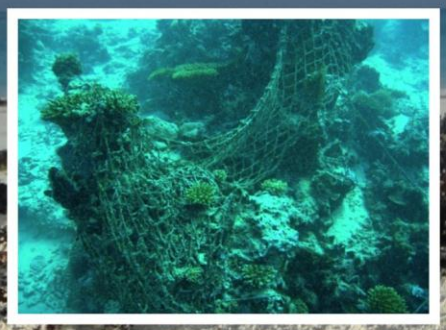


Legal and Institutional Framework for Effective Management of Marine Managed Areas in Tanzania



Report on Zanzibar



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Produced for
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2012

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2012

Executive Summary

Background: The Swahili people in Zanzibar have traditionally depended heavily on sailing and fishing in the waters of the Indian Ocean for livelihood. Zanzibar's marine and coastal environments are comprised of an interconnected variety of complex ecosystems. These ecosystems have supported and shaped the local culture, economy and social well-being of coastal Zanzibaris. The healthy functioning and continuous provision of goods and services by Zanzibar's marine ecosystems rely on the wise management and protection of its essential habitats and resources. A few key actions are required to ensure that the direct and indirect benefits provided by the ocean are maintained into the future. Perhaps one of the most critical needs is to strengthen the legal and institutional framework for sustainable management and protection of marine and coastal resources and to ensure effective implementation of the laws and regulations.

Objectives: The aim of this task was to study the legal and institutional framework and make recommendations for effective management of marine managed areas in Tanzania. This report has as a point of departure, a synthesis report on options for a national system of MMA networks for the United Republic of Tanzania, as well as a report on the legal and institutional framework for MMA management in mainland Tanzania.

Findings: The review revealed that coastal and marine resources in Zanzibar are under increasing threats due to ever increasing numbers of resource users with competing interests. A number of policy, legal and regulatory tools exist to support marine conservation in Zanzibar. The primary legal tool for managing the MMAs in Zanzibar is currently the Fisheries Act of 2010, which provides for the establishment of the Marine Conservation Unit (MCU) under the Department of Fisheries Development in the Ministry of Livestock and Fisheries. The Fisheries Act will be operationalized through the finalization and adoption of the draft MCU Regulations. The MCU is a relatively young institution and as such, is still in the process of strengthening its institutional core and management capability. Zanzibar has increased the area of the territorial seas under formal protection substantially over recent years. A great deal more resources, capacity development and skilled staffing are required for the MCU to be able to fulfil its stated mandate and responsibilities as a conservation coordination unit for all marine managed areas in Zanzibar. The draft framework Environmental legislation - the Environmental Management for Sustainable Development Act, provides a useful framework for establishment of a system of MMA network in Tanzania. Some of the key challenges to the effectiveness of implementing and enforcing legal and regulatory framework include operational challenges and a trend towards centralization of decision-making. The institutional framework for MMAs in Zanzibar is both multi-sectoral and multi-scaled across the central government and local government authorities.

Conclusions: The research undertaken to inform the development of this report has revealed that a great deal of progress has been achieved by Zanzibar over the last decade in strengthening the framework for marine and coastal conservation. A good trajectory has

been laid towards the establishment of significant areas of protection and in putting in place the institutional and legal building blocks for improved governance of the marine ecosystems and resources. That said, a concerted effort will be needed by the government to ensure that the MCAs do not simply remain paper parks and that the ever-increasing range and number of threats from growing numbers of resource users, inappropriate coastal development, climate variability and change to name a few. It will be critical to ensure finalization and proper implementation of the GMPs for the existing MCAs as well as development of additional GMPs for the proposed MCAs. In particular, rollout of the zoning schemes in each of the MCAs will go a long way towards achieving some of the management priorities contained in the plans and yielding valuable benefits to resource users over time.

Table of Contents

Acknowledgements ii

Executive Summary iii

Table of Contents v

List of Figures viii

List of Tables viii

Acronyms ix

1. Introduction 1
- **1.1. The Importance of the Ocean for Zanzibar** 1
- **1.2. Efforts to strengthen governance of marine and coastal resources** 1
- **1.3. Description of Services** 2
  - 1.3.1. Objectives and Scope of the study 2
  - 1.3.2. Methodological Procedures and Activities 4
  - 1.3.3. Outputs 4

2. Zanzibar Marine Environment 1
- **2.1. Concepts and definitions** 1
  - 2.1.1. Defining marine protected areas and marine managed areas 1
  - 2.1.2. The IUCN guidelines 2
- **2.2. Overview of Zanzibar** 2
- **2.3. Zanzibar's Marine Environment** 4
  - 2.3.1. Mangroves 5
  - 2.3.2. Seagrass Beds 5
  - 2.3.3. Coral Reefs 6
  - 2.3.4. Open Sea 7
  - 2.3.5. Marine Organisms 7
- **2.4. Socio-economic activities** 8
- **2.5. Nature and Culture-based Tourism in Zanzibar** 9
  - 2.5.1. Marine resource management and tourism development 9
  - 2.5.2. Underwater cultural heritage 11
  - 2.5.3. Strengthening the tourism-marine conservation link 11

3. Marine Conservation in Zanzibar 12
- **3.1. History of Marine Conservation** 12
- **3.2. Current Status of Marine Conservation** 12
- **3.3. Overview of Zanzibar's MCAs** 14
  - 3.3.1. Menai Bay Conservation Area (MBCA) 15
  - 3.3.2. Mnemba Island-Chwaka Bay Marine Conservation Area (MIMCA) 17
  - 3.3.3. Pemba Channel Conservation Area (PECCA) 18
  - 3.3.4. Tumbatu Marine Conservation Area (TUMCA) 19
  - 3.3.5. Changuu-Bawe Marine Conservation Area (CHABAMCA) 21
  - 3.3.6. Other MMAs – Chumbe Island Coral Park (CHICOP) 22
- **3.4. Conservation of Marine Organisms and Endangered Species** 23
- **3.5. Community Involvement and Collaborative Management in MCAs** 24
  - 3.5.1. Community-driven conservation 24
  - 3.5.2. Indigenous knowledge, traditional custom and marine conservation 25
  - 3.5.3. Community involvement in the management of the MCAs 26
  - 3.5.4. Community control of marine areas 27

