench wider recognition of the area's value for people and biodiversity through the Man and Biosphere reserve designation. The planned MAB reserve will connect the existing protected areas (MIMP and Rufiji Delta Mangrove Forest reserve) and include the according buffer zones.
Answer only if you answered yes to items 1, 2, or 3 above.		
a. If the project aims to establish or expand a protected area (PA) or to change its management regime, is there a risk of negative impacts on natural resources in areas outside the PA?	No	Biodiversity will be enhanced with improved management effectiveness of the protected areas including sustainable use in the CFMAs. The cash for work scheme is expected to deliver restoration to a regionally important area for mangrove biodiversity.
b. If the project plans any infrastructure in a PA or an area of high biodiversity value (e.g., watch tower, tourism facilities, access roads, small scale water infrastructure), is there a risk of negative impacts on biodiversity (e.g. on threatened species) during its construction and use?	No	None planned.
c. If the project promotes ecotourism, is there a risk of negative impacts on biodiversity (e.g., due to waste disposal, disturbance, slope erosion etc.)?	No	All potential risks will be carefully mitigated.
4. If the project involves civil works or infrastructure development outside of PA or other areas of high biodiversity value, is there a risk of significant impact on biodiversity?	n/a	

5. Will the project include introduction or translocation of species (e.g. for erosion control, dune stabilisation or reforestation) or include production of living natural resources? If yes, provide details and answer questions a-b	No		
a. Does this project involve non-native species or risk introducing non-native species by accident?			
b. If a.is yes, is there a risk that these species might develop invasive behaviour?			
6. Is there a risk that the project might create other pathways for spreading invasive species (e.g. through creation of corridors, import of commodities, tourism or movement of boats)?	No		
7. Is there a risk that the project negatively affects water flows through extraction, diversion or containment of surface or ground water (e.g., through dams, reservoirs, canals, levees, river basin developments, groundwater extraction) or through other activities?	No		

8. Is there a risk that the project negatively affects water dynamics, river connectivity or the hydrological cycle in ways other than direct changes of water flows (e.g., by affecting water infiltration, aquifer recharge or sedimentation)? Also consider reforestation projects as originators of such impacts.	No		
9. Is there a risk that the project affects water quality of surface or groundwater (e.g., contamination, increase of salinity) through irrigation/ agricultural run-off, water extraction practices, influence of livestock or other activities?	No		
10. If the project promotes the use of living natural resources (such as Non-Timber Forest Products), will the project ensure that harvest rates are controlled/monitored?	Yes	The project will develop a mobile information system for CFMAs that will enable continuing monitoring of targeted fisheries resources. The information generated will be analysed and proactively used for adaptive management of the fisheries, mangroves and Mafia Island Marine Park.	
11. Does the project intend to use pesticides, fungicides or herbicides (biocides)? If yes, provide details and answer questions a-b	No		
a. Have alternatives to the use of biocides been rigorously considered or tested?			
b. Has a pest management plan been established?			

12. In case the project intends to use biological pest management techniques, is there a risk of adversely affecting biodiversity?	N/A		
13. Is there a risk that project activities lead to fragmentation of the landscape?	No		
14. Is there a risk that the project unintendedly causes adverse knock-on effects on biodiversity in a wider area of influence (landscape/ watershed, regional or global levels) including transboundary impacts?	No		
15. Is there a risk that consequential developments triggered by the project will have adverse impacts on biodiversity? Is there a risk of adverse cumulative impacts generated together with other known or planned projects in the sites?	No		
Conclusion of ESMS Reviewer on the Standard on Biodiversity Conservation and Sustainable Use of Natural Resources			
Standard triggered? Yes / No / TBD What are the main risk issues? If possible indicate their probability (unlikely, likely, almost certain) and impact (minor, moderate, major).			
Are assessments required to better understand the impacts and identify mitigation measures? What specific topics are to be assessed?			

