



**REEF AND MARINE RECREATION MANAGEMENT (RMRM)
THEMATIC AREA**

MOZAMBIQUE

**Towards Sustainable Marine Tourism
In Tofo, Barra & Tofinho**

VERSION 1

2014 - 2019



**COLLABORATIVE ACTIONS FOR SUSTAINABLE
TOURISM (COAST) PROJECT: REEF AND MARINE
RECREATION MANAGEMENT (RMRM)
THEMATIC AREA**

MOZAMBIQUE

May 2014

Towards Sustainable Marine Tourism in Tofo, Barra & Tofinho

Version 1

2014 - 2019

By:

Bernice Mclean*

Jonathan Kingwill*

Jayshree Govender*

Gabriel Marime*

In collaboration with the COAST Demo Site Management Committee and other stakeholders

* EcoAfrica Environmental Consultants

Cover photo insert from left: Brinja Hahn; Gabriel Marime; EcoAfrica; AMAR

Collaborative Actions for Sustainable Tourism (COAST) Project funded by the Global Environment Fund (GEF) and United Nations Environment Program (UNEP), and implemented by United Nations Industrial Development Organisation (UNIDO) and United Nations World Tourism Organisation (UNWTO).

Preface

It gives us great pleasure to introduce the document: “Towards Sustainable Marine Tourism in Tofo, Barra & Tofinho” to you, on behalf of the Collaborative Actions for Sustainable Tourism (COAST) Project, Third Thematic Area: Reef and Marine Recreation Management.

The marine and coastal environments of East Africa are renowned for their wealth of cultural heritage, natural beauty, and biological diversity. The sensitive ecosystems that provide a multitude of goods and services to support tourism and other economic sectors in coastal areas are however under increasing pressure from threats such as rising pollution levels, degradation of sensitive habitats from poorly planned developments, and competition for natural resources. In addition, local communities continue to suffer from crippling poverty and decreasing resources. In recognition of these challenges, the COAST Project worked to apply, through a series of practical demonstration projects, a number of Best Available Practices and/or Best Available Technologies (BAPs/BATs) within nine coastal tourism destinations in Sub-Saharan Africa.

The Reef and Marine Recreation Management (RMRM) Thematic Area, was one of three main Thematic Areas through which COAST activities were categorised. The objective of the RMRM activities were to promote sustainable reef and marine recreation practices in three selected Demonstration Sites to reduce threats to sensitive marine and coastal ecosystems and prevent the further loss of biodiversity. This document is the key outcome of the RMRM project activities. The aim of this document is to ensure that sustainable marine tourism within the Tofo, Barra and Tofinho (TBT) Demonstration Site (hereafter referred to as Demo Site), is managed for the benefit of all users. This will ensure that the longevity of the reefs and marine resources is conserved, whilst generating economic revenue for the livelihoods of local people.

The TBT Demo Site, is situated on the Indian Ocean coast, North East of Inhambane, in Mozambique. This unique site is characterised by breath-taking sandy beaches, large dunes, and exquisite coral reef ecosystems hosting an array of marine megafauna species, Inhambane lagoon, mangrove forests and sea-grass beds. The area is home to many local inhabitants, as well as visited by national and international tourists.

Mozambicans have long used the area and the natural marine environment as a resource for their livelihoods. TBT is also a tourism destination and place of relaxation for both locals and visitors. The broader coastal area from Tofo to Bazaruto is identified as a potential marine World Heritage Site that has outstanding universal value (Obura et al, 2012). This high biodiversity and scenic natural beauty attracts large numbers of tourists every year. The pressure on the environment from the tourism sector is a major concern of the government and consequently a need was identified through the COAST Project for the development of a plan to improve management of marine tourism in the TBT area. The approach identified by the COAST Project was to work with local stakeholders to identify the needs of the site and to work towards sustainable management of marine tourism in the area.

Project activities were coordinated through the Demonstration Site Management Committee (DSMC), and smaller Technical (Tech) Team, comprising of Government institutions, Non-Government Organisations (NGOs), Community-based Organisations (CBOs), researchers, the private sector and other local stakeholders. A participatory sustainable management planning process resulted in the

identification of a Vision for the area and key priorities for strengthening management of marine tourism in the area. These are outlined in this document.

Vision

The Tofo, Barra and Tofinho area is a world-class tourist destination in which the wealth of our marine and coastal biodiversity is conserved and a clean, healthy environment is maintained. The diverse uses of the natural resources are managed in an integrated and collaborative way to ensure sustainability and to reduce conflict among users. The management of reef and marine recreation is improved to reduce the negative impacts from the tourism sector and to optimise the benefits for the local communities, the private sector, the government and the country as a whole. Through the implementation of sustainable management, within ten years, the TBT area will be transformed into a key marine conservation area in the region.

This document was developed in a participatory manner. The underlying philosophy is that in a complex context such as the TBT area with its multiple users, stakeholders and managers, management must be approached in a participative, collaborative and transparent manner. It is important to bear in mind that sustainably managing marine tourism in the TBT area is a process - it will not happen instantaneously, but will progress over time if driven collaboratively by the members of the DSMC and other key stakeholders.

It should be noted that this document is the first Version of the Management Plan and should be reviewed on a regular basis. It should be recognised as a working document that will be modified and updated to reflect new insights and innovations and address emerging issues and opportunities in the years to come.

Finally, we would like to express our gratitude and appreciation to the many individuals and parties, who participated in the development of this document, including those who participated in workshops, generously supplied data and information, their time, or assisted our team in the field. The willingness of those who contributed will help to strengthen governance of the area and set a strong trajectory for collaboration and collective action.

Mozambique Demo Site Management Committee

Table of Contents

Preface.....	i
Table of Contents.....	iii
List of Figures	iv
List of Tables.....	iv
Acronyms	v
1 Introduction.....	1
1.1 Tourism in Marine and Coastal Areas	1
1.2 The Value of Healthy Marine Ecosystems for Tourism	1
1.3 The COAST Project in Tofo, Barra and Tofinho	2
2 Context of the Tofo-Barra-Tofinho Demo Site.....	3
2.1 Overview.....	3
2.2 Marine Tourism in the TBT Demo Site.....	4
2.3 Challenges to Sustainable Marine Tourism	5
2.4 Current Marine Tourism Management Measures.....	10
2.5 Stakeholder Consultations.....	11
3 Institutional and Regulatory Framework	11
3.1 Institutional Framework.....	11
3.2 Policy and Legislation	12
4 Development of the Sustainable Marine Tourism Management Plan for TBT.....	14
4.1 Process of Developing the Document.....	14
4.2 Key Issues Identified by Stakeholders.....	15
4.3 Rapid Ecosystem Assessment and Participatory Mapping Activities	15
4.4 Results from the Research.....	16
5 Vision, Principles and Objectives.....	19
5.1 Vision.....	19
5.2 Guiding Principles	19
5.3 Aim and Objectives	20
5.4 Potential Partners, their Roles and Responsibilities	20
5.5 Anchoring the Plan.....	22
6 Implementation Plan.....	23
6.1 Monitoring and Evaluation for Adaptive Management	23
7 Conclusion and Recommendations	39
7.1 General Conclusion	39
7.2 Challenges.....	39
7.3 Risks	40
7.4 Timeframe.....	40
7.5 Recommendations	40
7.6 Future of Version 1 Document.....	41
References.....	42
Annex 1: List of DSMC and Tech Team Members.....	44
Annex 2: List of Stakeholders Consulted.....	45
Annex 3: List of Endangered and Vulnerable Marine Species.....	47
Annex 4: Research Underway at the Demo Site.....	49

List of Figures

Figure 1: Potential transboundary World Heritage Site in the Mozambique Channel.....	3
Figure 2: Marine Recreation Activities within the TBT Demo Site	6
Figure 3: Process of Developing the Sustainable Marine Tourism Management Plan.....	14
Figure 4: Marine Tourism Impacted Sites within the TBT Demo Site	17

List of Tables

Table 1: MPAs in Mozambique, as per the Marine Conservation Agreement.....	10
Table 2: Key Policies and Laws relating to Tourism and Marine and Coastal Protection.....	12
Table 3: Implementation Plan for Improving Reef and Marine Recreation Management	24

Acronyms

ADMAR	Administração Marítima (Maritime Administration)
AHTPI	Associação de Hotelaria e Turismo da Província de Inhambane (Hotel and Tourism Association of the Province of Inhambane)
ALMA	Associação de Limpeza e Meio Ambiente (Association of Cleaning and Environment)
AMAR	Associação dos Mergulhadores Activos para os Recursos Marinhos (National Divers' Association of Mozambique)
ANAC	Administração Nacional das Áreas de Conservação (National Agency for Conservation Areas)
AOA	All Out Africa
BAPs	Best Available Practices
BATs	Best Available Technologies
CBO	Community-based Organisation
CCP	Conselho Comunitário de Pescas (Community Council of Fishermen)
CDS	Centro de Desenvolvimento Sustentável (Centre for Sustainable Development)
CEPI	Council of Employers of the Province of Inhambane
CMCI	Conselho Municipal da Cidade de Inhambane (Inhambane Municipal Council)
COAST	Collaborative Actions for Sustainable Tourism
CoC	Code of Conduct
CTA	Confederação das Associações Moçambicanas (Confederation of Mozambiquan Associations)
DINATUR	Direcção Nacional de Turismo (National Directorate of Tourism)
DPC	Demo Site Project Coordinator
DPCA	Direcção Provincial Para Coordenação da Acção Ambiental (Provincial Department for the Environment)
DPP	Direcção Provincial das Pescas (Provincial Directorate of Fisheries)
DPTUR	Direcção Provincial do Turismo (Provincial Directorate of Tourism)
DSMC	Demo Site Management Committee
EBM	Ecosystem-based management
EIA	Environmental Impact Assessment
EMS	Environmental Management Systems
EotH	Eyes on the Horizon
FOPROI	Forum Provincial de Organizações de Inhambane (Provincial NGO Forum of Inhambane)
GEF	Global Environment Fund
GoM	Government of Mozambique

INAE	Instituto Nacional de Atividades Econômicas (National Institute for Economic Activities)
INAMAR	Instituto Nacional da Marinha (National Marine Institute)
IDPPE	Instituto para o Desenvolvimento de Pesca de Pequena Escala (Institute for the Development of Small Scale Fisheries)
IIP	Instituto de Investigação Pesqueira (Institute of Fisheries Research)
IUCN	International Union for Conservation of Nature
LMMA	Locally Managed Marine Area
M&E	Monitoring and Evaluation
MCA	Marine Conservation Agreement
MICOA	Ministerio para a Coordenação da Acção Ambiental (Ministry of Coordination of Environmental Affairs)
MITUR	Ministério do Turismo (Ministry of Tourism)
MMA	Marine Managed Area
MMF	Marine Mega Fauna Foundation
MoU	Memorandum of Understanding
MPA	Marine Protected Area
NGOs	Non-Governmental Organisations
OUV	Outstanding Universal Value
RMRM	Reef and Marine Recreation Management
SEA	Strategic Environmental Assessment
SDAE	 (District Services for Economic Development)
SNV	Netherlands Development Organisation
TBT	Tofo-Barra-Tofinho
Tech Team	Technical Team of the DSMC at the Demo Site
UEM	Universiade Eduardo Mondlane (Eduardo Mondlane University, Maputo)
UNEP	United Nations Environment Program
UNESCO	United Nations Education, Science and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
UNWTO	United Nations World Tourism Organisation
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

1 Introduction

1.1 Tourism in Marine and Coastal Areas

Coastal environments are complex, dynamic and highly sensitive and delicate ecosystems, comprising of significant habitats and rich biodiversity. Universally, the productive capacity and ecological integrity of the marine environment, which includes both estuaries and nearshore coastal waters, are being degraded, and in several of these places the degradation has intensified. In most cases, the main contributing driving factors to the degradation of these ecosystems are poor spatial planning, rapid growth and development-related activities in these coastal areas. These result from increasing population, urbanisation, industrialisation, tourism and maritime transport (UNWTO, 2013a).

Throughout history, coastal environments have held a charismatic lure for tourists. Tourism in coastal areas is one of the largest and fastest growing sectors of the industry that holds a promise of contributing to the economic and social wellbeing of the destination countries. In Sub-Saharan Africa, many of these coastal areas have been developed into flourishing tourism destinations. Countries are increasingly turning to tourism as a viable option to accelerate their economic growth while the sector consistently demonstrates its ability to act as a key factor for growth in some of the poorest countries of the world (UNWTO, 2013a).

Coastal tourism is however a fragile sector particularly within the developing countries, where governance systems and development structures are emerging. Here, the local residents are more likely to experience the negative side of the tourism trade than the tantalising riches. Negative impacts include for instance rising pollution and degradation of sensitive marine and coastal areas from poorly planned developments, competition for fresh water, over-exploitation of scarce resources to feed the sector, rising real estate prices, displacement of local fishing and farming communities, and irreversible damage to local culture.

Simply stated, inappropriate tourism development destroys local natural and cultural resources and limits tourism business opportunity into the long-term. The good news is the growing recognition that not all forms of tourism are equally destructive and that tourism can be managed to deliver both quality visitor experiences and benefits to local economies and livelihoods, if planned and practised collaboratively and responsibly.

1.2 The Value of Healthy Marine Ecosystems for Tourism

Coral reefs, seagrasses and mangroves provide a host of essential functions such as coastal protection, carbon sequestration, and provide nursery ground habitats for a great diversity of organisms including important commercial fish species. Coral reefs are among the most biologically diverse ecosystems on earth. The health of reefs, seagrass beds and mangrove forest ecosystems is closely interlinked due to a strong interconnectedness of species and natural processes. Some of the main recreational opportunities in the East Africa region provided by these marine ecosystems include glass-bottom-boat viewing, snorkelling, recreational and sport fishing and SCUBA diving.

Assessments of the economic benefits generated from these forms of tourism are estimated at \$9.6 billion annually. A 2013 analysis of the direct revenues generated from tourism relating to the

observation of a single marine species (manta ray watching operations) in 23 countries around the world, valued the industry at over US\$73 million annually.

The direct economic impact of the associated tourism expenditures is placed at US\$140 million annually (O'Malley et al, 2013). The growth of coastal and marine tourism has however, often failed to meet the promises of greater benefits to poor coastal communities while leading to a host of serious environmental and social problems. Tourism in coastal areas is one of the largest and fastest growing sectors of the industry with a promise of contributing to the economic and social wellbeing of the destination countries. Yet tourism has become one of the most powerful, most influential and least-examined forces in the world to the extent that it is termed “the stealth industry of the 21st century” (Becker, 2013).

While different types and extent of marine recreation occur within the Demo Site, the fact remains that the tourism sector relies directly upon healthy and productive marine and coastal ecosystems for long-term sustainability. The reality however, is that many pressures threaten the health of these ecosystems. Over-utilisation of marine and coastal resources, destructive activities in sensitive ecosystems, and poorly planned and unmanaged coastal development and use, are resulting in degradation of the resource base. The rampant poverty, increasing fishing pressures and rising conflicts between users, exacerbate the threats to the sensitive ecosystems. Weak governance and the limited collaboration among the stakeholders further contribute to threats facing this area.

Just as “The Goose that Lays the Golden Egg”, marine tourism depends directly on healthy, functioning ecosystems. If the natural environment of coastal and marine destinations is maintained and utilised responsibly, the greater the opportunities will be for the tourism sector to grow and flourish over the long-term and the greater the support will be for ongoing economic development of the area.

1.3 The COAST Project in Tofo, Barra and Tofinho


The Collaborative Actions for Sustainable Tourism (COAST) Project, implemented by United Nations Industrial Development Organisation (UNIDO), worked to apply, through a series of practical demonstration projects, a number of Best Available Practices and/or Best Available Technologies (BAPs/BATs) within nine coastal tourism destinations in Sub-Saharan Africa. These are all aimed at the reduction of negative environmental impacts resulting from the coastal tourism sector actions and pollutants. The Reef and Marine Recreation Management (RMRM) Thematic Area is one of three main Thematic Areas through which COAST activities are categorised, the remaining two being the Ecotourism Thematic Area and the Environmental Management Systems Thematic Area.

The COAST Project selected the Tofo, Barra and Tofinho (TBT) area as one of the three East African Demonstration Sites (hereafter Demo Sites) for the RMRM Thematic Area. The aim of the Demo Sites is to demonstrate and support adoption of best practice approaches to promote sustainable reef and marine recreation practices. This document draws from activities undertaken in the area as part of the COAST Project and provides an overview of recommendations for improving the governance of reef and marine recreation in the TBT area.