4. Policy, Legal and Regulatory Framework 28

4.1. Sector Policies and Strategies 28
4.1.1. The Constitution 28
4.1.2. Zanzibar Development Vision 2020 (ZDV 2020) 28
4.1.3. Zanzibar Strategy for Growth and Reduction of Poverty or Mpango wa Kukuza Uchumi Zanzibar (MKUZA) 29
4.1.4. The Fisheries Development Sector Programme (FSDP) 29
4.1.5. The Agricultural Sector Policy 30
4.2. Related Sectoral Policies 31
4.2.1. National Environmental Policy of 1992 and Draft National Environmental Policy of 2012 31
4.2.2. Forest Policy (1996) 32
4.2.3. Tourism Policy (2005) 32
4.2.4. National Land Policy (1982) 32
4.2.5. National Land Use Plan (1995) 33
4.2.6. Policy for Allocation and Use of Zanzibar's Small Islets (1994) 33
4.2.7. Zanzibar Disaster Management Policy (2011) 33
4.2.8. Draft Integrated Coastal Management (ICM) Strategies and Action Plan 34
4.3. Laws and Regulations 36
4.3.1. Laws covering the Territorial Sea and Exclusive Economic Zone 36
4.3.2. The Fisheries Act (Act 7 of 2010) 37
4.3.3. Draft MCU Regulations 39
4.3.4. Forest Resources Management and Conservation Act (No. 10 of 1996) 43
4.3.5. Environmental Management for Sustainable Development Act (Act 2 of 1996) 43
4.3.6. Other legislation relevant to marine conservation 45
4.4. Issues and Recommendations for Strengthening the Policy, Legal and Regulatory Framework for Marine Conservation in Zanzibar 47
4.4.1. Weaknesses and gaps 47
4.4.2. Recognition of traditional and customary practices 47
4.4.3. Requirements for strengthening the policy, legal and regulatory framework 48

5. Institutional Framework for Marine & Coastal Conservation 50
5.1. Institutional Mandate for Marine and Coastal Management 50
5.1.1. MCU, Department of Fisheries Development (Ministry of Livestock and Fisheries) 50
5.2. Marine Conservation Unit 52
5.2.1. Scope, vision and goals of the MCU 52
5.2.2. Structure of the MCU 54
5.2.3. Operational Capacity of the MCU 55
5.2.4. Key Competencies and challenges 55
5.2.5. Information Management: Marine Biodiversity Information System (MBIS) 56
5.2.6. Interaction of the MCU with MCAs 57
5.2.7. Proposed MCU Institutional Structure according to the Draft MCU Regulations 58
5.3. Management structure for the MCAs 59
5.3.1. Scope of MCA mandate 59
5.3.2. Marine conservation at the village level 59
5.4. Suggestions for strengthening the institutional framework for marine conservation 60
5.4.1. Diversification of stakeholder involvement 60
5.4.2. Scaling up efforts through ICM and networking of MMAs 60
5.4.3. Improving the organisational structure 61
5.5. Challenges and Priority Actions for the MCAs 63
5.5.1. Improving management effectiveness to keep up with expansion of marine conservation areas 63

5.6. Financial sustainability for marine conservation and suggestions for improved benefit-sharing to stakeholders 66
6. Recommendations for Improving Governance 70
6.1. The Key Elements and Models of Governance 70
6.2. Opportunities for Improving of Governance 71
7. Towards a Network of MMAs for Zanzibar 72
7.1. Introduction 72
7.2. A Framework for the establishment of MMA networks in Zanzibar 74
7.2.1. A multi-level approach to MMA networks 74
7.2.2. Legal and Institutional Considerations 74
8. Concluding Remarks 76
References 77
Annex 1: List of Stakeholder Interviewees 80
Annex 2: List of Questions for Stakeholder Interviews 81
Annex 3 Organogram of the Ministry of Livestock and Fisheries 86
Annex 4 87
Organogram of the Department of Fisheries and Marine Resources 87
Annexes .....

List of Figures

Figure 1: Activity chart presenting flow of objective activities _____ *5*
Figure 2: Maps of Zanzibar Islands (From Zanzibar Development Vision, 2010) _____ *4*
Figure 3: Destructive net deployment near Kendwa _____ *6*
Figure 4: Percentage breakdown of annual tourism excursions (from Steck et al, 2010) ___ *10*
Figure 5: Map of Unguja Island showing MBCA (Levine, 2004 & MLFD; 2010a) _____ *16*
Figure 6: Map of Unguja Island showing MIMCA (MLFD, 2010b) _____ *17*
Figure 7: Map of Pemba Island showing demarcation of PECCA (MLFD, 2010c) _____ *20*
Figure 8: Map of Unguja showing TUMCA and CHABAMCA (RGoZ, 2007) _____ *21*
Figure 9: Organogram of Chumbe Island Coral Park Advisory Committee (IUCN, 2010c) ___ *22*
Figure 10: Proposed Zanzibar ICM Organogram (from DoE, 2009) _____ *36*
Figure 11: Organisational structure of the MCU (MCU, 2012) _____ *58*
Figure 12: Proposed organisational structures of the MCU (Draft MCU Regs.) _____ *59*
Figure 13: Options for strengthening the organisational framework for marine conservation _____ *61*
Figure 14: Zanzibar MMA network areas (Ruitenbeek et al, 2005) _____ *73*