Have measures for avoiding impacts already been considered? Are they sufficient?		
C. Other social or environmental impacts		
C1: Other social impacts		
	Project proponent	IUCN ESMS Reviewer
	Yes, n, n/a, TBD	Answer question, provide further detail where relevant
1. Is there a risk that the project negatively affects human rights (e.g., right to self-determination, to education, to health, or cultural rights) – other than issues related to indigenous peoples which are dealt with in the respective standard? Differentiate between women and men, where applicable.	No	The project will be implemented to international standards of environmental and social safeguards and in line with legal obligations of Tanzania, including human rights obligations and values, research ethics, and funding accountability. Beneficiary participation and well-being are underpinned by the WWF Network’s Social Policies. These policies recognise and support the rights of people to benefit equitably from conservation and sustainable use of natural resources within their territories. Obtaining free, prior and informed consent from community participants is a recognised standard and will be applied in this project.
2. Will the project influence land tenure arrangements or community-based property rights to land or resources and is there a risk that this might adversely affect peoples’ rights and livelihoods? Consider in particular impacts on transhumant pastoralist, vulnerable groups, different gender etc.?	No	

3. Is there a risk that the project creates or aggravates inequalities between women and men or adversely impacts the situation or livelihood conditions of women or girls?	No	Gender disaggregation will be a central feature in the project approach to both co-management and to livelihoods. Approaches will entail giving separate consideration to, and consultation with, men and women. For example women have a significant and distinct role in certain fisheries practices (e.g. in intertidal octopus fisheries and as fish buyers and fryers) and usage of mangrove resources. Such differences will be taken into account in identifying areas for livelihood enhancement, for example through improving access to credit and enterprise skills.	
4. Explain whether the project use opportunities to secure and, when appropriate, enhance the economic, social and environmental benefits to women?		See 3) above.	
5. Explain whether the project provide, when appropriate and consistent with national policy, for measures that strengthen women's rights and access to land and resources?			
6. Is there a risk that the project benefits women and men in unequal terms that cannot be justified as affirmative action? ¹⁷	No		

7. Is there a risk that the project might negatively affect vulnerable groups ¹⁸ in terms of material or non-material livelihood conditions or contribute to their discrimination or marginalisation (only issues not captured in any of the sections above)?	No		
8. Is there a risk that the project would stir or exacerbate conflicts among communities, groups or individuals (e.g. by increasing resource competition when promoting economic opportunities or when strengthen rights of selected groups)? Also consider dynamics of recent or expected migration and issues / needs of displaced people.	Yes	<p>Inevitably, where fisheries and mangroves resources are over-exploited, controlling fishing effort in order to restore stocks to a more optimal and productive level carries a risk of conflict. That is further the case where resource users are a mix of residents and non-residents.</p> <p>The co-management approach adopted by the project is the best way of mitigating that risk of conflict because fishery and mangrove communities themselves are at the forefront of articulating proposed management measures. In such situations, fishers and mangrove users will tend to factor in the risk of conflict to their discussions and decision-making, weighing that against the need to manage fishing effort and mangrove use for the collective good. For that reason, conflict management and resolution is part of the training provided to BMUs, VLCs and VNRCs.</p>	
9. Is the project likely to induce immigration or significant increases in population density which might trigger environmental or social problems (with special consideration to women)?	no		

10. Is there a risk that the project affects community health and safety (incl. risks of spreading diseases, human-wildlife conflicts)?	no		
11. Is there a risk that changes in water resource management or enhanced water infrastructure may attract disease vectors and other environmental health issues (e.g. through poor water quality) and as such lead to an outbreak of water-related disease?	no		
12. Might the project be directly or indirectly involved in forced labour and/or child labour?	no		
13. Is there a risk that the project negatively affects the livelihoods of local communities in indirect ways or through cumulative (due to interaction with other projects or activities, current or planned) or transboundary impacts?	no	The project aims to secure livelihoods for communities.	
13. Is there a risk that the project negatively affects the operation of dams or other built water infrastructure (reservoirs, irrigation systems, canals), e.g., by changing flows into those structures, and as such impairing local communities' livelihood or income?	no		