2 Context of the Tofo-Barra-Tofinho Demo Site

2.1 Overview

The Tofo-Barra-Tofinho (TBT) Demo Site is located in south-eastern Mozambique. The area lies on the Indian Ocean coast, on Ponta da Barra peninsula in the province of Inhambane. The Demo Site lies about 22 kilometres from the historic town of Inhambane and is characterised by diverse ecosystems including coastal sand dunes, rocky and sandy shores, mangrove forests, sea grass beds, coral reefs, and open ocean. The Demo Site includes three main beach areas: Tofo, Barra and Tofinho and a number of coral reefs, with an abundance of soft corals of the genera *Lobophytum* and *Cladiela*. The dominant ocean currents transport sediment northwards and form North-trending headlands such as Tofo (Obura et al, 2012). A high degree of marine productivity in the region results from the mixing of variable eddies from the Mozambique Channel in the North, and from the East Madagascar Current-Agulhas Current region in the South.

The Tofo, Barra and Tofinho area hosts an exceptional wealth of biological diversity, which forms the basis for tourism and trade along this stretch of coast. The TBT area falls within a series of selected sites within the Mozambique Channel that, when combined, have potential World Heritage value. A recent Western Indian Ocean Study on marine World Heritage in 2012, found that 6 sites within the Mozambique Channel, (including the Tofo-Bazaruto area), host features that are globally unique and potentially have the Outstanding Universal Value (OUV) required for designation as a serial transboundary World Heritage area. The six constituent areas include: a) Quirimbas – Mtwara; b) Northern Madagascar; c) the Comoro Archipelago; d) the Iles  e) Tofo – Bazaruto, Mozambique; f) Madagascar Plateau (adapted from Obura et al, 2012) (See Figure 1 below).

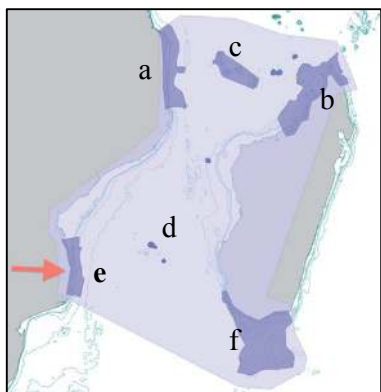


Figure 1: Potential transboundary World Heritage Site in the Mozambique Channel.

This system is home to a unique diversity of marine species, in particular to charismatic species such as seahorses, reef fish and large megafauna marine species, such as manta rays, Whale sharks, turtles, Gugongs and Humpback Whales. The significance of a potential marine World Heritage designation would mean global recognition of the value of the marine heritage of the area, which could lead to an enormous boost in tourism and greater resources for management.

The mosaic of ecosystems in the TBT area supports a unique combination of terrestrial and marine life forms. Most often cited are the globally significant, year-round aggregations of manta rays, the Reef Manta (*Manta alfredi*) and the Giant Manta (*Manta birostris*), which represents the largest known aggregation in the Indian Ocean and the second largest in the world (Marshall et al, 2011). The area also hosts one of the largest aggregations of Whalesharks (*Rhincodon typus*) in the Western Indian Ocean (Obura et al, 2012). Other charismatic megafauna sited in the area include large wintering populations of Humpback Whales (*Megaptera novaeangliae*), Bottlenose Dolphins (*Tursiops truncatus*), Humpback Dolphins (*Sousa chinensis*) and the highly endangered Dugongs (*Dugong dugon*). Five species of endangered marine turtles exist in the area, as do seahorses and a variety of other species add to the attraction for visitors to the area. Over thirty coral reefs are used within the

Demo Site as diving and/or snorkelling destinations, with new reefs being discovered on an ongoing basis.

In addition to the high biodiversity present off the shores of Tofinho, Tofo and Barra, the Bay of Inhambane provides an essential link in the complex ecosystem processes in the area. The Bay is rich in mangrove and seagrass ecosystems that provide critical habitats for countless marine organisms including seahorses (*Hippocampus* sp.), sea cucumbers (*Holothurian* sp.), crustaceans, and molluscs. They are also essential feeding and breeding grounds for many economically important fish species. Anecdotal evidence also exists of endangered dugongs in the Bay area. Inhambane Bay is used extensively by local fishermen, using a vast array of fish traps and nets. The North-eastern area of the Bay is also attracting growing numbers of visitors, particularly around the White Sands region where visitors picnic, snorkel, SCUBA dive, kayak, motor boat and jet ski. Trips are also offered by some operators to the islands in the Bay, including Ilha Dos Porcos, Ilha Dos Ratos and Pansy Shell Island.

The Inhambane Province contains a wealth of cultural heritage, with the historic city of Inhambane and a diversity of authentic visitor experiences including traditional food, music, dance, and art. A rich cultural diversity of local communities live in the Demo Site area, many of whom are engaged in fishing or tourism-related activities. Historically a small coastal fishing village, the TBT area has grown significantly over the years into a major tourism destination that has stimulated a significant growth in population. A total of six village areas fall within the Demo Site, including: Sequiriva, Salela, Machavenga, Josina Machael, Conguiane and Nhamua. Artisanal and subsistence fishing is the sole source of protein for over 40 percent of the Mozambican population in the TBT area (Ocean Revolution, 2011).

The coastal villagers in the Demo Site area depend to a large extent on the sea by fishing both in the sea and in Inhambane Bay for a livelihood. Local fishing practices include line fishing, spear fishing, net fishing and collection of seafood on the reefs and in Inhambane Bay. Small-scale agriculture activities supplement livelihoods of the villagers. Land-based aquaculture activities are being piloted in the area, but have yet to contribute significantly to livelihood activities. The heavy reliance of coastal villagers on the sea for food security, places a heavy imperative on maintaining healthy and productive marine and coastal ecosystems.

2.2 Marine Tourism in the TBT Demo Site

Mozambique's 2,700 km coastline is marked by a wide diversity of habitats that support an abundance of species. This richness makes the coastal zone of Mozambique unique in East Africa. Coastal tourism is well developed in the southern part of the country, and the industry has expanded rapidly since the end of the civil war in 1992 (COAST, 2009). Inhambane is one of Mozambique's poorest provinces yet it has a strong tourism growth rate and the sector represents the key economic activity in the Demo Site area. The tourism sector is focused on beach holidays and marine-related activities such as diving, fishing, marine safaris, snorkelling. The vast majority of tourist operators are of South African origin and visitors to the area come largely from South Africa, Zimbabwe, Europe, and the USA. Approximately 3 hotels, 9 guesthouses and 72 lodges provide accommodation within the area.

There are currently six dive operators working from the area, four in Tofo and two in Barra. These centres run snorkelling trips to swim with the whale sharks and diving trips to see the manta rays (these dives are generally over 20 meters deep) and some also undertake snorkelling trips and boat

tours to the islands located in the Inhambane Lagoon. A further 3 dive operators use the reefs in the TBT area. These include two operators in Guinjata and one in Paindane. There is also a possibility of including reefs like Hogwarts and Piandane Express in the TBT marine area since it is an extension of the TBT reef system and offers excellent drift dives. Tourism related activities within the Demo Site are dependent on the natural capital of the area – the beach and marine features.

Total over-night visitor numbers to the TBT area were estimated at 50,000 in 2010. Approximately half of the 125,000 visitors who travel to the Inhambane province, travel every year, and arrive to see the world's highest density of resident megafauna - Whalesharks and manta rays (Ocean Revolution, 2011). As a labour-intensive sector, tourism has the potential to contribute significantly to the income of the rural population and therefore has high potential as a pro-poor industry (SLE, 2003). The economic impact of the sector on surrounding communities is largely employment focussed, with workers employed on a casual basis for entry-level and unqualified work. Tourism is an important employment sector. In 2011, an estimated 45% of formal employment in Inhambane (130,000 jobs) was directly or indirectly related to marine tourism (Ocean Revolution, 2011). Threats to the long-term sustainability of the marine tourism sector are therefore a serious concern.

Figure 1 shows the diversity of tourism activities in the TBT Demo Site. Marine tourism-related activities depending on the beach and marine features include beach traders, boat and dive operators, sport fishing, snorkelling, diving, surfing, kayaking and boating. Secondary activities include safari tours, entertainment spots and other service trades. While the linkages between marine tourism and the local economy could be much improved in the Demo Site area, eco-tourism enterprises are growing, with increasing interest by local residents in the opportunities of sustainable marine tourism activities.

2.3 Challenges to Sustainable Marine Tourism

Oceans around the world are under pressure. Global change, exacerbated by destructive activities such as pollution, over-exploitation, destructive fishing, poor development, lack of governance and other human impacts is manifesting as a loss of biodiversity, degradation of critical marine and coastal ecosystems and a decline of essential marine resources. While tourism activities are seldom considered as drivers of these kinds of impacts, poor management of tourism and recreation activities can result in pollution of sensitive marine and coastal areas, disturbance of natural processes and species, destruction of habitats from poor coastal tourism development, competition for scarce resources to feed the sector, rising real estate prices, displacement of local communities and a host of indirect impacts such as increasing populations.

Changes are already being seen in both the marine environment and in the tourism sector in the TBT area. Research by Marine Megafauna Foundation shows evidence of steep declines in sightings of reef manta ray (88% decline) and whale shark (79% decline) between 2003 and 2011. While the causes may vary, it is suggested that both destructive fishing activities and increasing numbers of tourists to the reefs are causing the decline in sightings (Rohner et al, 2013). Anecdotal evidence suggests that tourism in the TBT area has declined somewhat over the last couple of years due in part to the global economic crisis. Recent political instability in Mozambique in 2013 could be further contributing to this decline. The long-term impacts of these changes are yet to emerge, but a decline in economic development in the region will surely impact negatively on both the local residents and the natural environment. These trends call for urgent attention by decision-makers and users of the marine area.

The Inhambane Province has an extremely high poverty rate. About 80% of the population lives in extreme poverty (Barros, 2012). Since marine resources are the sole source of protein for the majority of residents, maintaining a productive marine environment is critical. As mentioned above, changes to the marine resources and to the economy of the TBT area are already evident. So too are user conflicts, which revolve mainly around unmanaged tourism activities and resource extraction for local livelihood. Selected key interlinked challenges relating specifically to reef and marine recreation that were identified through consultation with stakeholders in the TBT Demo Site include:

1) Lack of awareness of the importance of healthy marine & coastal environments by decision makers, users groups and visitors

Consultations with stakeholders highlighted a lack of availability of and access to information about the marine and coastal ecosystems and resources and a desire from all sectors and levels of stakeholders for more information. There are currently few avenues for information sharing among stakeholders, particularly at the local level, apart from the essential awareness activities undertaken by Bitonga Divers. The awareness activities undertaken as part of the COAST Project including meetings and talks in local villages and schools in the Demo Site were useful for creating momentum and interest in further discussions and information sharing about improved management. Requests were received by fishermen and villagers in particular for more information resources to improve their knowledge about the marine resources. Good opportunity exists for sharing of findings from research groups with local government, CBOs and the private sector, which will go a long way to boosting concern for more sustainable use of resources and identification of better management options. The need also exists for more information for visitors to the area, as well as tour operators and lodge owners, about the value and importance of sustainable tourism activities, the need for responsible and low-impact tourism, and options for reducing impacts on marine ecosystems and species. This information can be contained in the Codes of Conduct for different activities, as well as in signage and other awareness materials.

2) Lack of management of marine tourism

Stakeholders cited insufficient management by government departments and lack of enforcement of tourism laws and regulations as key issues. Local government representatives highlighted issues of inadequate technical and financial resources that hinder execution of their responsibilities. Villagers expressed frustration of the lack of consideration of the impacts of tourism on the local communities by government, particularly regarding the consumption of marine resources, use of local materials for construction, increased pressure on specific species such as seahorses and sharks from uncontrolled extraction and restricted access to resources as a result of tourism development. The lack of control by government of licensing of sport fishing and other tourist activities that impact resources available for communities was also highlighted. Communities would like to see more responsible utilisation of the marine environment by the tourism sector. Members of the private sector stress issues relating to a lack of enforcement of regulations by government and a lack of transparency in licensing and permitting requirements and procedures.

The weak enforcement of and adherence to important regulations guiding coastal development and regulating destructive coastal and marine tourism and resource use activities, is clearly impacting the sensitive ecosystems and species in a negative way. For instance, tourist facilities in the coastal zone have been developed in extremely fragile dune ecosystems in the absence of the required environmental impact assessments (SLE, 2003). Unregulated vehicular traffic is degrading sensitive beach and mangrove areas, which serve as critical nesting and breeding areas for endangered sea

turtles. The same is true of motorised boats in sensitive seagrass areas of Inhambane Bay. Waste management in the area is poor and dumping in sensitive mangrove areas is evident. As coastal development increases and as more marine recreational activities emerge with the diversification of tourism products by operators, more sensitive marine ecosystems and species are impacted.

The lack of implementation of a tourism development plan and appropriate zonation for specific tourism and resource use activities is resulting in increased user conflicts. The need for stronger management by government to reduce conflicts among user groups and ensure appropriate tourism development was a key concern. Recently, an urban infrastructure plan for the Municipality of Inhambane was developed by the Inhambane Municipal Council (CMCI) with support of GIZ. This plan includes tourism areas, beaches/dunes, and outlines specific usage of areas, within the TBT area. Approval of this plan by the CMCI is anticipated in early 2014.

3) Inadequate protection of important sensitive reef and marine ecosystems and species

There is currently no formal marine protected area (MPA) or zoned management plan to protect the sensitive marine ecosystems, processes and species within the TBT Demo Site and the broader area. Preliminary efforts have however been made through informal collaboration between fishermen and one of the dive operators to reduce fishing pressure on Buddies Reef in the Barra area. Fishing on coral reefs is illegal, requiring only enforcement. Various community groups have also expressed a strong desire to establish locally managed marine areas to protect selected areas from over-exploitation and to use resources more sustainably through less destructive fishing activities. Challenges cited involve obtaining formal permission from the government for establishment and local management of such areas. Unfortunately the management of fisheries falls beyond the scope of this Plan.

A preliminary agreement was also made among dive operators for closure of one of the most popular diving reefs (Manta Reef) for a short period to reduce pressure on the manta rays by excessive diver numbers. While initial results appeared positive, a lack of collaboration among operators brought an end to the arrangement.

It is important however, to recognise the nexus between tourism and fisheries whereby much of the fishing pressure results from a demand for seafood for the tourism trade and also for food for local residents drawn into the area by the promise of employment from the tourism sector. A seafood survey, undertaken to understand the seafood trade dynamics within the tourism sector in the Tofo and Barra area, indicates that a diversity of marine species are harvested to supply the tourism sector, some of which include vulnerable reef species. Stakeholders also suggested that some of the megafauna species are targeted by local fishers for meat and income.

Initially, tourism activities in the Demo Site were focussed on the nearshore reefs. Recently however, certain areas within the Inhambane Bay have become increasingly popular with tourists. New attractions are emerging such as a highly biodiverse reef and seagrass area in the northeast area of the Bay. The inadequate monitoring and management by government to guide tourist and fishing activities and to prevent degradation of resources is cited as a key concern by stakeholders. The uncontrolled extraction of marine resources (fish and mangroves) and the lack of control of destructive marine tourism activities need to be addressed in a systematic and informed way.

4) Unsustainable marine tourism practices

The tourism sector in the Demo Site is mostly foreign-owned/operated and visitors are generally of international origin. Inconsistent enforcement of regulations by government, combined with a lack of a management framework for the tourism sector and potentially conflicting tourist activities is resulting in a decline in the condition of some of the highly sensitive areas and species. Activities such as driving on the beach, seriously impacts bird and turtle nesting habitat. Motor boats and jet skis threaten fragile seagrass areas in Inhambane Bay and with a lack of user zonation pose a danger to swimmers and divers. Visitation of high numbers of divers to certain popular reefs, poor diving and snorkelling practices and interference of species behaviour creates a high degree of disturbance, which may have resulted in the decline in the presence of certain key species.

While some solutions are being developed, these have yet to yield results. For instance, the National Divers' Association of Mozambique (AMAR) was tasked by the National Marine Institute (INAMAR) with the revision of the recreational diving legislation (Decree 44/2006), and submitted a proposal from the dive community to INAMAR. A response was anticipated in March 2014. Compounding the above factors is the inadequate management by government is the limited collaboration/self-regulation by the tourism operators. Some stakeholders in the area are attempting to self-regulate some activities and are disseminating locally-developed Codes of Conduct (CoC) based on international best practices for divers. Uptake of the CoC seems sporadic however, and more emphasis is needed for adherence to the procedures in CoC and for greater overall self-regulation by tour operators.