List of Tables

Table 1: Area of Territorial Sea under formal government protection _____ *14*
Table 2: Information requirements identified for each of the MCAs (MLF, 2010) _____ *65*
Table 3: Fees payable for activities undertaken within the MCAs (RGoZ, 2012) _____ *66*
Table 4: Comparative funding sources for MMAs (from Spergel, 2001) _____ *68*

Acronyms

ABNJ	Areas beyond national jurisdiction
ASCLME	Agulhas-Somali Current Large Marine Ecosystems
ASP	Agricultural Sector Policy
BMU	Beach Management Unit
CBD	Convention on Biological Diversity
CCC	Central Coordinating Committee
CHABAMCA	Changu-Bawe Marine Conservation Area
CHICOP	Chumbe Island Coral Park Ltd.
DSFA	Deep Sea Fishing Authority
EAME	East African Marine Ecoregion
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMSDA	Environmental Management for Sustainable Development Act (Zanzibar)
ENCAMU	Establishment of Zanzibar Nature Conservation Areas Management Unit Act
EU	European Union
FSDP	Fisheries Development Sector Programme
GEF	Global Environment Facility
GEMPA-EA	Group of Experts in Marine Protected Areas for Eastern Africa
GMP	General Management Plan
IBA	Important Bird Area
ICM	Integrated Coastal Management
ICRAN	International Coral Reef Action Network
ICRI	International Coral Reef Initiative
IMS	Institute of Marine Sciences (Zanzibar)
IUCN	International Union for Conservation of Nature
LGA	Local Government Act
LME	Large Marine Ecosystem
MACEMP	Marine and Coastal Environment Management Project
MANR	Ministry of Agriculture and Natural Resources
MBCA	Menai Bay Conservation Area
MB-REMP	Mnazi Bay – Ruvuma Estuary Marine Park
MCU	Marine Conservation Unit
MICA	Misali Island Conservation Association
MIMCA	Mnemba Island Marine Conservation Area
MIMP	Mafia Island Marine Park
MKUZA	Mpango wa Kukuza Uchumi Zanzibar (Zanzibar Strategy for Growth and Reduction of Poverty)
MLF	Ministry of Livestock and Fisheries, Zanzibar
MMA	Marine Managed Area
MNRT	Ministry of Natural Resources and Tourism, Mainland Tanzania

MPA	Marine Protected Area
MPRU	Marine Parks and Reserves Unit, Government of Tanzania
MR	Marine Reserve
NGO	Non-governmental organization
NICEMS	National Integrated Coastal Environment Management Strategy
NPAB	National Protected Areas Board for Zanzibar
RGoZ	Revolutionary Government of Zanzibar
SANAPA	Saadani National Park
TANAPA	Tanzania National Parks (Authority)
TCMP	Tanzania Coastal Management Partnership
TCZCDP	Tanga Coastal Zone Conservation and Development Program
TRANSMAP	Transboundary Networks of MPAs for Integrated Conservation and Sustainable Development (East Africa)
TUMCA	Tumbatu Marine Conservation Area
UNCLOS	United Nations Convention on the Law of the Sea
URT	United Republic of Tanzania
USAID	United States Agency for International Development
WAMER	West African Ecoregion
WCMC	World Conservation Monitoring Centre
WCPA	World Commission on Protected Areas
WCS	Wildlife Conservation Society
WDPA	World Database on Protected Areas
WHS	World Heritage Site
WIO	Western Indian Ocean
WIOMER	Western Indian Ocean Marine Eco-region
WIOMSA	West Indian Ocean Marine Science Association
WSSD	World Summit on Sustainable Development (Johannesburg 2002)
WWF	World Wildlife Fund
ZNCAMU	Zanzibar Nature Conservation Areas Management Unit

1. Introduction

1.1. The Importance of the Ocean for Zanzibar

The Swahili people in Zanzibar have traditionally depended heavily on sailing and fishing in the waters of the Indian Ocean for livelihood. Zanzibar's marine and coastal environments are comprised of an interconnected variety of complex ecosystems. These ecosystems have supported and shaped the local culture, economy and social well being of coastal Zanzibaris. The healthy functioning and continuous provision of goods and services by Zanzibar's marine ecosystems rely on the wise management and protection of its essential habitats and resources. While traditions customs and indigenous knowledge have previously guided management strategies by fishers, a decline in the effectiveness of indigenous strategies is contributing to the decline of coral reefs and fishing habitats (Masalu et al, 2010). A few key actions are required to ensure that the direct and indirect benefits provided by the ocean are maintained into the future. These include identifying and mitigating threats to the marine ecosystems; promoting diversified livelihoods for those who depend directly on marine and coastal resources to relieve pressure from the sea; enhancing awareness of sustainable resource use practices; and stronger planning and management of coastal and marine activities and developments. Perhaps one of the most critical needs is to strengthen the legal and institutional framework for sustainable management and protection of marine and coastal resources and to ensure effective implementation of the laws and regulations.

Awareness of the importance of Tanzania's ocean and coasts and the need to address some the threats to the country's marine and coastal ecosystems has grown over the last few years. The Government of the United Republic of Tanzania (URT) has repeatedly stated its dedication to identifying opportunities for increasing protection and sustainably managing its seas and coasts. For instance, at the 2003 World Parks Congress, the Government announced its intention to increase protection of its seas to 10 percent by 2012 and 20 percent by 2025. To achieve this intention, the URT identified a number of Marine Managed Areas (MMAs) both in Zanzibar and mainland Tanzania as a tool to conserve the biodiversity of the oceans and to maintain biological productivity.