14. Are there any statutory requirements for social impact assessments in the host country (including provisions for disclosure and consultation) the project needs to adhere to?	no		
15. Is there a risk that the project might conflict with existing legal social frameworks including traditional frameworks and norms?	no		
C2: Other environmental impacts			
	Project proponent		IUCN ESMS Reviewer
	Yes, no, n/a, TBD	<i>Answer question, provide further detail where relevant</i>	
1. Will the project lead to increased waste production, in particular hazardous waste?	No		
2. Is the project likely to cause pollution or degradation of soil, soil erosion or siltation?	No		
3. Might the project cause pollution to air or create other nuisances such as dust, traffic, noise or odour?	No		

4. Will the project lead to significant increases of greenhouse gas emissions or to the reduction of carbon pools (e.g. through changes in vegetation cover and loss of below and above ground carbon stocks).	No		
5. Is there a risk that the project triggers consequential development activities which could lead to adverse environmental impacts, cumulative impacts due to interaction with other projects (current or planned) or to transboundary impacts (consider only issues not captured under the Biodiversity Standard)?	No		
6. Are there any statutory requirements for environmental impact assessments in the host country (including provisions for disclosure and consultation) the project needs to adhere to?	No		
7. Is there a risk that the project might conflict with existing environmental regulations?	No		

D. Climate change risks (Risks caused by a failure to adequately take the effects of climate change on people and ecosystem into consideration)			
Project proponent		IUCN ESMS Reviewer	
	<i>Yes, no, n/a, TBD</i>	<i>Answer question, provide further detail where relevant</i>	<i>Comments, additional considerations</i>
1. Is the project area prone to specific climate hazards (e.g., floods, droughts, wildfires, landslides, cyclones, storm surges, etc.)?	TBD	No area is immune to the impacts of climate change, however this area has been shown to be more resilient to the impacts of climate as evidenced by below average levels of coral bleaching. The ocean study during the course of the project will further elucidate any key climate risks.	
2. Are changes in biophysical conditions in the project area triggered by climate change expected to impact people's livelihoods? Are some groups more susceptible than others (e.g., women or vulnerable groups)?	Yes	Building the resilience of the community through ensuring food security and economic pathways and maintaining relevant ecosystem services will be important to ensure susceptible groups are protected.	

3. Is there a risk that climate variability and changes might affect the effectiveness of project activities or the sustainability of intended changes?	TBD	<p>Project activities are designed to improve the resilience of the area to buffer impacts of climate change. Specifically, the project will enhance the condition of coral reef habitats in Mafia Island Marine Park and Songosongo archipelago, and of mangrove forests in Rufiji Delta, by reducing unsustainable, destructive resource-use activities such as seine nets and illegal pole-cutting. As a result of their improved condition, coral reef and mangrove habitats will have increased resilience to climate-related impacts.</p> <p>However, it is difficult at this stage to tell if any more significant changes due to climate change may drastically change ecosystem function to impact on intended changes. The ocean study in particular will help to deepen understanding of this although it seems reasonable to think that it is unlikely within the duration of the project.</p>	
4. Could project activities potentially increase the vulnerability of local communities to current or future climate variability and changes?	No	The project activities aim to build the resilience of the community including particular activities to ensure food security and economic pathways.	
5. Could project activities potentially increase the vulnerability of the local ecosystem to current or future climate variability and changes?	No		

6. Explain whether the project seek opportunities to enhance the adaptive capacity of communities and ecosystem to climate change?	Yes	The project aims to benefit 19 villages (43,159 people as per 2012 census) in the Rufiji Delta. It will directly target livelihoods by improving access to small-scale credit and strengthening enterprise skills. In addition, it will strengthen livelihood and food security through improving information-based fisheries management, which will lead to improved fish stock health and increased total catches.	
Conclusion of ESMS Reviewer on the Climate Change Risks			
<i>Have negative impacts been identified? If possible indicate probability (unlikely, likely, almost certain) and impact (minor, moderate, major) of risks.</i>			
<i>Are assessments required to better understand the impacts and identify mitigation measures? What specific topics are to be assessed</i>			
<i>Have measures for avoiding impacts already been considered? Are they sufficient?</i>			

(Footnotes)

- 1 Rohner CA, Watts A& Pierce SJ [2017] Mafia Island whale shark research project report for 2017. Marine Megafauna Foundation

Note: the baseline of 74 sharks in 2017 is actual number identified. To be revised when population model is finalised by December 2018.