5) Lack of collaboration, coordination & communication among all user groups

Collaboration between government, the private sector and local villagers in the Demo Site is weak. That said, some initial efforts are evident which can serve as a useful example for further collaboration. An Intersectoral Dialogue Group was convened to mediate issues of the public-private dialogue. This group includes representatives of Maritime Administration (ADMAR), Provincial Directorate of Tourism (DPTUR), Ministry for the Coordination of Environmental Affairs (MICOA), Provincial Directorate of Fisheries (DPP), Inhambane Municipal Council (CMCI), Council of Employers of the Province of Inhambane (CEPI), National Divers Association of Mozambique (AMAR), Hotel and Tourism Association of the Province of Inhambane (AHTPI), and the National Institute for Economic Activities (INAE).

Another collaborative initiative is the provision of accommodation and transport by lodge operators for government officials to enforce regulations such as preventing driving on the beach. These collaborative arrangements are however few. Enormous competition and rivalry exists between tourist operators and collaboration is very low, specifically in terms of regulating the numbers of visitors to popular reef environments. Concern expressed by local residents and artisanal fishers relate to challenges to their livelihood from issues such as conflicts with the tourism sector, and a lack of co-management arrangements between government and coastal communities for managing the reefs. While locally managed areas are scarce, there is currently only one agreement between the fishers and the tourism operators in Barra to protect one of the reefs, consultation with fishers reveal a high interest in such arrangements.

2.4 Current Marine Tourism Management Measures

Mozambique's marine environment is highly diverse and productive, but is threatened by overfishing, coastal development and pollution (WWF, 2007). Despite the extensive coastline, Mozambique has demarcated seven Marine Protected Areas (MPAs) (see Table 1).

Table 1: MPAs in Mozambique, as per the Marine Conservation Agreement

Marine Protected Area	IUCN Category	Area (km ²)	Date established	Governance type
Primeiras and Segundas Archipelago (2 areas)		10,411	2012	Government
Bazaruto	II	1430	2001	Government
Ilha da Inhaca e dos Portugueses	VI	1	1965	Government
Quirimbas	--	1522	2002	Government
North Quirimbas	--	230	2008	Private
Reserva Marinha Parcial da Ponta do Ouro	--	678	2009	Government
Vilanculos	--	80	2000	Private

Despite the important marine biodiversity of the Inhambane area and the reliance of the tourism sector (and therefore the local economy) on the marine natural capital, there are currently no formal marine protected areas declared within the Demo Site or any clearly zoned marine managed areas demarcating specific activities. The closest marine protected areas are located further North in the Bazaruto Archipelago. Efforts have however been made to establish locally managed marine areas following participatory models, involving the local villages through the Community Council of Fishermen (CCP), local authorities, the tourism sector and research organisations, to protect the some of the reefs and species that sustain the local economy. As mentioned above, the area has also been identified as part of a globally important complex of marine areas (in association with Bazaruto) that has potential World Heritage value.

On the land-based side of the coastal zone, Inhambane has been identified as a Priority Area for Tourism Investment within the Strategic Plan for Tourism Development in Mozambique (2004-2013) (MITUR, 2004). A number of studies have been done to guide development in the area. In 2002 the Centre for Sustainable Development (CDS) for Coastal Zones – an advisory institution for the Ministry for Coordination of Environmental Affairs (MICOA) commissioned a strategic environmental assessment (SEA) as an input to the preparation of a Macro-Zoning Plan for the Tofo, Barra, Tofinho and Rocha beaches area.

This process highlighted some of the key issues and solutions to some tourism impacts for the area, including those impacting the marine environment, and identified terrestrial community protection zones and a community reforestation zone and seven zones for approval of development proposals (Gove, 2011). The Macro-zoning Plan has yet to be implemented, but remains a useful Plan for guiding development in the area. Subsequently, a tourism development plan (Nhantumbo, 2009), was established for Inhambane Province, and the provincial administration in Inhambane has worked to promote transparency in the process of establishing tourism enterprises, and to develop private sector associations to represent dive operators.

In addition to the above, a useful study conducted in 2002 by the Centre for Advance Training in Rural Development (SLE), highlighted clear steps for sustainable coastal tourism development in Inhambane (SLE, 2003). This document entitled “Tourism and Coastal Zone Management” focuses primarily on land-based coastal environment, but the recommendations it contains to reduce poverty, manage conflicts and protect the environment remain valid given that many of the impacts on the reefs and marine ecosystems are driven by coastal tourism activities. More recently the World Bank-funded the Competitiveness and Private Sector Development Project (PACDE) provided support for the tourism sector in Inhambane through the development and implementation of a tourism strategy and action plan. The project began in 2009 and is due to conclude in 2015 (World Bank, 2014).

2.5 Stakeholder Consultations

A diverse group of stakeholders are concerned with reef and marine recreation in the TBT Demo Site including government representatives from different agencies, local villagers, fishermen, private sector tour operators and lodge owners, residents and property owners, research organisations, NGOs and CBOs. At the beginning of the COAST Project, a Demonstration Site Management Committee (DSMC) was established for the TBT Demo Site (see Annex 1).

The purpose of the DSMC was to support implementation of project activities and to promote sustainability of project outcomes. The DSMC was comprised of relevant representatives from most stakeholder groups in the area. The DSMC also served to link local stakeholders with national government, facilitated by a Demo Site Project Coordinator (DPC). A Technical Team was also set up for the TBT Demo Site in August 2013 to include additional stakeholders and provide further specialist support to the implementation of RMRM activities of the project. This document was developed through ongoing consultations with members of the DSMC and Tech Team, as well as other stakeholders both within the Demo Site and in the broader Western Indian Ocean region. Annex 2 provides a list of stakeholders consulted.

3 Institutional and Regulatory Framework

3.1 Institutional Framework

The Ministry of Tourism (MITUR) is the government institution responsible for the promotion and licensing of tourism activities. Provincial Directorates of Tourism (DPTUR) and District Economic Services (SDAE) are the local representatives of MITUR.

Responsibility for overall environmental management in Mozambique rests with the Ministry for the Coordination of Environmental Affairs (MICOA). The responsible institutions for management of the reef and marine resources are the Department of Fisheries, MICOA and ADMAR. The mandate for protected areas sits with the Ministry of Tourism, under the National Agency for Conservation Areas (ANAC), since tourism is seen to be an avenue for financing conservation. The National Directorate for Environmental Management within MICOA facilitates the identification of Marine Protected Areas (MPAs) and strengthens management. Finally, both the Institute for Development of Small Scale Fisheries (IDPPE) and the National Fisheries Research Institute (IIP) handles fisheries issues relating to MPAs.

Local management of fisheries is promoted by the legislation through the development of local organisations known as Community Council for Fishermen (CCP). Not all fishermen belong to CCPs, however the number of members is reportedly increasing (Songane pers. com. 2013). The CCPs are aware of unsustainable practices of fishermen. These councils have a high degree of knowledge of traditional practices and are strong promoters of sustainable methods of fishing (Ocean Revolution, 2011).

The Maritime Administration, within the Ministry of Transport and Communication, is responsible for navigation and safety at sea. The Maritime Administration also assists with artisanal fisheries licensing and licensing diving centres and schools. In the Inhambane area, they are responsible for enforcing some tourism regulations, such as preventing vehicles from driving on the beaches.

3.2 Policy and Legislation

A variety of policy, legal and regulatory tools are relevant to the marine tourism sector in Mozambique and in the Demo Site area (see Table 2). The tourism sector in Mozambique has received much attention from a planning and legislative perspective. Following the end of the civil war in Mozambique and the signing of the peace accord in 1992, the World Tourism Organisation assisted the Mozambican government to formulate a strategic tourism development plan the period 1993 to 1997. In 2000 the Mozambican Government created the Ministry of Tourism (Ministério do Turismo or MITUR), which steered the formulation of the Strategic Plan for Development of Tourism (MITUR, 2004) and the National Tourism Policy and Implementation Strategy for the development of tourism in Mozambique (GoM, 2007).

Table 2: Key Policies and Laws relating to Tourism, Marine and Coastal Protection

Policy or Law	Relevance
National Environmental Management Program (1995)	Overarching national environmental strategy seeking to promote and implement sound environmental policy.
Conservation Policy and Implementation Strategy (2009)	Strategy for the conservation of Mozambique's natural resources and biodiversity.
Land Policy (1995)	Maintains the fundamental tenet that land ownership is vested in the State but recognising traditional usage rights
National Strategy and Action Plan for the Conservation of Biodiversity (2003)	Plan to meet the targets of the Convention on Biological Diversity (Appendix 1) including conservation of marine resources.
Fisheries Policy and Implementation Strategy (1996)	Aims to maximise economic benefits whilst ensuring sustainable harvesting of the resource.
National Tourism Strategy and Policy (2003)	Recognises the need to develop tourism sustainably and promotes private sector investments.
Framework Environmental law (1997)	Legal and institutional framework for the management of Mozambique's environment.
Land Law (1997)	Determines that land is State property and may not be sold. Provides a legal basis for designating protected areas.
Forestry and Wildlife Act (1999)	Lays down the principles and rules for the protection, conservation and sustainable use of forest and wildlife resources within the framework of integrated management. Establishes land-based protected areas.
Forestry and Wildlife Regulations	Lists protected animals that cannot be hunted according to the Forestry

Annex II (2002)	and Wildlife legislation (only marine species included are dugongs and marine turtles which each carry a fine of 50 000 000 Mzn and 25 000 000 Mzn respectively).
Tourism Law (2004)	Applies to tourism activities, public sector activities directed at promoting tourism, suppliers, tourists and consumers of tourism products and services.
Regulations on community benefits from tourism (2005)	Governs community benefits from tourism. States that 20% of the value of taxes from tourism should be awarded to local communities. Includes details of community registration, management, and finance distribution etc.
Diving Regulations Decree (2006)	Replacing 1968 decree requires full registration and authorisation of dive centres from the National Maritime Authority. The provisions primarily refer to the admission, certification and practice of diving instructors and divers.
Taxes and tariffs for Protected Areas (2009)	Outlines tax and tariffs for protected areas in Mozambique (parks and reserves).
Fisheries Law and Regulations	Governs the adoption of an array of fisheries management and conservation measures.
Local Organs Law	Enables district authorities to propose and designate protected areas through their land use planning powers.
Law on Environmental Impact Assessments (EIAs) (2004)	Addresses all environmental impact assessment issues of land prior to development, including pollution, infra-structure, sustainable management, audits, responsibilities and sanctions.
Regulations governing EIAs (2004)	The regulations to the law on EIAs.

In 2004, the first Strategic Plan for Tourism Development and Human Development in Inhambane was adopted, covering the period from 2004 to 2013 (Gove, 2011). Subsequently, a Tourism Strategy and Action Plan was drafted through the World Bank PACDE Project and presented to the government in late 2012. The intention of the document is to provide an overall destination development vision and strategy on Inhambane Province's tourism product development and upgrade, as well as increased benefits to local communities and sustainable linkages between local small and medium businesses and the tourism sector between 2011 and 2016. Implementation of the Strategy has yet to be completed (Tourism Strategy Company, 2014).

Protected areas are established under the Forestry and Wildlife Act 1999. This refers primarily to land-based protected areas. While no Marine Protected Area (MPA) specific legislation exists, decree 16/96, of the Marine Fishery Regulation, permits the designation of National Marine Reserves, Nature Marine Parks and "protected marine areas." The National Fisheries law and Provincial strategic plans provide for the creation of co-management zones for utilisation of marine resources with local Community Fishing Councils (Ocean Revolution, 2011). Table 2 summarises key law and policy relating to use and conservation of marine resources.

In 2013, the government approved a new Fisheries Act (2013), which will address rights-based management of fisheries, mainly for the direct benefit of local fishermen and pro-poor conservation. This rights-based instrument is the first of its kind on the Western Indian Ocean. The Fisheries Act is the mother instrument that governs all fishing activities in Mozambique and related regulations and falls under the 1996 Fisheries Policy. The sector's main framework instruments are the Fisheries Master Plan, Strategic Plan for the Artisanal Fishing, Strategy for the Development of Aquaculture, Fisheries Research Development Strategy, MCS Policy and the Implementation Strategy, and the

National Plan to Combat Illegal, Unreported and Unregulated Fishing. In the Demo Site area, a local regulation was created by the Community Association of Fishermen of Tofo and the Community Council of Fisheries to strengthen the existing legislation to provide a better understanding among the fishermen and focus on the use of marine resources in the TBT area.

4 Development of the Sustainable Marine Tourism Management Plan for TBT

4.1 Process of Developing the Document

This document was developed through a participatory process involving DSMC members, relevant stakeholders, NGOs, CBOs and researchers within the Demo Site. The approach followed a bottom-up, top-down consultative approach, utilising a number of techniques including baseline research, identification of Best Available Practices and Technologies (BAPs & BATs), ecosystem assessments, participatory mapping, awareness raising, issues and needs identification and discussions to identify priority solutions (see Figure 3 below illustrating the process).

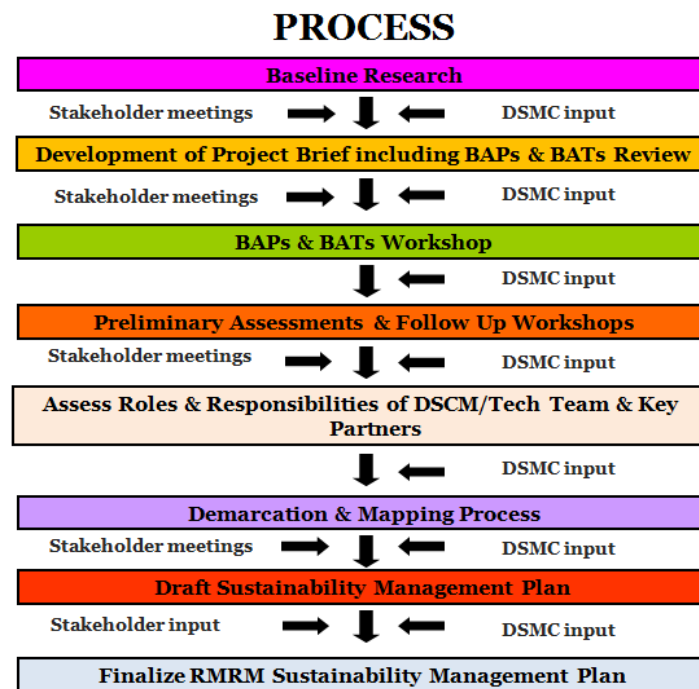


Figure 3: Process of Developing the Sustainable Marine Tourism Management Plan

This document aims to be simple, practical and user-friendly manual that can be used by all marine resource users of the Demo Site interested in the improved management of reef and marine recreation.

4.2 Key Issues Identified by Stakeholders

As discussed in Section 2.3 above, a list of prioritised key issues were identified by stakeholders through the consultation process. These include:

- Lack of awareness of the importance of healthy marine & coastal environments by decision makers, users groups and visitors;
- Lack of management of marine tourism;
- Inadequate protection of important sensitive reef and marine ecosystems and species;
- Unsustainable marine tourism practices; and
- Lack of collaboration, coordination & communication among all user groups.

4.3 Rapid Ecosystem Assessment and Participatory Mapping Activities

The rapid ecosystem assessment and participatory mapping activities provided an indication of the key sensitive ecosystem areas and degraded or impacted sites. Initial reef surveys were conducted using rapid reef assessment approaches to obtain an understanding of the degree and type of reef usage, as well as the type of impacts from marine recreation. The rapid assessment approach using a combination of techniques such as: i) Photographic Profiling; ii) Fish and Coral Counts (hard and soft corals and other indicator species), iii) Photos along a Transect and iv) Video Transects. These techniques were also piloted to test options for future monitoring. Field visits were also conducted at other sensitive marine ecosystems including the mangrove forests and seagrass beds in the Inhambane Bay. The field assessments were supplemented with existing research findings and stakeholder consultations. The assessment supported the identification of the sensitive marine areas within the overall Demo Site and the identification of some of the key current human impacts from marine tourism on the marine system.

The participatory mapping exercise was undertaken through ongoing consultation with stakeholders and field visits to identify key features, impacts, areas of concern, and opportunities for improved management. GPS points were recorded for as many major features as possible relating to the reef and marine recreational use. Collection of additional information through the ecosystem assessments, 'ground-truthing', existing research and stakeholder participation, contributed to the mapping exercise. Mapping of some of the major sensitive ecosystems (reefs, seagrass beds and mangroves) was supplemented by information provided by researchers from Eduardo Mondlane University, Bitonga Divers and selected dive operators.