1.2. Efforts to strengthen governance of marine and coastal resources

The development and implementation of the World Bank-funded Marine and Coastal Environment Management Project (MACEMP) over the last few years, has driven much of the government-led interventions in fisheries, coastal management and livelihood promotion and conservation. A number of studies were undertaken in both preparation for and implementation of the MACEMP project. One important publication that was based on a number of preparatory studies for the MACEMP project and provided a vision for its implementation was: "Blueprint 2050: Sustaining the Marine Environment in Tanzania and

Zanzibar". In this publication, released in 2005, the Government endorses a vision to protect and manage coastal and marine ecosystems in an ecologically, socially and financially sustainable manner that alleviates poverty and respects the political and institutional realities in the URT. This vision recognizes a number of unique characteristics that call for innovative, adaptable and locally specific approaches to the challenging task of strengthening protection of marine and coastal managed areas in the URT including the:

- existence of two different institutional regimes for mainland Tanzania and Zanzibar and the need for management models that respond to the specific contextual needs;
- differences in the capacity and experience in implementing protected area management ranging from highly successful MMA management to a complete lack of MMA protection;
- lack of adequate scientific information, particularly in respect of long-term impacts of global change, leading to a need for flexible and adaptable management systems that utilize the best available knowledge and tools;
- Government's policies of decentralization which require contextually-specific governance frameworks to improve local empowerment and sustainable resource use and reduce poverty; and
- Vulnerability of coastal ecosystems and communities and the need for a diversity of efforts to provide greater security.

The objective of Component 2 of the MACEMP project: Sound Management of the Coastal and Marine Environment, was to establish and support a comprehensive system of MMAs in the territorial sea built on an Integrated Coastal Management (ICM) strategy that empowers and benefits coastal communities.

This report is one of 3 reports that outlines the results of a study that was commissioned through the MACEMP project to assess the legal and institutional framework for effective management of marine managed areas in Tanzania and Zanzibar and draw on lessons and best practices from within and outside the region that can be embraced for effective management of MMAs in the country. The study utilised the vision outlined in the Blueprint 2050 publication as a point of departure.

1.3. Description of Services

1.3.1. Objectives and Scope of the study

The overall objective of this work was to review the legal and institutional framework to identify ways of strengthening institutional capacity and legal and regulatory tools and advocating co-management approaches and networking of MMAs. To accomplish this objective, the terms of reference required investigation into 3 main issues:

1. The network of Marine Managed Areas, focusing on management options, criteria for network and principles;
2. Co-Management Arrangements in marine conservation; and
3. Institutional Strengthening Opportunities

The terms of reference required that the investigation follow the following activities:

1. Revision on the network of Marine Managed Areas (MMAs), focusing on management options, criteria for network and principles
    i. Review and draw lessons and best practices from the existing MMAs network system.
    ii. Identify and describe the ecological and socio-economic characteristics of the primary marine and coastal ecosystems in Tanzania.
    iii. Identify a set of management options for MMAs network system and other identified ecological system, which can be incorporated in the MMAs network system.
    iv. Examine to what extent the ecosystems should be managed as a network system (suggesting principles).
    v. Develop criteria and guideline for selection of MMAs network system including but not limited to the following:
        - Ecological connectivity
        - Social and economic connectivity
        - Fisheries management
        - Sectoral/institutional collaboration
        - Common goals
        - Potential for sharing research information and lessons learnt from MMAs within and outside the Western Indian Ocean (WIO)
    vi. Draw experiences from other MMAs network systems within and outside the WIO region.
    vii. Study on policies, legal and institutional basis for supporting MMAs network system in the country.

2. Revision on Co-Management Arrangements
    i. Review of the existing co-management approaches and structures in marine conservation.
    ii. Propose an effective collaboration approach in terms of empowerment and partnership.
    iii. Review the existing policies, legal and institutional basis supporting co-management approaches and propose areas for improvement.
    iv. Identify key stakeholders and develop criteria for setting boundaries of MMAs.

3. Revision on Institutional capacity and Strengthening Opportunities
    i. Develop and review of existing structures to facilitate execution of the MCU Vision, Mission, and its implementation strategy.
    ii. Define roles and responsibilities in the proposed MCU management structure
    iii. Develop a mechanism of MMAs to improve the management-stakeholders relations in the reviewed structure.

iv. Review guiding policies, legal status in order to harmonise with international conventions and conservation protocols.
v. Identify specific roles of MCU and individual MMAs in relation to Local Government Authorities, partners and other stakeholders.
vi. Identify capacity requirements in terms of human, infrastructure and equipment for the two institutions.
vii. Propose financial mechanisms for sustainability of MCU and individual MMAs.
viii. Review and draw lessons and best practices from the existing relevant institutional structures, operational strategies and business plans for similar organs within and outside Tanzania, preferably in the Western Indian Ocean region.
ix. Develop and recommend appropriate operational strategies and business plan to suit the needs of the MCU.
x. Identify and propose the number, positions and qualifications of staff required and their carrier development for realizing the operations of MPRU objectives.

1.3.2. Methodological Procedures and Activities

i. To undertake review of the relevant literature including but not limited to legislative documents, policy and strategy papers, management and action plans and reports, peer reviewed articles and books.
ii. To undertake consultations/in-depth interviews with key stakeholders including but not limited to: Fisheries Departments, MCU and other Government agencies, Local Government Authorities, Community groups, resource users, private sector, local and international NGO's through individual and focused group discussions using semi-structured interviews/checklists. These consultations were to ascertain personal opinions and specific field practical experiences. A list of the individuals consulted for the Zanzibar component of the research is provided in Annex 1. Following an activity tree in Fig 1.1, a guiding set of issues/questions was used during consultations. This list of broad questions is outlined in Annex 2.
iii. To provide progress reports as per schedule of payments and whenever needed.
iv. Organize and facilitate stakeholders' workshop to discuss and reach consensus
v. Prepare and submit final report detailing the components within the scope of the work.
vi. Recommend on the best options for improved management of the combined MMAs network system (existing and identified ecological systems).