- 2 Unpublished data, Sea Sense, Dar es Salaam, Tanzania.
 - 3 Wetlands International unpublished data [2018]
 - 4 Marine Parks & Reserve Unit [MPRU] under GoT/World Bank SWIOFish Tanzania project
 - 5 WWF Germany & Institute of Marine Science, Zanzibar are establishing a Mangrove Research and Demonstration Forest (MRDF) in the Rufiji Delta under the USFS *Sustainable Wetlands Adaptation and Mitigation Program* (SWAMP), in collaboration with Tanzania Forest Service and Wetlands International.
 - 6 Rohner CA, Watts A& Pierce SJ [2017] Mafia Island whale shark research project report for 2017. Marine Megafauna Foundation
- Note:* the baseline of 74 sharks in 2017 is actual number identified. To be revised when population model is finalised by December 2018.
- 7 Unpublished data, Sea Sense, Dar Es Salaam, Tanzania.
 - 8 Wetlands International unpublished data [2018]
 - 9 by Marine Parks & Reserve Unit [MPRU] under GoT/World Bank SWIOFish Tanzania project
 - 10 WWF Germany & Institute of Marine Science, Zanzibar are establishing a Mangrove Research and Demonstration Forest (MRDF) in the Rufiji Delta under the USFS *Sustainable Wetlands Adaptation and Mitigation Program* (SWAMP), in collaboration with Tanzania Forest Service and Wetlands International.
 - 11 Mkenda (2011) Household Economics Baseline Survey in Coastal Communities in Rufiji, Mafia, Kilwa Districts. WWF Tanzania. Data from 2008
 - 12 For projects below CHF 500,000 where no risks have been identified the screening report is completed by the project proponent - only the section on the rationale but the sections below that as low risk projects don't require assessments. The columns in the ESMS Questionnaire reserved for the IUCN ESMS reviewer will remain blank.
 - 13 If the project budget is < CHF 500,000 this field (and the equivalent fields below) needs to be completed by the project proponent (instead of the IUCN ESMS Reviewer).
 - 14 The coverage of indigenous peoples includes: (i) peoples who identify themselves as "indigenous" in strict sense; (ii) tribal peoples whose social, cultural, and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; and (iii) traditional peoples not necessarily called indigenous or tribal but who share the same characteristics of social, cultural, and economic conditions that distinguish them from other sections of the national community, whose status is regulated wholly or partially by their own customs or traditions, and whose livelihoods are closely connected to ecosystems and their goods and services

- 15 Cultural heritage is defined as tangible, movable or immovable cultural resource or site with paleontological, archaeological, historical, cultural, artistic, religious, spiritual or symbolic value for a nation, people or community, or natural feature or resource with cultural, religious, spiritual or symbolic significance for a nation, people or community associated with that feature.
- 16 Areas important to threatened species according to IUCN Red List of Threatened Species, important to endemic or restricted-range species or to migratory and congregatory species; areas representing key evolutionary processes, providing connectivity with other critical habitats or key ecosystem services; highly threatened and/or unique ecosystems (e.g. to be determined in future by the evolving IUCN Red List of Ecosystems); areas identified as Key Biodiversity Areas (KBA) and subsets such as important Bird and Biodiversity Areas (IBAs), important Plant Areas (IPAs), important Sites for Freshwater Biodiversity or Alliance for Zero Extinction (AZE) sites.
- 17 Affirmative action is a measure designed to overcome prevailing inequalities by favouring members of a disadvantaged group who suffer from discrimination. However, if not designed appropriately these measures could aggravate the situation of a previously advantaged groups leading to conflicts and social unrest.
- 18 Depending on the context vulnerable groups could be landless, elderly, people with disability, displaced people, children, ethnic minorities, people living in poverty, marginalised or discriminated individuals or groups.