The draft maps produced were discussed with the DSMC, Tech Team members, villagers in the Demo Site, researchers, lodge owners and other key users of the TBT Demo Site. Areas of specific use or concern identified by the stakeholders during the consultation meetings were also mapped. A second draft of the maps were presented to stakeholders for further feedback and input which was incorporated into the final maps. The aim of the maps is to provide information to orientate management (sensitivities, degradation, threats, management arrangements and priorities, research and information gaps) of the site.

Figure 4 below illustrates the higher use zone and some of the key sensitive marine areas impacted by tourism including coral reefs, mangrove forests, seagrass beds and sandy beaches. The map provides a

useful illustration of the location of sensitive ecosystems and their proximity to high tourism use. It is evident that the higher use and impacted areas relate directly to the level of access by users of the areas and there is a clear need for improved management in these areas. The establishment of protection and zoned management of the impacted and priority higher use areas indicated in the map should be a priority.

The marine areas under high use from marine tourism included the coral reefs, nearshore areas (for swimming, surfing, fishing, boating, jet skiing etc.) and the Inhambane Estuary, an area that hosts sensitive seagrass beds, rocky areas and mangrove forests. Certain coral reefs are targeted more often by operators due to their easy access and the perception of opportunities for marine fauna encounters. While new coral reef areas are continuously under exploration, which could potentially relieve some of the visitor pressure on the regularly-visited reefs, collaboration was still needed among dive operators to agree upon visitor limits and reef recreation management options.

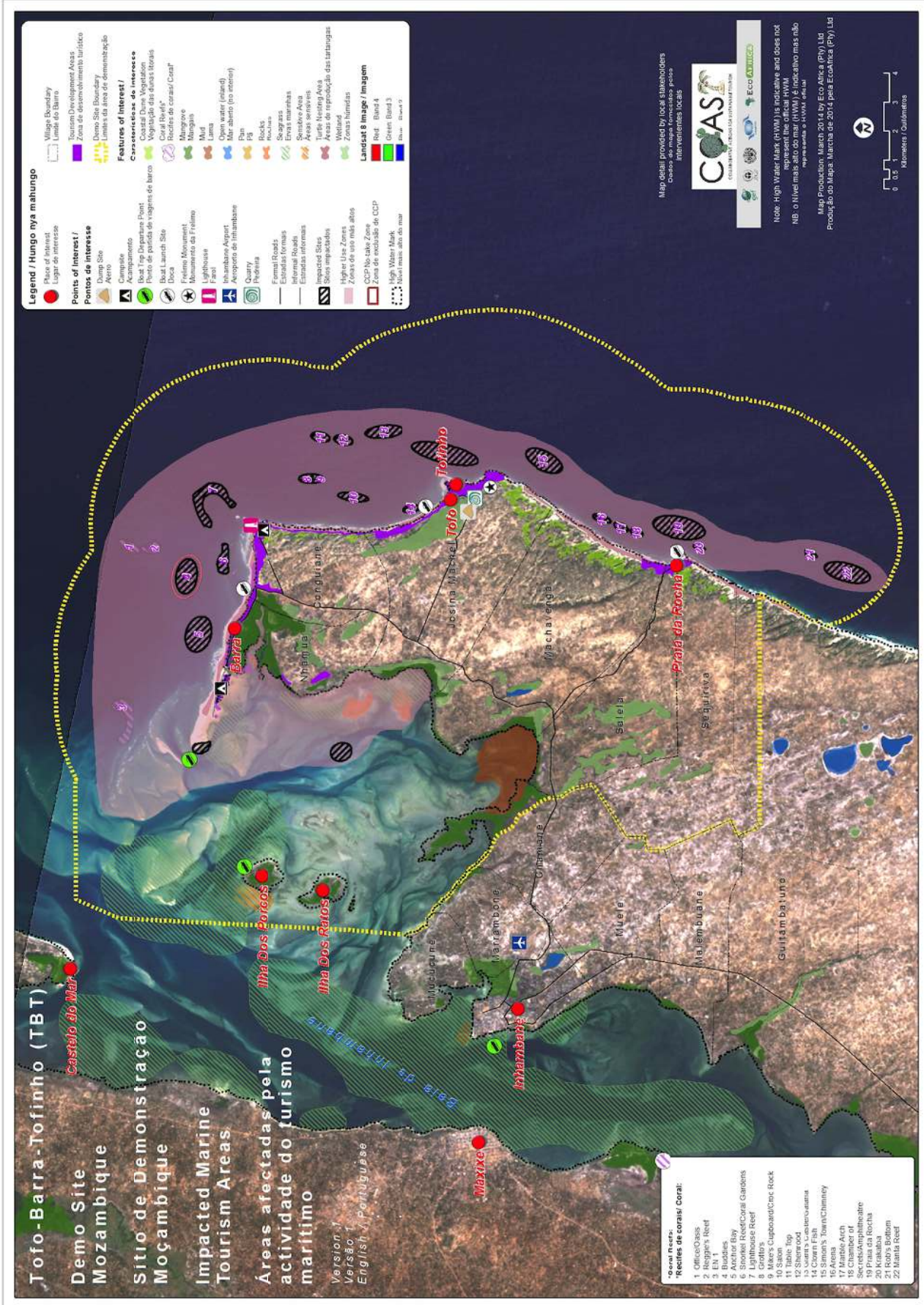
At the time of writing, sensitive areas of the Inhambane Estuary were growing in popularity as a marine tourism destination. New recreational activities increasing access to some of the sensitive areas in the estuary were being promoted including snorkelling in the seagrass and rocky areas in the estuary, boating and kayaking, jet skiing and swimming. While visitor numbers were controlled to a certain extent by operators in some of the more sensitive areas such as seagrasses, mangroves and coral reef areas, these areas are still freely accessible by boat and uncontrolled by user fees or regulations. Management of the visitation to these areas and activities within these sensitive areas and the less sensitive buffer areas, was not yet strong enough to ensure adequate protection and sustainable use.

4.4 Results from the Research

Some of the results emerging from the ecosystem assessment, mapping and stakeholder consultation are as follows:

- There is a drastic recorded decline (approximately 80%) in the sightings of certain marine species (reef manta rays and whale sharks), and anecdotal evidence of an overall decline in fish and other marine resources;
- During the same period over which the decline in sightings of these large marine species has been recorded, there has been an increase in the practice of tagging, tissue sampling and other activities by researchers. These studies have reportedly been unregulated and unpermitted and correlate directly with the decline in sightings during the period and area noted above (Dykman, pers. com., 2014);
- Clear evidence exists of ecosystem change and degradation in some of the higher-use areas from tourism activities. This includes erosion of beach areas from unregulated and poorly planned development and also from destructive tourism activities (driving on the beach). This further threatens the nesting areas of the already endangered marine turtles and increases the risk of disturbing other sensitive species;
- Risk to critical nursery and feeding areas for marine organisms within the Inhambane Bay from inappropriate and uncontrolled activities such as heavy visitor traffic, the use of motorised boats and uncontrolled mooring of boats in fragile seagrass beds and coral reefs;

Figure 4: Marine Tourism Impacted Sites within the TBT Demo Site



- A lack of enforcement of regulations is failing to prevent over-utilisation and destructive resource extraction including removal of mangroves for construction and fuelwood and overfishing and destructive fishing practices on reefs and in Inhambane Bay that is reducing numbers of turtles, sharks and other fish species;
- Uncontrolled removal of targeted species such as seahorses (*Hippocampus sp.*) from Inhambane Bay;
- Degradation of sensitive reef ecosystems and disturbance of marine species due to high visitation by divers and pressure from fishing. Some of the corals on the nearshore shallower reefs that were sampled show signs of damage, either from fishing and/or from poor recreational practices; and
- Information of high-risk marine recreation areas and activities, as well as procedures to follow when injuries or mortalities occur, is not readily accessible. Safety of people participating in marine recreation activities is a growing concern and an issue that needs to be improved through stronger protocols and precautionary regulations, as well as greater awareness of the risks and options to reduce them.

While the rapid assessments are not sufficient to quantify specific cause and effect relationships for the degradation, the combined pressures of a number of impacts is contributing to the degradation including: over-utilisation of resources, destructive tourism and fishing activities, uncontrolled coastal development and poor waste management. Figure 4 illustrates a shaded zone of higher tourism use that stretches along the coast from the East of the Tofo peninsular, to the North along the Barra headland and into the Inhambane Bay. The area of higher use illustrates a concentration of activities on sensitive marine ecosystems (reefs, sandy beaches, mangroves and seagrasses) and highlights the need for greater environmental protection and improved management of tourism in this area. It also illustrates the need to zone specific areas for different uses and to manage visitor numbers and impacts for these areas relative to the type and extent of marine recreation activity.

From the reef assessment and mapping it is clear that human impacts are taking a toll on the health of the ecosystems in the area. The combination of unsustainable resource use driven by poverty and uncontrolled tourism activities and a lack of planning and management is leading to a decline in species and degradation of essential habitats. There is an urgent need for improved management, as well as targeted research and monitoring for specific impacts from tourism activities such as the Limits of Acceptable Change approach (an updated approach to that of determining the carrying capacity of an area), that informs adaptive management.

Limits of Acceptable Change

Management of visitor impacts can be tackled through the Limit of Acceptable Change (LAC) framework where visitor limits can be established as one management tool among a range of tools. The LAC management framework is based on constant monitoring of a site according to specific objectives and can be implemented as a nine-step process:

1. Identify area issues and concerns;
2. Define and describe opportunity classes;
3. Select indicators of resource and social conditions;
4. Inventory existing resource and social conditions;
5. Specify resource standards and social indicators for each opportunity class;
6. Identify alternative opportunity class allocations;
7. Identify management actions for each alternative;
8. Evaluate and select preferred alternatives; and
9. Implement actions and monitor conditions

(The Market Research Group, 2007).

5 Vision, Principles and Objectives

This *Sustainable Marine Tourism Management Plan for the Tofo-Barra- Tofinho (TBT) Demo Site* was developed through extensive consultations with the DSMC, Tech Team, key stakeholders and users of the marine environment. This document serves to promote sustainable marine recreation and tourism within the Demo Site and to increase the social and economic value of the marine environment of the TBT area.

5.1 Vision

The identification of management strategies was guided by a development of a Vision statement that evolved during the consultative process of crafting this document. Stakeholders identified the following set of aspirations for the area:

“The Tofo, Barra and Tofinho area is a world class tourist destination in which the wealth of our marine and coastal biodiversity is conserved and a clean, healthy environment is maintained. The different uses of the natural resources are managed in an integrated and collaborative way to ensure sustainability and to reduce conflict among user groups. The management of reef and marine recreation is improved to reduce the negative impacts from the tourism sector and to optimise the benefits for the local communities, the private sector, the government and the country as a whole. Through the implementation of sustainable management, within ten years, the TBT area will be transformed into a key marine conservation area in the Afro-Austral region.”

5.2 Guiding Principles

From the Vision, a set of guiding principles and objectives were generated to guide the development of this document.

The guiding principles that should underpin the implementation of this plan include:

- a. **Intergenerational equity** -To ensure viable populations of marine resources and biodiversity and their habitat are in state that is good or better e.g. conservation of rare and endangered species including sea turtles, dugongs etc.
- b. **Ecological sustainability** -To ensure sustainable utilisation of marine resources is achieved for both social and economic development. Key elements of management and planning for ecological sustainability include protection of critical habitats, use not to exceed maximum sustainable yield or carrying capacity, and conservation of biodiversity in general.
- c. **Ecosystem-based management approach (EBM)** for reef and marine recreation management that views marine resources as elements of complex systems, acknowledges complexity in management and seeks to protect ecosystem health, while maintaining the ecosystem services needed by people. An ecosystem-based approach to marine management incorporates science and balances the demands of user groups for sustainable resource use.
- d. **Integrated planning and management** - To ensure effective and well coordinated planning of many activities that threaten the marine environment. Consider all potential threats and develop a management protocol that addresses these threats. In order to do this, management will need to be integrated with management responsibilities of the other relevant agencies. It also refers to the

integration of science-based approaches in reef and marine recreation management and monitoring.

- e. **Adaptive management** -To ensure integrated research, monitoring and information exchange is enhanced to promote effective and informed management. Continual monitoring, evaluation and intervention, when required, are essential.
- f. **Collaboration and participatory planning and management** through extensive multi-sector stakeholder engagement and community consultation are key. Managing complexity involves collaboration among a diverse set of organisations and individuals in making decisions.
- g. **Locally managed marine areas** (LMMAs) and the use of local knowledge and traditional practices, whereby areas of nearshore waters and coastal resources are largely or wholly managed at a local level by the coastal communities, partner organisations, and/or collaborative government bodies based in the immediate area.

5.3 Aim and Objectives

The aim of this document is to guide the strengthened management of marine tourism activities. It will also serve as a strategic tool for the decision makers and users alike to modify the marine tourism sector to respond to economic, environmental and cultural needs.

The objectives of this document are to:

- i. Increase awareness of the significance of reef and marine environments to all users;
- ii. Promote awareness of the importance of improved management and sustainable use of the reef and marine environment through BAPs and BATs/sustainable practices;
- iii. Promote protection of important sensitive reef and marine ecosystems within the Demo Site;
- iv. Promote diverse, yet sustainable and appropriate reef and marine recreation practices (BAPs/BATs) at the Demo Site level for the benefit of all stakeholders and user groups;
- v. Improve collaboration and cooperation among all user groups of the Demo Site; and
- vi. Support improved governance of marine resources and ecosystems.

5.4 Potential Partners, their Roles and Responsibilities

This document is based on the findings of the research undertaken at the Demo Site. It reflects broad-based stakeholder input that will hopefully stimulate action by all stakeholders for more efficient and effective outcomes for managing reef and marine recreation as a small piece of the broader tourism puzzle. A number of potential partners should be involved in the implementation and monitoring of this Plan and have been included in the Implementation Plan in Section 6 below. Most obvious are the members of the DSMC and Tech Team that represent most key stakeholders and who have played a central role in developing this Plan. Other government agencies that are not currently participating in the DSMC such as Fisheries and Planning should also be involved.

Additional key partners who have provided input and who will also be central to implementation of the Plan include:

- Marine Megafauna Foundation (MMF), undertakes the majority of the scientific research effort in the area, as well as many of the established education programs. MMF provided input into this document and will promote the value of conservation in the area widely. MMF will be a key partner in guiding and implementing many of the priority research and lobbying actions identified in this document;
- Ocean Revolution, which supports Bitonga Divers, provided information and advice to the RMRM team during the preparation and implementation of the RMRM activities, as well as providing input into this document;
- Bitonga Divers were represented on the DSMC and the Tech Team throughout the project and assisted with the reef surveys and awareness-raising among school groups. Bitonga Divers will be an essential partner in continuing to create awareness of the importance of the reef and the marine environment and in implementing many of the priority actions identified in this document;
- All Out Africa Volunteers assisted with a seafood survey and also developed a set of Code of Conduct posters for the Demo Site, as well as providing input into this document. The group is integrally involved in reef and marine monitoring activities and will be an important partner in implementing many of the research-related actions identified in this document;
- Eyes on the Horizon have provided useful input and guidance in the consultative process for development of this Plan and may be a useful partner for information dissemination, research and lobbying for improved management;
- AMAR were represented on the DSMC for part of the project and undertook capacity building of skippers and dive masters of the dive operators in the TBT area. AMAR also provided useful input into this document and will be a key partner in driving the coordination of dive operators for more sustainable marine tourism and in implementing many of the priority actions identified in this document;
- The private sector operators and lodge owners within the Demo Site will be critical to the success of any efforts to improve the sustainability of reef and marine recreation. Not only do they have direct influence on the behaviour of visitors to reef and marine areas, but they could also support the government to fulfil their enforcement responsibilities in the absence of resources and capacity;
- The Council of Employers of the Province of Inhambane (CEPI) represents the Confederation of Mozambican Associations (CTA) on a provincial level and includes relevant employers of Inhambane Province; and
- Beyond the Demo Site, Provincial and National government, NGOs and research organisations operating to the North of Tofo in the Bazaruto Archipelago, should be drawn in to ensure that the potential Marine World Heritage value of the broader region is realised.