1.3.3. Outputs

This report contributes to the overall output of this consultancy work, which is to produce a combined synthesis (in a separate volume) together with that of Zanzibar (parallel undertaken) on the management of MMAs in Tanzania.

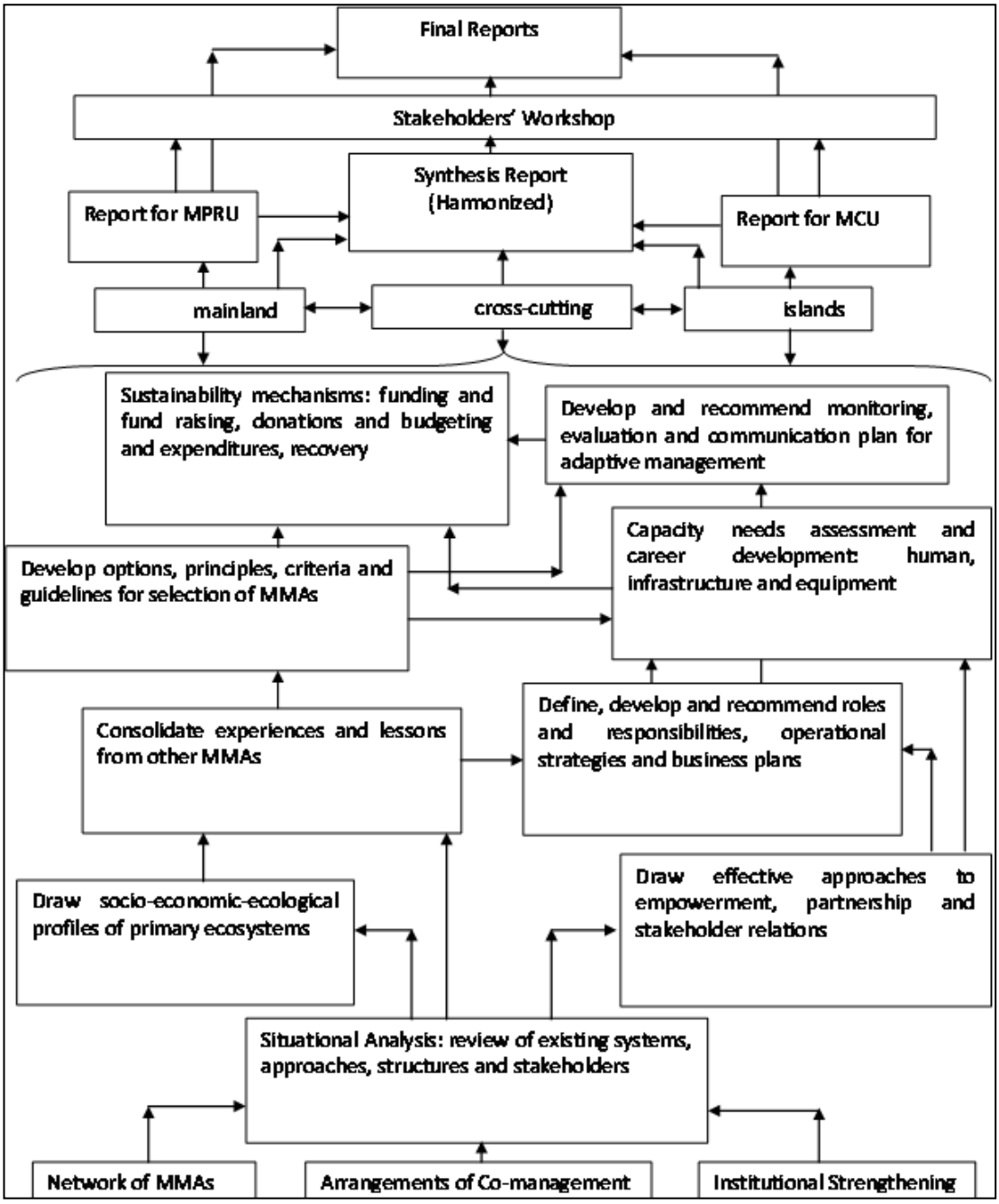


Figure 1: Activity chart presenting flow of objective activities

2. Zanzibar Marine Environment

2.1. Concepts and definitions

2.1.1. Defining marine protected areas and marine managed areas

Much attention has been given to the definition of marine protected areas, coastal protected areas and/or other areas under some kind of management (commonly referred to as marine managed areas or MMAs).

The Convention on Biological Diversity (CBD, 2003), provides a useful definition for the broader concept of a 'Marine and Coastal Protected Area' (MCPA) as:

> *Any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings*.

A wide range of terms are used for describing other types of marine areas that are under some form of management and that have objectives other than biodiversity conservation, such as marine resource management, collaborative fisheries management, integrated coastal management, etc. While these approaches are sometimes used interchangeably with the term MPA, they cover a wide range of types and objectives. The term marine managed area or MMA is therefore a useful one to use to describe all marine management approaches, even those that do not meet the IUCN definition of MPAs or do not have biodiversity conservation as their primary objectives.

As per the publication: “Blueprint 2050: Sustaining the marine environment in mainland Tanzania and Zanzibar” (hereafter Blueprint 2050), which was approved by the Government of Tanzania, the term MPA is used for sites that meet the IUCN definition while other sites are referred to as MMAs (Ruitenbeek et al, 2005). While the term MMA is commonly used, it is seldom seen in the formal policy and legal framework for the two different legal and institutional regimes in Tanzania (Zanzibar and mainland Tanzania). In the context of formalizing the national network system of MMAs (including MPAs), it may be important to define the aims objectives of the different approaches to allow for effective implementation and enforcement of the regulations and to allow for effective networking of MMAs as well as effective monitoring and management.