The Implementation Plan presented in Table 3 below outlines a range of different partners for ensuring the achievement of prioritised activities. It should be noted that the DSMC is identified as a key leading and collaborating body. It is therefore essential that the parties involved in the DSMC (and other interested organisations), further establish the structure to drive the implementation of activities following the end of the COAT Project. Recommendations for such a structure are included in the Implementation Plan.

5.5 Anchoring the Plan

Any plan is only as good as its implementation and this is typically guided by a coordinated implementing body. This body will need to continue from build on the DSMC to drive implementation of the steps outlined in this Plan beyond the closure of the COAST Project in June 2014.

The Implementation Plan, which is presented in the next section, looks at establishing a formal localised management body for the TBT Demo Site for the future continuation of management efforts.

6 Implementation Plan

The Implementation Plan provides the TBT Demo Site with a clear, simple template to roll out activities for strengthening management of marine tourism. The Implementation Plan has been developed so that individual elements can be easily taken up by different stakeholder groups into existing or future management programmes or plans. Development of the Implementation Plan was facilitated by the RMRM team, drawing from recommendations for members of the assistance of the DSMC, Tech Team, key stakeholders and other partners identified during the course of project.

The Implementation Plan is designed to address the main issues, concerns and aspirations identified by stakeholders. Table 3 below, outlines the key objectives and specific actions and steps for implementation. Indicators and performance measures are identified for ease of monitoring of the implementation of the actions and steps. The table also suggests relevant implementing partners to lead or drive the activities and to collaborate on implementing the actions. These roles should not be cast in stone, but should be viewed as suggestions for further agreement among participating entities. Each action is ranked in terms of levels of priority to highlight the urgency of particular actions. It is important to note that the Implementation also dovetails with recommendations made by United Nations World Tourism Organisation (UNWTO) in the document that was developed through the COAST Project entitled: “Action Planning and Supporting Activity for Sustainable Tourism Governance and Management in Coastal Areas: Mozambique” (UNWTO, 2013b).

It should also be noted that the Implementation Plan should be seen as a “living” and iterative document that is easily updated following regular review and revision. To fully operationalise the Implementation Plan, it will be necessary for each Action to be further discussed, costed and agreed upon by the implementing party/parties and for adequate budget to be secured. This will require close cooperation between all parties identified in the Table and careful coordination by the body or agency (see Action 2.5 and 2.6 in Table 3 below) that will continue to manage marine tourism in the area.

6.1 Monitoring and Evaluation for Adaptive Management

In the absence of comprehensive scientific information to guide management, adaptive management provides an approach to “learn by doing” management. Monitoring and evaluation (M&E) measures that inform changes in management provide the only way to understand and to measure the impact of the management activities. Thus implementation of the actions outlined in this document must be carefully monitored and the findings considered in future management measures to ensure ongoing improvements based on the best available knowledge. It is proposed that the Implementation Plan be assessed on a regular (biannual/annual basis). Obstacles and emerging issues and opportunities can then be discussed and solved. The advantage of monitoring is that bottlenecks in management can also be easily identified and timely assistance can be provided to the respective and responsible parties.

Finally, an evaluation matrix that focuses on end results must also be part of the M&E system whereby the impact of this document can be evaluated. Not everything in the Plan may be as effective as originally anticipated. Certain approaches or actions may have to be modified and entirely new ones may need to be brought in to ensure that the desired effect is reached. This forms the basis of adaptive management. An added advantage is that a good M&E system can greatly assist in reporting to the relevant stakeholders and to raising awareness of important ideas, findings opportunities and issues.

Table 3: Implementation Plan for Improving Reef and Marine Recreation Management

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
Objective 1: Raise awareness of the importance of healthy marine & coastal environments to all users and decision-makers					
1.1. Develop & implement a long-term targeted awareness campaign among coastal villages and schools on the value of healthy coastal & marine ecosystems and sustainable resource use.	1.1.a. Develop an awareness raising campaign on the value of healthy coastal & marine ecosystems and sustainable resource use comprised of different elements and approaches suitable for all local stakeholders	<ul style="list-style-type: none"> At least 1 annual awareness raising campaign with roles for all user groups 	Improved understanding among local users of the need for more sustainable use of marine and coastal resources. Changes in behaviour of user groups to reduce their negative impacts on the resource base. Greater involvement of citizens in management activities through volunteer activities. Reduced conflicts among users concerning marine resources	<p>Lead: DSMC</p> <p>Collaborators: CCP, Bitonga Divers, Ocean Revolution, Eyes on the Horizon, ALMA, AMAR, FOPROI, DPP, DPCA, Maritime Administration, DPTURI, UEM, ESHTI, MMF, AOA</p>	Year 1
	1.1.b. Undertake village meetings/talks on a regular basis as needed	<ul style="list-style-type: none"> At least 1 talk per village per year Each talk presented to at least 15 participants 		<p>Lead: Bitonga Divers</p> <p>Collaborators: CCP MMF, Ocean Revolution, UEM, DPP</p>	Year 1 Ongoing
	1.1.c. Work with schools to include relevant marine resource content in school curriculum	<ul style="list-style-type: none"> 3 School curriculums incorporate marine educational content 		<p>Lead: Bitonga Divers</p> <p>Collaborators: MMF, Ocean Revolution, Eyes on the Horizon, AOA</p>	Year 2 Ongoing
	1.1.d. Use film events, radio and other media to communicate marine management issues to villages	<ul style="list-style-type: none"> At least 1 annual film event disseminated on marine management At least 2 annual radio events disseminated on marine management 		<p>Lead: DPP</p> <p>Collaborators: CCP, Bitonga Divers, FOPROI, MMF, Eyes on the Horizon, Ocean Revolution</p>	Year 3 Ongoing
	1.1.e. Facilitate local projects (reef protection, beach clean-ups, environmental youth groups, community monitoring of	<ul style="list-style-type: none"> At least 4 local projects per year focussing on citizen action for improved marine health implemented 		<p>Lead: AMAR</p> <p>Collaborators: Dive & tour operators, ALMA, FOPROI, Bitonga Divers, Eyes on the Horizon, MMF, Ocean</p>	Year 3 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
1.2. Increase awareness of the sensitivity and high biodiversity of the area	ecosystem/species; recycling etc.)			Revolution, AOA, AHTPI & Lodges	
	1.1.f. Share research results with villagers & local government	<ul style="list-style-type: none"> All local project results disseminated annually 		Lead: Bitonga Divers Collaborators: DPP, UEM, MMF, AOA, Eyes on the Horizon, ALMA	Year 5
	1.1.g. Work with fishers to identify and implement best practices and sustainable methods	<ul style="list-style-type: none"> Annual training with at least 20 fishers on sustainable fishing practices Change in fishing practices towards more sustainable methods 		Lead: DPP Collaborators: CCPs, Bitonga Divers, AMAR	Year 2
	1.2.a. Develop & disseminate codes of conduct (CoC) for all relevant marine recreation activities	<ul style="list-style-type: none"> A set of 3 CoCs developed for marine recreation (diving, snorkelling) CoC communicated to all tour operators and at least 500 visitors per year; 	Visitors aware of how to conduct themselves to reduce their impacts on marine and coastal ecosystems & species.	Lead: MMF, AOA Collaborators: Dive & tour operators, AHTPI & lodges, DIPA, DPTUR	Year 1
	1.2.b. Promote & undertake activities that involve and inspire visitors to contribute & participate in responsible & authentic eco-tourism	<ul style="list-style-type: none"> At least 5 annual responsible tourism activities implemented i.e. reef/beach clean-ups, community help activities etc. 	Changes in behaviour of visitors to reduce their negative impacts on the people & environment of the area.	Lead: AMAR Collaborators: Dive & tour operators, AHTPI & lodges, ALMA, Bitonga Divers, FOPROI, MMF, AOA	Year 1
	1.2.c. Develop & disseminate awareness information through visitor gateways (posters, leaflets, research talks, etc.)	<ul style="list-style-type: none"> Materials promoting responsible tourist behaviour displayed and updated annually 		Lead: AMAR Collaborators: MMF, AHTPI & lodges, AOA, Eyes on the Horizon	Year 2 ongoing
	1.2.d. Continue and expand awareness events on	<ul style="list-style-type: none"> Weekly awareness talks & events to involve visitors 	Greater demand by visitors for	Lead: Bitonga Divers, MMF Collaborators: AMAR, Dive &	Year 1 - Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	ocean & coastal environment/issues for visitors	held regularly	responsible tourism products.	tour operators, lodges, AOA, EoH	
1.3. Increase awareness of tour operators and lodges/ hotels of the sensitivity and high biodiversity of the area	1.2.e. Develop & install signage and information about the importance of healthy ecosystems / species & responsible tourism.	<ul style="list-style-type: none"> 1 Sign on value/importance of ocean environments & species installed (link to awareness raising campaign) 	More authentic eco-tourism experiences for visitors.	Lead: DSMC, DPTUR Collaborators: DPCA, DPP, AHTPI & lodges	Year 1
	1.3.a. Communicate impacts of tourism on sensitive ecosystems to tour operators and hospitality establishments	<ul style="list-style-type: none"> CoC information for marine tourism activities provided to all operators and hoteliers for display 	Improved understanding among tour operators and lodge owners of the impacts of tourism on marine and coastal ecosystems & species.	Lead: DPP Collaborators: MMF, AHTPI & lodges, AMAR, EoH	Year 1 Ongoing
	1.3.b. Highlight options for hotels and operators to reduce their impact on the coastal & marine environment through measures such as limiting visitor numbers to sensitive sites, minimising disturbance to nesting, breeding etc. following sustainable seafood ideals etc.	<ul style="list-style-type: none"> 20 CoC provided to operators and lodges includes basic information on causes of impacts on marine environment and options & steps to prevent the impacts Sustainable Seafood initiative based on voluntary compliance is developed and launched 	Greater effort by tour operators and lodge owners to promote responsible tourism. Reduced conflicts among users over marine resources.	Lead: DSMC, DPTUR Collaborators: MMF, AMAR, AHTPI, EoH	Year 2 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
<p>Objective 2: Improved management towards sustainable marine tourism</p> <p>2.1. Alternative sources of livelihood developed for communities using natural resources from sensitive marine & coastal ecosystems are identified and supported</p>	<p>2.1.a. Determine, in collaboration with communities, the level of use of vulnerable species (turtles, sharks, reef fish, seahorses, etc. see Annex 4) and products from sensitive marine & coastal ecosystems (reefs, mangroves, seagrasses, sandy & rocky shores) to understand driving forces of resource extraction</p>	<ul style="list-style-type: none"> At least 1 annual report produced and disseminated on the use of marine and coastal natural resources in the TBT area including types and levels of use, drivers of use and recommendations for management and further research and monitoring 	<p>Improved wellbeing of communities who are more resilient to environmental change due to diversification of livelihood</p> <p>Greater understanding of the status of the health of sensitive marine & coastal ecosystems & species</p> <p>Stronger collaboration among residents, decision-makers and users of the marine resources</p> <p>Ongoing provision of essential ecosystem goods and services that provide the platform for the</p>	<p>Lead: Government, CCP, Bitonga Divers, Ocean Revolution, DPP, UEM, MMF, AOA, EoH</p>	<p>Year 4 Ongoing</p>
	<p>2.1.b. Identify options with communities for alternative livelihood initiatives (including funding options) to reduce pressure from extractive use on natural resources from sensitive marine ecosystems</p>	<ul style="list-style-type: none"> At least 1 list of community needs and aspirations for alternative livelihoods developed for each village At least 2 appropriate project proposals developed for support of specific project ideas All completed project proposals sent to government, the private sector and development partners for support 	<p>At least 1 list of community needs and aspirations for alternative livelihoods developed for each village</p> <p>At least 2 appropriate project proposals developed for support of specific project ideas</p> <p>All completed project proposals sent to government, the private sector and development partners for support</p>	<p>Greater understanding of the status of the health of sensitive marine & coastal ecosystems & species</p> <p>Stronger collaboration among residents, decision-makers and users of the marine resources</p> <p>Ongoing provision of essential ecosystem goods and services that provide the platform for the</p>	<p>Lead: CMCI, CCP</p> <p>Collaborators: DPCA, FOPROI, Bitonga Divers, MMF, Ocean Revolution, DPP, relevant lodges & tour operators, GIZ</p> <p>Year 3 Ongoing</p>
	<p>2.1.c. Implement local level projects with communities to reduce dependence on natural resources i.e. aqua/mariculture, green</p>	<ul style="list-style-type: none"> At least 1 local alternative livelihood projects implemented annually. Projects should link with existing initiatives such as 	<p>At least 1 local alternative livelihood projects implemented annually. Projects should link with existing initiatives such as</p>	<p>Ongoing provision of essential ecosystem goods and services that provide the platform for the</p>	<p>Lead: DPCA, CMCI</p> <p>Collaborators: FOPROI, CCP, Bitonga Divers, relevant lodges & tour operators, GIZ, DPP</p> <p>Year 4 Ongoing</p>

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	energy, waste management, tree nurseries, tour guiding, etc.	the STEP ecotourism project run by MITUR Regional Office and the World Bank tourism project operating in the area <ul style="list-style-type: none"> Increased number of employment opportunities available for local villagers in the marine tourism sector Reduced pressure on sensitive ecosystems and vulnerable species from extractive use 	local economy and therefore greater sustainability of the tourism sector		
2.2. More integrated planning & management of marine and coastal environment based on the EBM approach	2.2.a. Include considerations of sensitive coastal and ecosystems and the linkages between them in existing and proposed/draft land and coastal use planning and development documents & guidelines (i.e. into the Urban Development Plan - <i>Plano de Estrutura Urbana</i> for Inhambane that is being drafted and into the proposed Inhambane land-use-plans (<i>micro-zoneamento</i>) to be developed by the DPC.	<ul style="list-style-type: none"> Review of land use planning & development guidelines & documents completed by December 2014 Recommendations for EBM of marine ecosystems and best practices guidelines for marine recreation included into district and municipal land use planning and natural resource management 	More sustainable land use and development that does not degrade the natural resource base upon which the local economy thrives Greater sectoral synergy among planning and development sectors	Lead: MICOA, CMCI, Collaborators: MITUR, MPD, DPCA, DPTUR, DINATUR, DPP, CCP	Year 2
2.3. Strengthen	2.3.a. Raise general awareness of	<ul style="list-style-type: none"> Examination of details of 	Awareness of	Lead: ADMAR	Year 1 -

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
enforcement of laws, regulations and by-laws preventing marine & coastal environmental degradation	<p>all user groups existing laws and guidelines that serve to prevent environmental degradation i.e. no Driving on the beach, Cutting of mangroves, or removal of sensitive or protected species, environmental authorisations for coastal development, contributions from the tourism sector to communities etc.</p> <p>2.3.b. Provide training for enforcement bodies to enforce regulations and laws such as the judiciary and the police</p> <p>2.3.c. Improve coordination among various ministries at the provincial and local level, for inspections of marine tourism enterprises & resource use</p>	<p>existing uncertainties in legal and regulatory provisions (i.e. legality of resuscitating people on the beach, removal of species, beach driving/parking etc.) and report developed for clarification on the issues</p> <ul style="list-style-type: none"> List of relevant laws and regulations relating to marine and coastal tourism is developed and made broadly available to visitors, tourism operators and user groups Information on specific laws & regulations applicable to marine tourism collated and disseminated to tour operators and lodges At least 1 joint sectoral inspection and site visit undertaken on a quarterly basis or as needed (whichever is more often) Information document developed and distributed to marine tourism enterprises on requirements and objectives of inspections At least 1 MoU developed 	<p>applicable laws and regulations is increased, providing a strong platform for enforcement.</p> <p>Citizens and user groups are more respectful of the legal framework and understand the impacts of non-compliance.</p> <p>Enforcement is more effective and transparent</p> <p>Resources for enforcement are shared and capacities built through cooperation</p> <p>Enforcement is more effective and transparent</p> <p>Greater stewardship by citizens of their marine environment</p>	<p>Collaborators: DPP, DIPTUR, MMF, EoH, CCP, MICOA</p> <p>Lead: ADMAR Collaborators: DPP, DIPTUR, CCP, CMCI, DPCA, DINATUR</p> <p>Lead: ADMAR</p>	<p>Ongoing</p> <p>Year 2 Ongoing</p> <p>Year 2 -</p>
	Strengthen regular			Lead: ADMAR	Year 2 -

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	enforcement of relevant laws through partnerships with fishermen and the private sector (i.e. in the absence of resources for enforcement, the private sector can provide vehicles/vessels, accommodation, fuel etc.)	<p>outlining coordination arrangements between government & private sector for law enforcement</p> <ul style="list-style-type: none"> At least 2 agreements developed between government, private sector and resource users (fishers, resource harvesters) to avoid or sustainably use sensitive marine areas 		<p>Collaborators: DPP, DIPTUR, CCP, private sector (lodges, dive operators)</p>	Ongoing
	2.3.e. Develop effective mechanisms for identifying and reporting on illegal activities that degrade the marine environment	<ul style="list-style-type: none"> Reporting hotline (or similar) is established by December 2014 to which anyone can report an infringement of the laws relating to marine recreation Mechanism established to monitor and report on the enforcement response by relevant government agency to reported crimes 		<p>Lead: MPD Collaborators: CMCI, ADMAR</p>	Year 3 Ongoing
2.4. Strengthen research and monitoring for improved management of marine recreation (Annex 3 outlines key existing research	2.4.a. Identify specific research needs for improved management of sensitive marine and coastal resources within the TBT area including (but not be limited to) research on the status & use of: <ul style="list-style-type: none"> Coral reefs 	<ul style="list-style-type: none"> At least 1 meeting held annually to identify and prioritise research needs through a collaborative process between government, researchers and user groups 	Greater understanding of the uses of and changes in marine and coastal ecosystems to guide management actions	<p>Lead: UEM, MMF Collaborators: ESHTI, AOA, EotH, MICOA, DPP, CCP, MPD, DIPTUR, AMAR</p>	Year 1 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
efforts in the TBT area)	<ul style="list-style-type: none"> o Sandy and rocky shores o Mangrove forests o Seagrass beds o Inhambane Bay <p>2.4.b. In the context of the broader marine region develop a targeted research & monitoring strategy that promotes citizen science, local capacity development and regional and global cooperation</p>	<ul style="list-style-type: none"> • At least 1 targeted marine and coastal research & monitoring strategy developed for TBT within the broader marine context • Citizen science research activities are incorporated within a structured and targeted research and monitoring strategy to ensure relevance and viability of information collected 	<p>Greater local capacity for monitoring and managing marine and coastal ecosystem use and management</p> <p>Research is used to inform decision-making and prevent further degradation of marine and coastal ecosystems</p> <p>Greater stewardship among citizens for marine management and responsible tourism</p>	<p>Lead: UEM, MMF Collaborators: ESHTI, AOA, EotH, MICOA, DPP, CCP, MPD, DIPTUR, AMAR</p>	Year 2 Ongoing
	<p>2.4.c. Undertake targeted research activities that involves user groups and promotes citizen science and regional and global cooperation (i.e. recording & mapping of species occurrence and resource use)</p>	<ul style="list-style-type: none"> • At least 6 targeted marine and coastal research initiatives underway on an annual basis to inform management of marine and coastal use • At least 4 collaborative links are made with regional/global networks for monitoring & protection of key ecosystems (coral reefs, mangroves, seagrasses) and species (manta rays, whale sharks, dugongs, humpback 		<p>Lead: UEM, MMF Collaborators: ESHTI, AOA, EotH, MICOA, DPP, CCP, MPD, DIPTUR, AMAR</p>	Year 3 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
2.5. Build structured collaboration among marine recreation operators and hotels to guide activities to reduce their impact on sensitive marine areas through cooperative management of their tourism activities	2.4.d. Establish a system for communication and use of research results to government & user groups for improved management (i.e. annual reports, meeting with stakeholders to share findings etc.)	whales, sharks, seahorses, coral diseases, etc.) <ul style="list-style-type: none"> A system for information provision and reporting on research activities and findings is established and operational by June 2015 		Lead: UEM, MMF Collaborators: ESHTL, AOA, EoH, MICOA, DPP, CCP, MPD, DIPTUR, AMAR	Year 2 Ongoing
	2.4.e. Establish monitoring system of use and status of marine resources and ecosystems and implementation of management measures	<ul style="list-style-type: none"> One M&E system established as part of the research strategy that can inform adaptive management 		Lead: UEM, MMF Collaborators: ESHTL, AOA, EoH, MICOA, DPP, CCP, MPD, DIPTUR, AMAR	Year 1
	2.5.a. Establish of a marine environmental action group with guiding principles and self governing arrangements to drive management among operators. This could fall within the DPTUR sustainable development forum created in 2005: 'Fórum do Turismo'	<ul style="list-style-type: none"> One environmental action group is established with guiding principles and self governing arrangements to drive management among operators 	Improved stewardship of the environment by the private sector (tour operators and lodge owners etc.) to reduce the negative impacts of their marine tourism activities.	Lead: AMAR Collaborators: Hotels & lodges, FOPROI, DPTUR, AHTPI	Year 2
	2.5.b. Develop and implement through a collaborative process, actions for reducing impacts on	<ul style="list-style-type: none"> Actions for reducing impacts on marine ecosystems & species developed and implemented 	Reduced conflict among operators and researchers over use of marine	Lead: AMAR Collaborators: dive and tour operators, Hotels & lodges, AHTPI, ESHTL, MMF, EoH,	Year 2 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	<p>marine species and habitats by tourism (i.e. closed reefs, limits to numbers of divers on reefs, access to sensitive areas etc.)</p>	<p>The collaborative. immediate focus should be on:</p> <ul style="list-style-type: none"> o Compliance with existing CoCs and development and implementation of additional marine recreation CoCs o Temporary agreed closure of highly impacted reefs, to tourists (i.e. Manta Reef) o Limits to numbers of divers on reefs agreed upon o Restricted/controlled access to highly sensitive areas i.e. snorkelling area in Inhambane Bay o Proper planning following environmental assessment of development of additional infrastructure in or near marine habitats (boardwalks, artificial reefs, fishery aggregation devices - FADs etc.) 	<p>areas and resources</p> <p>A more sustainable marine tourism sector due to reduced impacts from poorly managed marine recreation activities</p>	<p>AOA, FOPROI</p>	<p>Year 1 - Ongoing</p> <p>Lead: AMAR Collaborators: dive and tour operators, Hotels & lodges, AHTPI, ESHTI, MMF, EoH,</p>
	<p>2.5.c. Develop and disseminate awareness information on these actions disseminated to all marine tourism</p>	<ul style="list-style-type: none"> • At least one set of materials outlining information on these actions disseminated to all operators and lodges to 			

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	operators, hotels and lodges and researchers	encourage voluntary compliance for responsible tourism		AOA, FOPROI	
2.6. Establish a tourism/planning observatory or information facility for Inhambane that includes a web-based platform to promote information sharing and informed decision-making for sustainable development of the area	2.6.a. Establish and/or build on existing arrangements for development of an information facility that could host and use relevant planning and research information for management of tourism including marine tourism activities	<ul style="list-style-type: none"> A tourism /planning facility is established that serves as a repository of information about tourism in Inhambane, including data on marine tourism The web-based platform that serves as an information dissemination mechanism is established as part of the facility 	Information on marine tourism is centralised and widely available for use in decision-making Data collected during the COAST Project RMRM activities is accessible for use by relevant stakeholders	Lead: ESHTI Collaborators: AMAR, UEM, DPTUR, MICOA	Year 3
	2.6.b. Populate the observatory and web-based platform with relevant information i.e. the mapping data developed through the RMRM activities of the COAST Project; relevant planning documents and research findings	<ul style="list-style-type: none"> The observatory is populated with data and information including information on marine recreation. The web-based platform includes the mapping data developed through the RMRM activities 		Lead: ESHTI Collaborators: UEM, DPTUR, MICOA	Year 4 Ongoing
2.7. Identify options for more equitable distribution of benefits from marine tourism to local inhabitants	2.7.a. Identify options / projects for promoting alternative livelihoods for fishing communities including marine tourism-related alternatives (see 2.1 above)	<ul style="list-style-type: none"> At least 4 options for projects to support alternative livelihoods for villagers are identified Project options are developed collaboratively and outlined within at least 2 proposals for support 	Villagers in the TBT area benefit more equitably from marine tourism and have an increased understanding of the importance of	Lead: DPTUR Collaborators: Bitonga Divers, FOPROI, CCP, CMCI, ESHTI	Year 2 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	2.7.b. Support training opportunities for building capacity of local residents for work in the marine tourism sector	<ul style="list-style-type: none"> At least 2 training events are implemented annually for local residents in marine tourism-related activities. Training should link with existing initiatives such as the STEP ecotourism project run by MITUR Regional Office and the World Bank tourism project operating in the area 	environmental management for the sector	Lead: DPTUR Collaborators: Bitonga Divers, FOPROI, CCP, CMCI, ESHTI	Year 2 Ongoing
Objective 3: Protect important sensitive reef and marine ecosystems					
3.1. Improve knowledge and understanding of the marine and coastal environments and their use	3.1.a. Targeted research to understand the functioning and use of the marine and coastal environments and resources (See 2.4 above).	<ul style="list-style-type: none"> Indicators as per 2.4 above 	See 2.4 above	Lead: UEM, MMF Collaborators: ESHTI, EoH, AOA, Bitonga Divers, AMAR, AHTPI, FOPROI	Year 2 Ongoing
3.2. Investigate options for formal protection of the marine and coastal environments of TBT and the broader region based on the findings from the COAST Project & existing	3.2.a. Determine the value of the area and need for protection. Includes socio-economic research to determine value of resources for local livelihoods and identify options for reduced dependence on natural marine resources	<ul style="list-style-type: none"> A value chain analysis of the use of marine resources is completed including direct, indirect and other use values of the marine area and Inhambane Bay The analysis outlines appropriate options for use and protection The results of the analysis and options for sustainable use are shared with relevant 	Greater understanding of the value of the marine and coastal resources and informed decision-making on use and management options. More sustainable use and effective	Lead: MICOA, DPP Collaborators: UEM, ESHTI, Ocean Revolution, MMF, EoH, AOA, Bitonga Divers, AMAR, SNV, UNESCO (marine world heritage), CCP	Year 2 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
proposals and initiatives (i.e. Ocean Revolution)	3.2.b. Determine options for establishing locally managed marine areas within a broader network of marine managed areas for the region	<p>authorities</p> <ul style="list-style-type: none"> At least 1 participatory process is conducted among villagers, users, researchers and other relevant stakeholders and decision-makers over the next 2 years to outline options for protection of marine areas and establish steps for achieving it 	local management of marine resources by user groups. Greater protection of essential marine ecosystems, processes & species that support the local economy and livelihood of the	<p>Lead: MICOA, DPP</p> <p>Collaborators: UEM, CCP, Ocean Revolution, Bitonga Divers, MMF, AMAR, UNESCO (marine world heritage), WWF</p>	Year 3 Ongoing
	3.2.c. Outline a process with a clear workplan to move towards protection of the marine area within the broader regional context that includes the Bazaruto archipelago and falls within Mozambique's national MMA network	<ul style="list-style-type: none"> A workplan, from 2014-2019 is agreed upon through a collaborative process with stakeholders, to design and develop marine protection for the TBT area 	TBT area and beyond.	<p>Lead: MICOA, DPP</p> <p>Collaborators: UEM, CCP, MMF, Ocean Revolution, Bitonga Divers, MMF, AMAR, UNESCO (marine world heritage)</p>	Year 2 Ongoing
	3.3. Identify options for voluntary compliance initiatives for user groups to reduce the pressure on the marine ecosystems	3.3.a. Promote compliance with the marine recreation codes of conduct through awareness raising and collaborative management (see 1.2 and 1.3 above)	<ul style="list-style-type: none"> Indicators as per 1.2 and 1.3 above 	See 1.2 and 1.3 above	<p>Lead: AMAR</p> <p>Collaborators: Dive and tour operators, Hotels & lodges, AHTPL, ESHTI, MMF, EoH, AOA, FOPROI</p>
3.3.b. Collaborate with user groups to identify opportunities for local management of marine resources based on best		<ul style="list-style-type: none"> Indicators as per 3.2b above 		<p>Lead: CCP, DPP,</p> <p>Collaborators: Ocean Revolution, Bitonga Divers</p>	Year 2 Ongoing

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
	<p>available practices</p> <p>3.3.c. Develop green-labelling or eco-certification options to promote sustainable marine recreation such as a sustainable seafood initiative. This should consider the findings from the COAST Project EMS/TEST methodology, which highlighted challenges working with small and medium-sized hotels/lodges.</p>	<ul style="list-style-type: none"> A sustainable seafood initiative is develop and promoted among restaurants and hotels to reduce pressure on reefs and other sensitive marine resources At least 1 eco-certification initiative is developed for coastal & marine tourism 		<p>Lead: AMAR</p> <p>Collaborators: Hotels & lodges, AHTPL, ESHTI, MMF, EoH, AOA, FOPROI, Dive and tour operators,</p>	<p>Year 3</p> <p>Ongoing</p>
Objective 4: Promote sustainable marine tourism practices for the benefit of all stakeholders					
<p>4.1. Reduce the conflicts among different user groups</p>	<p>4.1.a. Identify appropriate recreation practices and specific areas (zonation) to reduce conflicts among users</p>	<ul style="list-style-type: none"> Establish a conflict management mechanism (multi-stakeholder committee) by January 2015 to address conflicts over marine resources and areas Undertake a participatory process with user groups to identify appropriate recreation and uses for sensitive marine areas Establish zonation of specific marine areas as part of the locally management of the marine area protected area network 	<p>Marine and coastal areas are used sustainably and managed more collaboratively</p>	<p>Lead: MICOA, DPP</p> <p>Collaborators: CCP, Bitonga Divers, MPD, DIPTUR, AMAR, MMF, ESHTI, AOA, EoH, MMF, UEM</p>	<p>Year 2</p> <p>Ongoing</p>

Action	Steps	Indicator	Performance measure	Responsibility	To be completed by
Objective 5: Improve coordination & communication among all user groups for improved management of the marine recreation					
5.1. Improve coordination among operators to reduce the pressure on marine ecosystems and fauna	5.1.a. Establish a marine recreation management forum consisting of interested people to drive improved management of the marine tourism in the area	<ul style="list-style-type: none"> Indicators as per 2.5 and 2.6 above 	Marine and coastal areas are used sustainably and managed collaboratively	Lead: AMAR Collaborators: Dive operators, hotels & lodges, AHTPI, Bitonga Divers, MMF	Year 1
	5.1.b. Establish a coordination system to control the number of visitors to the reefs (i.e. agree to stagger ocean safaris and dives to ensure lower numbers of visitors at one time)	<ul style="list-style-type: none"> Indicators as per 2.5 and 2.6 above 			Lead: AMAR Collaborators: Dive operators, hotels & lodges, AHTPI, Bitonga Divers
5.2. Improve consultation with communities by government on tourism and environmental issues	5.2.a. Establish a mechanism whereby communities can provide regular input into decision-making and communicate issues to decision-makers. See 2.1, 2.2, 3.2 and 3.3 above	<ul style="list-style-type: none"> At least 1 meeting held with MICOA, DPP, CCPs and other CBOs to agree on an effective consultation mechanism for regular communication. 	Marine and coastal areas are used sustainably and managed collaboratively	Lead: MICOA Collaborators: DPP, CCP, DPP, DPCA, Maritime Administration, Bitonga Divers	Year 3 Ongoing

7 Conclusion and Recommendations

7.1 General Conclusion

The marine environment of the TBT Demo Site represents environmental area of global significance. This site is frequented by important aggregations of important and endangered megafauna species (manta rays, Whalesharks, whales, sea turtles), and an array of other marine and coastal organisms (See Annex 4 for a list of Endangered and vulnerable marine species). The complex and interconnected ecosystems, the coral reefs, mangroves, seagrass beds and sandy and rocky beaches, support a highly productive web of organisms that provide an essential resource base for the local economy of the area. The health of the reef and marine environment of the TBT area is under pressure from numerous and diverse human impacts, many of which are associated with the tourism sector that continues to expand in an unregulated and poorly planned manner.

The high levels of poverty among populations living within the Demo Site result in the direct dependence of the majority of local villagers on the marine resources for livelihood. The benefits of marine tourism have yet to contribute significantly to the lives of local communities, a fact which is hindering the awareness of the value of sustainable resource use and ecosystem protection. The nexus between unsustainable tourism practices, over-utilisation and destructive methods of the natural resource use, a lack of management and enforcement and low awareness of the value of the marine environment, is resulting in a sharp decline in the integrity and productivity of the natural resource base. This decline is clearly evident and is impacting negatively on the tourism sector and more significantly, on the social and economic well-being of coastal communities in the Demo Site and in surrounding areas.