2.1.2. The IUCN guidelines

The International Union for Conservation of Nature (IUCN) through its World Commission on Protected Areas (WCPA) has worked to establish international guidelines on concepts, establishment, management and governance of protected areas. While the IUCN guidelines are not binding, they have proved valuable in facilitating a global system of defining, recording and classifying protected areas and the wide variety of countrywide specific aims they embody. The IUCN recently proposed a revised definition of a protected area (PA) as: "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley 2008). The IUCN defines six protected area management categories as a standardisation of different categories of MMAs:

Category I: Strict nature reserve
Category II: Wilderness area
Category III: National Park
Category IV: National Monument or feature
Category V: Habitat/species management area
Category VI: Protected landscape or seascape
Category VII: Protected areas with sustainable use of natural resources

These categories are described in more detail in the Synthesis report that serves as the point of departure for this report.

MMAs in Tanzania have evolved as management tools to safeguard natural resources by restricting and/or controlling the activities and access to the resources therein through various arrangements including state legal frameworks for MPAs and locally or community-based arranged mechanisms governed by designated local by-laws and MoUs. As will be discussed on Section 3 below, Zanzibar currently has 3 formally established Marine Conservation Areas (MCAs) that are managed under the auspices of the Marine Conservation Unit (Department of Fisheries and Marine Resources), and the boundaries of two additional areas near to Stone Town are awaiting finalisation. Chumbe Island Coral Park, a privately owned Park was the first sanctuary (privately/contracted managed conservation areas) to be established in Zanzibar. It operates via a contractual between the RGoZ and the private sector. The principal law governing the conservation and management of marine ecosystems and resources in Zanzibar is the Fisheries Act (No 7 of 2010). While there is no legal definition of an MPA or a "Marine Conservation Area" in the Act, it is generally considered to be a marine area that is protected under the law.

2.2. Overview of Zanzibar

The ocean and coastal areas of Zanzibar are integral to the economic development and wellbeing of the island's inhabitants. They provide essential goods and services such as food, building materials, fuel wood, medicine and activities, which generate household income. The way in which these benefits are used in activities such as fishing, tourism, seaweed farming, mangrove harvesting and other related activities can place significant pressure on

the ecosystems if not managed adequately. Careful planning for utilization and development marine resources that is appropriate to the local cultural and socio-economic context and that is within the limits of the natural carrying capacities is essential to minimise the risks of environmental degradation. Marine protected areas (MPAs) are used as a tool around the world to ensuring that the health of sensitive marine and coastal ecosystems and organisms is maintained and that they continue to provide essential benefits to those that depend on them. The following section provides a brief description of Zanzibar's marine environment, including the physical, socio-economic and cultural aspects and the main threats.

Zanzibar consists of the two large islands of Unguja (or Zanzibar Island) and Pemba and number of smaller islets and is situated approximately 40 km off the coast of mainland Tanzania (see Figure 1 below). Unguja stretches about 85 km in length, between 20-30 km wide, and has an area of 1500 km^2. The two main islands are 50 km apart separated by the deep Pemba channel. Pemba Island is slightly smaller at about 75 km long, between 15-20 km wide, with an area of 850 km^2. Despite their geographical proximity, Unguja and Pemba have different origins. Unguja comprises fossil coral while Pemba is a continental island, similar to the African continent both in terms of fauna and flora. Thus, while both islands are generally flat and low lying, the soils of Pemba are more fertile than those of Unguja. Both islands are surrounded by coasts of rocky inlets or sandy beaches, lagoons, mangroves and coral reefs.

Zanzibar's climate is tropical and humid with an average maximum temperature of about 30^0C during hot seasons and 21^0C during the cool season. Unguja's climate is highly influenced by the monsoon winds that blow from a north easterly direction from October to March and from a south easterly direction from March to early July. Two rainy seasons occur every year, the short rains from October to December and the long rains from March to early June.

The main economic activities for Zanzibar people are tourism, fishing and agriculture - maize, cassava, coconuts, spices (cloves) and to some extent bananas and citrus fruits. Zanzibar has a small yet rapidly expanding population. According to an extrapolation of the 2002 Population and Housing Census and an average growth rate of 3.1%, the total population of Zanzibar is estimated at 1 284 435 (RGoZ, 2011). At 551 people/km2 the average population density for Zanzibar is very high and given the prevailing socioeconomic development, suggests a high population pressure. Approximately 60% of the population lives in Unguja and 40% in Pemba with 57.8% of the population living in rural areas.