Good potential exists to improve management of the area through greater cooperation and collaboration among user groups, decision makers, researchers and NGOs and CBOs. This collaboration could go a long way to addressing the current lack of technical and financial resources experienced by authorities. It would also help to transform the user group landscape from one of conflict and competition and individual interests, to one in which all stakeholders are working together to ensure a healthy environment that continues to support a sustainable economy over the long term. To achieve this, particularly in the marine tourism sector, more effort is needed by stakeholders to ensure that management of their activities is improved.

7.2 Challenges

The main challenges in the implementation of the actions outlined in this document relate to institutional strengthening, resource availability, and stakeholder collaboration and coordination. The continuation and extension of the stakeholder collaboration established through the DSMC or the further establishment of a similar multi-stakeholder forum that can drive and guide improved marine tourism management, is a significant challenge in the implementation of priority actions. Suggestions are made in Sections 2.5 and 2.6 of Table 3 for strengthening the institutional framework. This challenge should be addressed as a matter of urgency in implementation of this document. Additional stakeholders need to be brought in to the discourse about sustainable marine tourism, including local inhabitants and user groups (fishers, villagers), as well as additional research groups, private sector entities and government authorities, such as fisheries and planning authorities. Resource availability

remains a key issue in implementing the priority actions – both in terms of financial resources and human resources and capacities. The actions outlined in Table 3 will need to be costed and further planned as project activities and funding is identified for implementation. Human resources and capacities for managing and monitoring the implementation will also be required. Challenges related to stakeholder collaboration and coordination needs to be strengthened in the TBT area among all stakeholders. If implemented, the options suggested for strengthening the institutional framework will go a long way to addressing this issue, but extra effort will still be necessary to build collaboration and ensure ongoing engagement among stakeholders for responsible marine tourism.

7.3 Risks

Some key risks to the implementation of the actions outlined within this document are related to the challenges mentioned above and involve the continued political will and resources to implement the priority activities, stakeholder collaboration, adequate safety and security protocols and the health of the marine ecosystems. A lack of political will to support ongoing efforts to improve marine tourism management will hinder the implementation of the priority actions and pose a risk to the likelihood of obtaining financial support for the Implementation Plan. A lack of collaboration among all stakeholders and continuation of the marine tourism sector as is, presents a great risk to the health of the marine environment. Lack of engagement of villagers and fishers in the implementation of priority activities poses a further risk to the success of management efforts. Additional issues that pose a risk to the marine tourism sector and the tourism sector as a whole, include the lack of adequate safety and security protocols to govern the marine recreation activities, the lack of responsible tourism development, as well as ongoing degradation of the marine environment and over-exploitation of marine and coastal resources. Given the reliance of the tourism sector on healthy marine and coastal areas, and the presence of marine megafauna and other charismatic species that draw visitors to see them, the degradation or disappearance of these presents a risk to the tourism sector as a whole. Other risks that may affect the local tourism economy in the TBT area include civil unrest, natural disasters and conflicting extractive activities that negatively impact on the natural resource base through degradation or pollution (i.e. mining and mineral extraction).

7.4 Timeframe

The timeframe for the implementation of the actions outlined in this document is 5 years, between mid-2014 and mid-2019. While ongoing monitoring and adjustment of the content of the document may be necessary according to emerging issues, changing legal and institutional frameworks (i.e. implementation of the Tourism Strategy and Action Plan) and opportunities, it is recommended that an timely review be done of the recommended actions after 5 years to keep the content relevant.

7.5 Recommendations

The results presented in this document shed some light on the threats, priorities and opportunities inherent in the marine tourism sector in the TBT Demo Site. While the issues of fisheries management and land-based tourism lie beyond the scope of this Plan, they are both integrally related to the health of the marine environment. Given the importance of adopting a holistic, ecosystem-based approach to governance of the marine environment, that recognises the inter-linkages among different marine ecosystems and species and the threats impacting them, the Implementation Plan outlined above includes a few urgent actions for addressing fisheries and land-based impacts. It is clear that urgent

and targeted collaborative action is needed among all sectors and user groups to prevent further degradation of the marine and coastal resource base and to improve sustainability of activities within the Demo Site. A forum for the improved management of marine tourism (and tourism in general) is urgently needed to drive the implementation of priority actions in the Implementation Plan. This document supports the improved management of marine tourism to benefit user groups, reduce conflicts and support sustainable growth of the local economy.

In addition to the recommendations incorporated into the Implementation Plan of this document, the opportunity is now ripe for improving management of the TBT area and examining the opportunity to expand protection of the area within a broader governance landscape. Experience shows that the most effective approach in the current context would be establishment of locally management marine areas or LMMAs that are developed through highly participatory processes with coastal inhabitants and other users and are founded on an adaptive, ecosystem-based management approach that recognises the importance of management by local user groups and protects the important linkages and processes among sensitive coastal and marine ecosystems. Incorporation of these LMMAs within the national system of marine managed areas could significantly improve the tourism profile of the area, as well as the support to the area for improved management.

Some options that could be investigated as tools for marine management of the immediate TBT area have been suggested by the Ocean Revolution in 2011 and include:

- **Zone of Touristic Interest:** whereby the terrestrial area (in addition to the LMMA) is declared as a Zone of Touristic Interest to allow for the development of a spatial zoning plan.
- **Ramsar Site:** It is evident that the Bay of Inhambane is a site of significant value and is eligible to apply for demarcation as a Ramsar Site. This designation could prompt the development of a spatial plan to balance use of the resources with protection of key sensitive areas and species.

A third option is the potential of the area to be incorporated into a **marine World Heritage area**, which presents an important opportunity. The site has already been identified as having sufficient value as part of a regional marine World Heritage area. Protection of the broader marine and coastal context through development of marine managed areas within the Demo Site that are nested within a national and regional network of marine managed areas could go a long way to ensuring the long-term health and productivity of the marine and coastal environment.

The protection and sustainable use of the marine and coastal ecosystems, processes and species in TBT is of critical importance for the future economy of the area. Protection of the resource base through stronger planning, governance and sustainable use should be the number one priority to ensure ongoing benefits to the country and the region as a whole.

7.6 Future of Version 1 Document

This document, Version 1, must be recognised as a working document in progress. In addition to ongoing M&E of the actions outlined in the Implementation Plan, it is proposed that this document should be reviewed comprehensively after five years so that new data, information, statistics, etc. are incorporated. The review of this Version 1 should be done by the management entity that will take responsibility for continuing activities emerging from the COAST Project following the closure of the project in June 2014.

References

Associação Cultural para o Desenvolvimento Sustentável (ACUDES), 2007. Tourism and Socio-economic Development in Inhambane; The status on the development of linkages between the local economy and the tourism sector.

Barros, C.P. 2012. Sustainable Tourism in Inhambane-Mozambique. Working Paper 105/2012. Centro de Estudos sobre Africa e do Desenvolvimento. Pp 18.

Becker, E 2013. Overbooked: The Global Business of Travel and Tourism. Simon & Schuster, 466pp.

Collaborative Actions for Sustainable Tourism (COAST), 2009. Mozambique Demo Narrative and Logframe. Online material: <http://coast.iwlearn.org/en/archives/demonstration-projects-background-documents2/mozambique-demonstration-project-background-document/view>. Accessed 10th June, 2013.

Dykman, T., 2014. Personal communication. Email correspondence 22nd February, 2014.

Fisheries Research Institute (FRI), 2012. Meetings between O. Lemos and J. Govender and the Fisheries Research Institute, Ministry of Fisheries. COAST Stakeholder meetings during 2012.

Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP). 2001. A Sea of Troubles. GESAMP Reports and Studies No. 70. IMO. London: 35pp.

Government of Mozambique (GoM), 2007. Tourism policy and Implementation Strategy.

Gove, D.Z. 2011. Mozambique National Policy and Governance Assessment for Management of Marine and Coastal Resources. Policy and Governance Assessment for the Agulhas and Somali Currents Large Marine Ecosystem (ASCLME) Project.

Instituto Nacional de Estatística (INE), 2009. National Institute of Statistics. Internet material: Accessed April 2013.

International Union for Conservation of Nature (IUCN). 2004. Managing Marine Protected Areas: Marine Conservation Agreements. Internet material: http://www.mcatoolkit.org/Country_Analyses/Mozambique.html.

The Market Research Group, 2007. The Purbeck Section of the Dorset & East Devon World Heritage Site Carrying Capacity Evaluation Report. Prepared for the World Heritage Steering Group, the Purbeck Heritage Committee and the Dorset AONB. Bournemouth University. Pp. 127.

Marshal A., Pierce S.J., and Kodja G., 2011. 'Rationale for protecting manta rays in Mozambique'.

□ □□□□□□□□□□□□□□□□ □ **(MITUR), 2004.** Strategic Plan for the Development of Tourism in Mozambique (2004 – 2013) Volume I *February 2004*.

National mapping centre in Mozambique (CENACARTA), 2005. Land use and land cover in Inhambane Province.

Nhantumbo, E.S., 2009. Tourism development and community response: the case of the Inhambane coastal zone, Mozambique Inhambane Province.

O'Malley MP, Lee-Brooks K, Medd HB., 2013 The Global Economic Impact of Manta Ray Watching Tourism. PLoS ONE 8(5): e65051. doi:10.1371/journal.pone.0065051.

Obura, D.O., Church, J.E. and Gabrie, C. 2012. Assessing Marine World Heritage from an Ecosystem: The Western Indian Ocean, World Heritage Papers, UNESCO.

Ocean Revolution, 2011. Conservation and Poverty Alleviation Without Donors. Development Plan for the establishment of Locally Managed Marine Areas in Inhambane.

Provincial Directorate of Tourism (DPTUR), 2007. Baseline Study: Tourism and Socio-economic Development in Inhambane. Report for SNV.

Rohner CA, Pierce SJ, Marshall AD, Weeks SJ, Bennett MB, Richardson AJ., 2013. Trends in sightings and environmental influences on a coastal aggregation of manta rays and whale sharks. Mar Ecol Prog Ser 482:153-168.

Seminar für Ländliche Entwicklung (SLE), 2003. Tourism and Coastal Zone Management: Steps towards poverty reduction, conflict transformation and environmental protection in Inhambane/Mozambique. Berlin. 250pp.

Songane, S. 2013. Personal communication during meeting to discuss the outcomes of village meetings. December 06, 2013.

Tourism Strategy Company. 2014. Tourism Growth Strategy For Inhambane Province, Mozambique. Internet material: <http://www.tourismstratco.com>. Accessed March 30, 2014.

United Nations World Tourism Organisation (UNWTO), 2013a. Sustainable Tourism Governance and Management in Coastal Areas of Africa.

United Nations World Tourism Organisation (UNWTO), 2013b. Action Planning and Supporting Activity for Sustainable Tourism Governance and Management in Coastal Areas: Mozambique. Internet material: www.coast.iwlearn.org. Accessed January 30, 2014.

Warnell, L.J.K, Darrin, H.M., Pierce, S. J., 2013. Threatened Marine Species in Mozambique: A Summary of the Conservation and Legal Status.

World Bank, 2014. Internet material: <http://www.worldbank.org/projects/P106355/competitiveness-private-sector-development?lang=en>. Accessed March 30, 2014.

WWF. 2007. Policy, Legal and Institutional Framework: Mozambique, Tanzania, Zanzibar & Kenya. Assessment done for development of the MCA Toolkit for East Africa by The Nature Conservancy.

Annex 1: List of DSMC and Tech Team Members

DSMC Members

Title	Name	Organisation	Type	Contact
Mr.	Juliao Machava	Direcção Provincial Para Coordenação da Acção Ambiental (DPCA)	Government	+258 824506740
Mr.	Marcos Trerup	Associação de Limpeza e do Meio Ambiente (ALMA)	Private	+258 843060970
Mr.	Raufo Usta	Forum Provincial das ONGs de Inhambane FOPROI)	NGO	
Mr.	Jose da Cunha	Associação de Hotelaria e Turismo de Inhambane (AHTPI)	Private	
Mr.	Ernesto Macaringue	Escola Superior de Hotelaria e Turismo (ESHTI)	Government	+258 848494343
Mr.	Casimiro José	Conselho Municipal da Cidade de Inhambane (CMCI)	Government	+258 824288890
Mr.	Vasco Miguel Pascoal	Administração Marítima (ADMAR)	Government	+258 824923110
Mr.	Sinde	Direcção Provincial de Pescas (DPP)	Government	+258 849224943
Mr.	Augusto Songane	Associação Comunitária dos Pescadores do Tofo	Private	+258 842180401
Mr.	Carlos Macuacua	Bitonga Divers	CBO	+258 840357719
Ms.	Karin Allogoewer	Sociedade Alemã de Cooperação Internacional (GIZ)	Private	
Mr.	Augusto Issae	Congma	Private	
Mr.	Avelino David	Associação Wonelela	Private	+258 828125675
Mr.	Ricardo Filipe	Conselho Comunitário de Pescas (CCP)	CBO	+258 823893840

Tech Team Members

Organisation	Type
Ministério para Coordenação da Acção Ambiental (MICOA)	Government
Forum Provincial das ONGs de Inhambane FOPROI)	NGO
Associação de Hotelaria e Turismo de Inhambane (AHTPI)	Private
Escola Superior de Hotelaria e Turismo (ESHTI)	Government
Administração Marítima (ADMAR)	Government
Direcção Provincial de Pescas (DPP)	Government
Bitonga Divers	CBO
Marine Megafauna Foundation (MMF)	Research
Associação dos Mergulhadores (AMAR)	Private
Conselho Comunitário de Pescas (CCP)	CBO

Annex 2: List of Stakeholders Consulted

Title	Name	Surname	COAST Role	Institutional Address
Mozambique DPC/FPC				
Mr	Alexandrea	Magno	Tourism Focal Point	Provincial Directorate of Tourism, Inhambane-Mozambique
Mrs.	Cidalia	Mahumane	Tourism Focal Point	Ministry of Tourism National Directorate for Conservation areas, Mozambique
Mr.	Luzio	Nhavene	DPC	Provincial Directorate of Tourism, Inhambane-Mozambique
Ms.	Ester	Munyithia	VSO	Provincial Directorate of Tourism, Inhambane-Mozambique
Mozambique Tech Team				
Mr.	Juliao	Machava		Direcção Provincial Para Coordenação da Acção Ambiental (Dept. Of Enviro)
Mr.	Vasco Miguel	Pascoal		Administração Marítima (Martime) (ADMAR)
Mr.	Sinai	Macuacua		Direcção Provincial de Pescas (Fisheries) (DPP)
Mr.	Augusto	Songane		Associação Comunitária dos Pescadores do Tofo (CCP)
Mr.	Carlos	Macuacua		Bitonga Divers
Mr.	Ernesto	Macaringue		Escola Superior de Hotelaria e Turismo (Tourism College) (ESHTI)
Ms.	Natalie	Nordin		Tourism Association/Dinos Bar
Ms.	Libby	Bowles		Marine Megafauna (MMF)
Mozambique DSMC Team				
Mr.	Juliao	Machava		Direcção Provincial Para Coordenação da Acção Ambiental (DPCA)
Mr.	Carlos	Macuacua		Bitonga Divers (BD)
Mrs	Raquel	Maliquela		Associação de Limpeza e do Meio Ambiente (ALMA)
Mr.	Raufo	Usta		Tourism Association (APHTI)
Mr.	Ernesto	Macaringue		Escola Superior de Hotelaria e Turismo (ESHTI)
Mr.	Lulu dos	Santos		Conselho Municipal da Cidade de Inhambane (CMCI)
Mr.	Vasco Miguel	Pascoal		Administração Marítima (ADMAR)
Mr.	Sinai Ricardo	Macuacua		Direcção Provincial de Pescas (Fisheries) (DPP)
Mr.	Augusto	Songane		Associação Comunitária dos Pescadores do Tofo (CCP)
Mr.	Luis	Cuamba		Comite de Co-gestao (CCRNT)
Mr.	Avelino	David		Associação Wonelela
Mr.	Afonso	Mapasse		Instituto de Investigacao Pesq. (IIFI)
Mr.	Elisio	Panzambila		Direcção Provincial do Tourism (DPTURI)
Mrs.	Natalie	Nordin		Tourism Association/Dinos Bar
Mrs.	Leigh	Davis		Farol da Barra
Mr.	Frank	Weetjens		Associação dos Mergulhadores Activos para os Recursos Marinhos (AMAR)

Additional Mozambique DSMC members who attended meetings				
Mr.	Marcos	Trerup		Associação de Limpeza e do Meio Ambiente (ALMA)
Mr.	Jose da	Cunha		Associação de Hotelaria e Turismo de Inhambane (APHTI)
Mr.	Casimiro	José		Conselho Municipal da Cidade de Inhambane
Mr.	Ricardo	Filipe		Conselho Comunitário de Pescas
Ms.	Karin	Angoewer		Sociedade Alemã de Cooperação Internacional
Mr.	Augusto	Issae		Congma
Mozambique Dive Operators				
Mr.	Alain	Dinis	Diver	Tofo Scuba
Mr.	John	Pears	Diver	Tofo Scuba
Mr.	Marcell	Claassen	Diver	Tofo Scuba
Ms	Tibea	Hamman	Diver	Tofo Scuba
Mr.	Patrick	Little	Project manager	GIZ/Change Management Agency
Mr.	Donovan	Parker	Diver	Barra lodge
Mr.	Matthew	Eglinton	Diver	WEBB
Ms.	Nadia	Rifaat	Diver	Liquid Adventures
Ms.	Cindy	Acutt	Owner	Liquid Adventures
Ms.	Linda	Viljoen	Diver	Liquid Adventures
Mr.	Paul	Acutt	Owner	Liquid Adventures
Mr.	Steve	Thorley	Diver	Diversity Scuba
Mr.	Russel	Walster	Diver	Barra Reef Divers
Mr.	Tim	Dykman	Co-Director	Ocean Revolution
Mr.	Steve	Counsel	Co-owner	Peri-Peri Divers
Mozambique Other				
Dr.	Andrea	Marshal	Principal scientist-Manta Ray Research	Marine Megafauna (MMF)
Ms.	Libby	Bowles	Researcher	Marine Megafauna (MMF)
Dr.	Fabrice	Jaine	Senior Scientist	Marine Megafauna (MMF)
Mr.	Daniel	van Duinkerken	Researcher	Marine Megafauna (MMF)
Ms.	Kudzi	Guicome	Director	Bitonga Divers
Ms.	Katie	Reeve-Arnold	Director of Marine Research	All Out Africa
Ms.	Hannah	Darrin	Technical Advisor	Eyes on the Horizon
Mr.	Gabriel	Marine	Project Assistant	EcoAfrica
Ms.	Manuela Elisa	Amone	Researcher	Universidade Eduardo Mondlane
Prof.	Salamo	Bandera	Professor	Universidade Eduardo Mondlane
Ms.	Halima	Taju	Researcher	Universidade Eduardo Mondlane
Ms.	Damboia	Cossa	Researcher	Universidade Eduardo Mondlane
Mr	Aubrey	Kloppers	Lodge owner	Barra Lake and Sea
Ms	Danielle	Cook	Tour operator	Walk on Water
Mr	Freddie	Du Plessis	Owner	White Sands

Annex 3: List of Endangered and Vulnerable Marine Species¹

Scientific Name	Common Name	IUCN classification
Sharks & Rays		
<i>Pristis pristis</i>	Common Sawfish	Critically Endangered
<i>Pristis zijsron</i>	Longcomb Sawfish	Critically Endangered
<i>Aetomylaeus vespertilio</i>	Ornate Electric Ray	Endangered
<i>Holohalaelurus favus</i>	Honeycomb Izak	Endangered
<i>Holohalaelurus punctatus</i>	African Spotted Catshark	Endangered
<i>Rostroraja alba</i>	White Skate	Endangered
<i>Sphyrna lewini</i>	Scalloped Hammerhead	Endangered
<i>Sphyrna mokarran</i>	Great Hammerhead	Endangered
<i>Aetomylaeus nichofii</i>	Banded Eagle Ray	Vulnerable
<i>Alopias pelagicus</i>	Pelagic Thresher Shark	Vulnerable
<i>Alopias superciliosus</i>	Bigeye Thresher Shark	Vulnerable
<i>Alopias vulpinus</i>	Common Thresher Shark	Vulnerable
<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark	Vulnerable
<i>Carcharhinus obscurus</i>	Dusky Shark	Vulnerable
<i>Carcharhinus plumbeus</i>	Sandbar Shark	Vulnerable
<i>Carcharias taurus</i>	Spotted Ragged-Tooth Shark	Vulnerable
<i>Carcharodon carcharias</i>	Great White Shark	Vulnerable
<i>Centrophorus granulosus</i>	Gulper Shark	Vulnerable
<i>Centrophorus lusitanicus</i>	Lowfin Gulper Shark	Vulnerable
<i>Centrophorus squamosus</i>	Leafscale Gulper Shark	Vulnerable
<i>Galeorhinus galeus</i>	Tope Shark	Vulnerable
<i>Hemipristis elongata</i>	Snaggletooth Shark	Vulnerable
<i>Heteronarce garmani</i>	Natal Electric Ray	Vulnerable
<i>Himantura gerrardi</i>	Whitespotted Whipray	Vulnerable
<i>Himantura uarnak</i>	Reticulate Whipray	Vulnerable
<i>Isurus oxyrinchus</i>	Shortfin Mako Shark	Vulnerable
<i>Manta alfredi</i>	Reef Manta Ray	Vulnerable
<i>Manta birostris</i>	Giant Manta Ray	Vulnerable
<i>Nebrius ferrugineus</i>	Tawny Nurse Shark	Vulnerable
<i>Negaprion acutidens</i>	Sicklefin Lemon Shark	Vulnerable
<i>Rhina ancylostoma</i>	Bowmouth Guitarfish	Vulnerable
<i>Rhincodon typus</i>	Whale Shark	Vulnerable
<i>Rhinoptera javanica</i>	Cownose Ray	Vulnerable
<i>Rhynchobatus djiddensis</i>	Giant Guitarfish	Vulnerable
<i>Sphyrna zygaena</i>	Smooth Hammerhead	Vulnerable
<i>Stegostoma fasciatum</i>	Leopard Shark	Vulnerable
<i>Taeniurops meyeri</i>	Blotched Fantail Ray	Vulnerable
Bony Fish		
<i>Latimeria chalumnae</i>	Coelacanth	Critically Endangered
<i>Cheilinus undulatus</i>	Humphead Wrasse	Endangered
<i>Epinephelus marginatus</i>	Dusky Grouper	Endangered
<i>Liza luciae</i>	St. Lucia Mullet	Endangered
<i>Bolbometopon muricatum</i>	Green Humphead Parrotfish	Vulnerable
<i>Cromileptes altivelis</i>	Humpback Grouper	Vulnerable
<i>Epinephelus albomarginatus</i>	White-Edged Grouper	Vulnerable
<i>Epinephelus lanceolatus</i>	Brindle Bass	Vulnerable
<i>Hippocampus histrix</i>	Thorny Seahorse	Vulnerable

¹ List of species from Warnell et al, 2013

<i>Hippocampus kuda</i>	Spotted Seahorse	Vulnerable
<i>Makaira nigricans</i>	Blue marlin	Vulnerable
<i>Plectropomus areolatu</i>	Square-tail coral grouper	Vulnerable
<i>Plectropomus laevis</i>	Blacksaddled Coral Grouper	Vulnerable
Turtles		
<i>Dermochelys coriacea</i>	Leatherback Turtle	Critically Endangered
<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Critically Endangered
<i>Caretta caretta</i>	Loggerhead Turtle	Endangered
<i>Chelonia Mydas</i>	Green Turtle	Endangered
<i>Lepidochelys olivacea</i>	Olive Ridley Turtle	Vulnerable
Mammals		
<i>Balaenoptera musculus</i>	Blue Whale	Endangered
<i>Balaenoptera physalus</i>	Fin Whale	Endangered
<i>Dugong dugon</i>	Dugong	Vulnerable
<i>Physeter macrocephalus</i>	Sperm Whale	Vulnerable
Protected Mozambican species not classified as threatened by the IUCN Redlist		
<i>Hippocampus camelopardalis</i>	Giraffe Seahorse	Data Deficient
<i>Hippocampus borboniensis</i>	Reunion Seahorse	Data Deficient
<i>Tridacna squamosa</i>	Giant Clam	Least Concern
<i>Charonia tritonis</i>	Trumpet Triton	Not Evaluated
<i>Cassis cornuta</i>	Horned Helmet	Not Evaluated
<i>Petrus rupestris</i>	Red Steenbras	Not Evaluated
<i>Polysteganus undulosus</i>	Seventy-Four Seabream	Not Evaluated
<i>Megaptera novaeangliae</i>	Humpback Whale	Least Concern
<i>Ephinephelus tukula</i>	Potato Grouper	Least Concern
<i>Tridacna maxima</i>	Small Giant Clam	Least Concern
<i>Eubalaena australis</i>	Southern Right Whale	Least Concern

Annex 4: Research Underway at the Demo Site

Target Ecosystem /Species	Researcher	Details	Date	Use of the information	Details of sharing the results with the authorities	Funding partner	Local assistance
Seagrasses	UEM - Manuela Amona	Identification of seagrass species in Inhambane Bay, distribution & extent	2012-2013	Masters Degree	Presentation given to multi-sectoral local government group. No arrangement yet to submit findings to government	Ocean Revolution, COAST Project	Bitonga Divers
Mangroves	UEM - Salamo Bandiera	Mapping of Mangroves in Inhambane Bay	2013	Publications			
Manta Rays	Marine Megafauna Foundation	http://www.marinemegafauna.org/ray-ecology/	2003 -	Government reports, student dissertations, peer-reviewed publications, management recommendations, conference proceedings	MoUs developed with the BANP, Fisheries and reports consistently prepared for MICOA and the CMS/CITES focal point for international conventions	Save Our Seas Foundation, Dobberke Foundation, Lucie Bergers Foundation, National Geographic, Norcross, Ocean Revolution Project AWARE, Idea Wild, Private Donors	Casa Barry Lodge, Peri Peri Divers, Pestana Resort, Big Blue, Vilanculos Beach Lodge, AMAR, Bitonga Divers
	AOA Marine Research Unit	Numbers, ID photos, location	2008 -	Data added to global database and available to locally based researchers	Publications planned for the future. Results available for decision-makers upon request but no direct communication mechanism is established		
	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangelala Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups

Whale Sharks	Marine Megafauna Foundation	http://www.marinemesafauna.org/research/whale-shark-ecology/	2005 -	Government reports, student dissertations, peer-reviewed publications, management recommendations, conference proceedings	MoUs developed with the BANP, Fisheries and reports consistently prepared for MICOA and the CMS/CITES focal point for international conventions	Shark Foundation, PADI Foundation, National Aquarium UK, Norcross, Project AWARE, Ocean Revolution, Private Donors	Casa Barry Lodge, Peri Divers, Pestana Resort, Big Blue, Vilanculos Beach Lodge, AMAR, Bitonga Divers
	AOA Marine Research Unit	Numbers, ID photos, location, biological samples	2008 -	Data added to global database and available to locally based researchers	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
Marine Turtles	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting	2008 -	Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
	Marine Megafauna Foundation	http://www.marinemesafauna.org/research/sea-turtles/	2008 -	Government reports, student dissertations, peer-reviewed publications, management recommendations, conference proceedings	MoUs developed with the BANP, Fisheries and reports consistently prepared for MICOA and the CMS/CITES focal point for international conventions	Rufford Small Grants	Casa Barry Lodge, Peri Divers, Pestana Resort, Big Blue, Vilanculos Beach Lodge, AMAR, Bitonga Divers
	AOA Marine Research Unit	Numbers, ID photos, location	2008 -	Data added to global database and available to locally based researchers	Publications planned for the future. Results available for decision-makers upon request but no direct communication		

	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	exists Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Threatened Shark and Rays	Marine Megafauna Foundation	http://www.marinemegafauna.org/research/shark-rays/	2006 -	Government reports, student dissertations, peer-reviewed publications, management recommendations, conference proceedings	MoUs developed with the BANP, Fisheries and reports consistently prepared for MICOA and the CMS/CITES focal point for international conventions		Casa Barry Lodge, Peri Peri Divers, Pestana Resort, Big Blue, Vilanculos Beach Lodge, AMAR, Bitonga Divers
	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Small Eye Sting Ray	AOA Marine Research Unit	Numbers, ID photos, location	2011 -	Database developed and data analysed by AOA researchers	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
Bow Mouth Guitar Ray	AOA Marine Research Unit	Numbers, ID photos, location	2011 -	Database developed and data analysed by AOA researchers	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
Leopard Shark	AOA Marine	Numbers, ID photos, location	2011 -	Database developed and data analysed by AOA researchers	Publications planned for the future. Results		

Great White Shark	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	available for decision-makers upon request but no direct communication exists Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Dugongs	Marine Megafauna Foundation	http://www.marinemegafauna.org/research/dugongs/	2012 -	Government reports, student dissertations, peer-reviewed publications, management recommendations, conference proceedings	MoUs developed with the BANP, Fisheries and reports consistently prepared for MICOA and the CMS/CITES focal point for international conventions	Endangered Wildlife Trust (South Africa), WWF, Big Blue	Casa Barry Lodge, Peri Peri Divers, Pestana Resort, Big Blue, Vilanculos Beach Lodge, AMAR, Bitonga Divers
Inhambane Estuary Fauna Surveys	Marine Megafauna Foundation/ Underwater Africa	Faunal surveys of the estuary and creation of species databases	2012 -	Species lists, peer-reviewed publications	Not at present but planned for the future		Casa Barry Lodge
Species of interest or illegals activities that are observed in the Estuary	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Seahorses	AOA Marine Research Unit	Monitor general diversity and Seahorse species found, numbers	2013 -	Collaboration with Project Seahorse	Publications planned. Results available for decision-makers upon request, no direct communication exists		

Coral Reefs	East Africa Marine Transect	Undertook a baseline survey of different reefs in the area	2012 - 2013	Data currently under analysis, will be made open source for use by any individual or organisation			
	All Out Africa (AOA) Marine Research Unit	Monitoring 60 species of indicator fish	2008 -	Data analysed by AOA researchers. Collaborations with Tim McClanahan from Wildlife Conservation Society (WCS) and East African Transect under development	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
	AOA Marine Research Unit	Monitor Crown of thorns starfish cover	2013 -	Data analysed by AOA researchers. Collaborations with Tim McClanahan from Wildlife Conservation Society (WCS) and East African Transect under development	Publications planned. Results available for decision-makers upon request but no direct communication exists		
	AOA Marine Research Unit	Monitor coral bleaching and disease	2013 -	Data analysed by AOA researchers. Collaborations with Tim McClanahan from Wildlife Conservation Society (WCS) and East African Transect under development	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
	AOA Marine Research Unit	Monitor Benthic cover	2013 -	Data analysed by AOA researchers. Collaborations with Tim McClanahan from Wildlife Conservation Society (WCS) and East African Transect under development	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
	AOA Marine Research Unit	Trawls at 5m for 5min	2012 -	Part of an Indian Ocean Wide collaboration with Dr Rowena White	Publications planned. Results available for decision-makers upon request but no direct communication exists		
	AOA Marine Research Unit	Numbers, ID photos, location, species diversity	2013 -	Database developed in collaboration with Zavora Marine Lab	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
Plankton							
Nudibranchs							

Dolphins	AOA Marine Research Unit	Numbers, ID photos, location	2011 -	Collaboration with Dolphin Encounters in Ponta do Oura to examine the application of Code of Conduct according to variations in encounters and behaviour Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Publications planned. Results available for decision-makers upon request but no direct communication exists	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Whales (boat-based)	AOA Marine Research Unit	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality	2008 -	Collaboration with Zavora Marine Lab to develop an ID database of individuals. Collaboration with researchers along the East African coast on migration of whales. Collaboration with Kym Collins	Publications planned. Results available for decision-makers upon request but no direct communication mechanism is established		
Whales (shore-based)	AOA Marine Research Unit	Numbers, behaviours, locations	2008 -	Collaboration with Zavora Marine Lab to develop an ID database of individuals. Collaboration with researchers along the East African coast on whale migration. Collaboration with Kym Collins	Publications planned for the future. Results available for decision-makers upon request but no direct communication exists		
Whales	Eyes on the Horizon	Encounters: Numbers, sex, ID photos, location; Illegal harvesting, mortality		Information collected is shared with decision-makers and stakeholders to raise awareness about issues along the coasts and oceans	Via newsletters, presentations, and direct interaction	LM Radio, DHL, Executive Logistics, Kangela Cellular, Libelular, Apex Shark Expeditions	Visitors, stakeholders, user groups
Tourism	AOA Marine Research Unit	All studies acquire tourism data		Not currently used in a formal way	Publications planned for the future. Results available for decision-makers upon request, no direct communication exists	Self-funded	