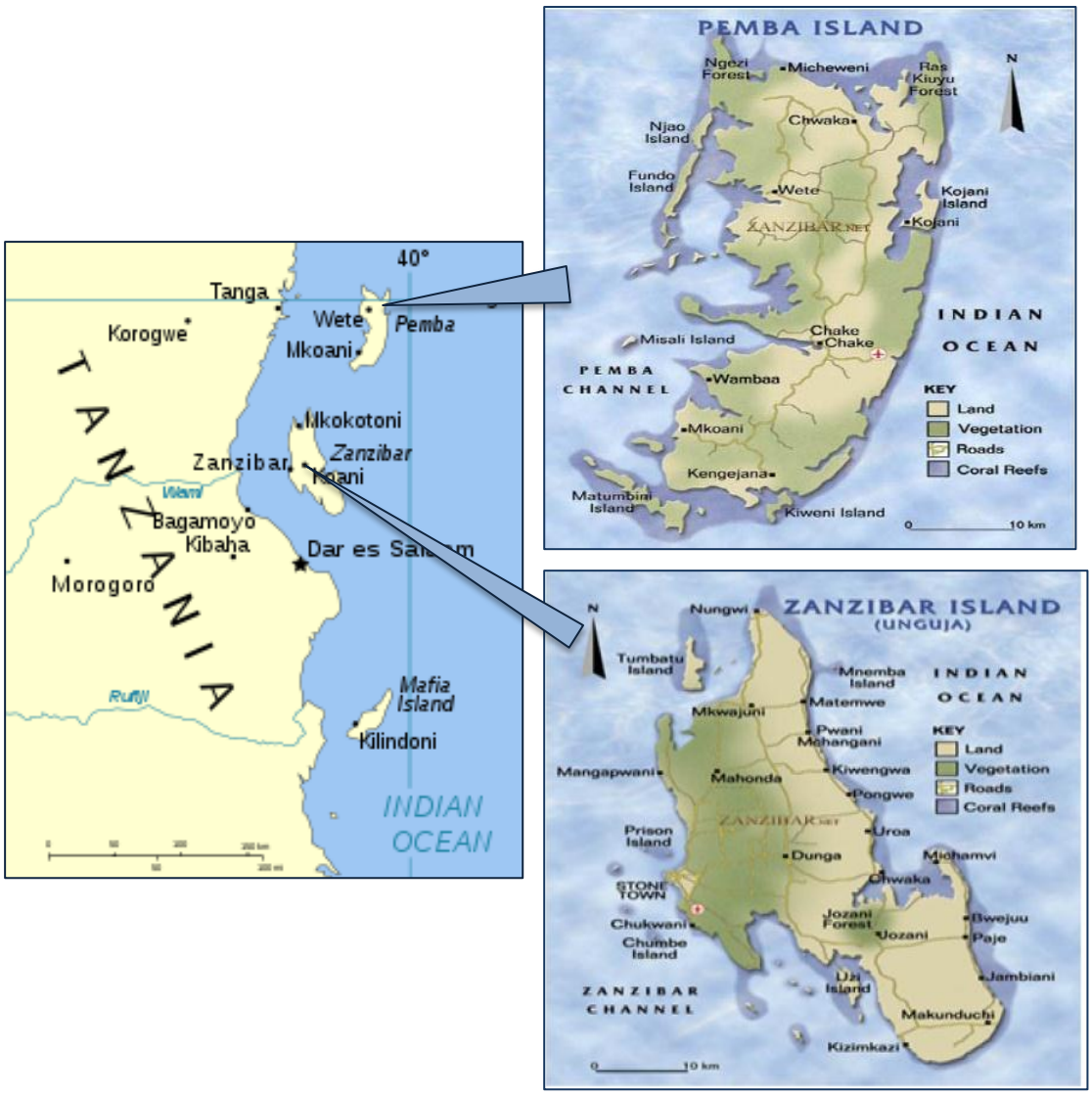


Figure 2: Maps of Zanzibar Islands (From Zanzibar Development Vision, 2010)

2.3. Zanzibar's Marine Environment

As an island, the marine and coastal ecosystems are critical to the livelihood, culture and wellbeing of Zanzibaris. A number of different marine and coastal ecosystems and species characterise Zanzibar's ocean areas. Their distribution is primarily determined by physical conditions such as tidal and current regimes, influence of fresh water, type and slope of the substrate. The main marine and coastal habitats includes mangrove forests, sea grasses and

algal beds, inter-tidal flats and coral reefs, which are found around much of the coastline. Other habitats include sandy beaches, rocky shores and estuaries. These ecosystems support a very high diversity of plant and animal species including marine mammals, marine turtles, coastal and sea birds, fish, plankton, sponges, crustaceans, molluscs, echinoderms and a variety of other organisms.

2.3.1. Mangroves

Mangroves, unique salt-tolerant evergreen trees growing in a clear zone from the mid-eulitoral to the upper shores, support a high biodiversity of plant, invertebrate and bird species. Zanzibar has 10 different mangrove species occupying extensive areas, especially in the sheltered Chwaka Bay on the east coast and Menai Bay in the South of Unguja island. Mangroves are essential habitats, providing a number of important ecological products and services. Mangroves provide feeding, breeding, nursery and shelter areas for fish and other species. During the high tide, hundreds of fish species move into the mangrove areas to feed and reproduce (Richmond, 2011). They also protect the shoreline from erosion caused by marine transport, waves and coastal storms and help improve water quality and recycle nutrients. Timber products are also highly sought after as a source for building materials and fuel. Mangroves are estimated to cover approximately 17 500ha in Zanzibar - 6 000ha in Unguja and over 11 000ha in Pemba (DoE, 2009). Much of the Pemba coastline is fringed with mangroves while on Unguja, the largest coverage is around Chwaka Bay. Mangrove coverage has seen a severe deterioration near urban centers such as Maruhubi in Unguja but Pemba forests are also subject to cutting in several areas (Ruitenbeek et al, 2005).

2.3.2. Seagrass Beds

In the shallow nearshore waters, seagrasses are terrestrial plants that have adapted to live submerged from the mid-tide mark to a depth of 20 m or more, where water quality allows sufficient sunlight to penetrate for photosynthesis. Tanzania hosts 12 of the world's 50 seagrass species. Seagrass beds are flowering marine plants that provide food and habitat for hundreds of species of invertebrates such as polychaete worms, isopods, amphipods, molluscs and echinoderms (Richmond, 2011). They also support different species of fish and marine turtles. These habitats filter the water of sediments, release oxygen and stabilise the sea floor and coastal areas as sediment is trapped through washed-up seagrass leaves. Recent research also shows the importance of seagrasses in sequestering carbon as seagrass meadows can store up to twice as much carbon as the world's temperate and tropical forests (Fourqurean et al, 2012). The species densities and area covered by sea grass beds in Tanzania are not recorded. They are widely distributed in inter-tidal and sub-tidal mud and sand flats and sand bars, coastal lagoons, sandy areas around the bases of shallow reefs, and in mangrove creeks exposed to low tide (Ruitenbeek et al, 2005). Threats to sea grass beds include human and natural activities. Seagrasses are threatened by destructive fishing methods, regular anchoring of fishing and tourist boats, excessive sedimentation, shoreline changes and predation. The extent to which these threats pose a problem in Zanzibar and Tanzania in general, requires further research.

2.3.3. Coral Reefs

Coral reefs are critical to Zanzibar's economic and social development as they underpin the livelihood of the population through support of the artisanal fisheries industry. The complex ecosystems are three-dimensional living structures comprised of benthic plants and animals. Members of these bottom-dwelling communities include hard and soft corals, algae, sponges, molluscs and worms (Richmond, 2011). Bright sunlight and clear water are essential for coral growth as the algal organisms, zooxanthellae, which form a critical component of coral reefs, produce energy via photosynthesis.

Zanzibar coastal waters are host to approximately 150 different coral species located within approximately 90km^2 of living coral reefs (DoE, 2009). Fringing and patch reefs predominate and are generally close to land due to the narrow continental shelf. A long fringing reef occurs down the east coast of Unguja and reefs fringe the small islands off the west coast. Reefs around Pemba are also extensive and highly diverse. Coral reefs prefer waters free from suspended sediments, and pollutants. They are built over centuries to create one of the most diverse ecosystems on earth. They are composed of thin layers of calcium carbonate secreted over thousands of years by billions of polyps, tiny soft bodied animals. These polyps live in a symbiotic relationship with host algae. These delicately balanced and highly complex marine ecosystems are highly productive, providing food and shelter to a great diversity of marine organisms. Like mangrove ecosystems, the sensitive coral reef environments provide a diversity of goods and services important to Zanzibar inhabitants. They provide essential nursery and feeding habitats for commercially important marine species. Coral reefs also form natural barriers against wave action and coastal storms.

Although coral colonies are constructed out of a rock-like mineral, calcium carbonate, many are extremely fragile and vulnerable to damage (Richmond, 2011). Key factors impacting reef health are pollution, destructive fishing methods, negative impacts from recreational activities (for example, anchor and diver damage) and coral bleaching. The coral bleaching event of 1997/1998, triggered by El Nino, had a particularly devastating effect on shallow reefs, reduced average live hard coral from 52 percent to 26 percent. The Zanzibar sites monitored by IMS showed high mortality (60-90%) on the outer reefs around Misali while reefs around Unguja were least affected with 10-25% mortality. Some level of recovery has reportedly been observed at affected sites (Ruitenbeek et al, 2005).


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Figure 3: Destructive net deployment near Kendwa

In recent years the reefs around Zanzibar have faced extreme pressure, primarily from pollution, uncontrolled recreational activities and destructive fishing practices such as placement of fish

traps on top of coral forms and illegal/destructive net deployment damaging corals (El Kharousy & Mohamed, 2012). Figure 2 shows an example of such destructive net placements on Mbwangawa Reef, Kendwa.

While not comprehensively monitored, pollution poses a significant threat to the marine ecosystems on the island and particularly around the urban centres such as Stone Town. Some recent attempts are underway by NGOs to address the lack of adequate solid waste management through recycling, however, preliminary research highlights the dangers of inadequately treated sewage and runoff entering the marine ecosystem through multiple marine outfall pipes around Stone Town. Results have shown that not only is the water around Stone Town unsafe for public swimming, but it is also threatening the health of coral ecosystems in nearby marine conservation areas (Moynihan, 2010). Destructive fishing methods continue to present a significant challenge to protection of reefs in some areas, and recent monitoring at reefs around Menai Bay Conservation Area (MBCA), Mnemba Island Conservation Area (MIMCA) and Pemba Channel Conservation Area (PECCA) indicate high fishing pressure (El Kharousy & Mohamed, 2012).

2.3.4. Open Sea

The open sea is yet another important type of marine ecosystem for Zanzibar. The nutrients in the warm Western Indian Ocean provide a source of nourishment for phytoplankton, which in turn is fed upon by zooplankton. Sardines and other small pelagic fish then feed on zooplankton, forming the basis of the local fisheries. The open ocean hosts a wide diversity of reef and pelagic fish, some of which are commercially important provides habitat for sea turtles, endangered species that need special care, as well as marine mammal species such as whales, dolphins and dugongs, several of which are threatened. The open sea forms the basis of large commercial fisheries that bring revenue to the country. The people of Zanzibar have for generations relied on fish stocks for their livelihood. As long as fishing is done in a sustainable manner and allows for regeneration, the ocean's fish can continue to support local livelihoods. Sea turtles, whales and dolphins are part of a balanced ecosystem and major tourist attractions.

2.3.5. Marine Organisms

Several species of marine mammals (8 dolphin species, 3 whale species and 1 dugong species) occur in Zanzibar's marine waters. Dolphins are hunted in some areas where they are used primarily as bait, but also for local consumption (Doe, 2009). Small resident populations of Indo-Pacific bottlenose and humpback dolphins in Menai Bay, has stimulated the growth of an informal dolphin-watching industry since 1992. Five species of marine turtles and approximately 28 species of sharks have traditionally occurred in Zanzibar waters. Three incidences of accidental catches of the endangered and ancient coelacanth, have also been reported from Nungwi since 2007. Anecdotal evidence suggests that the increasing pressures on Zanzibar's marine and coastal environments from unsustainable fishing, tourism and development practices, are driving a decline in some species, particularly marine turtles and sharks. Marine turtle nesting frequency occurs most

frequently during the southeast monsoon between April and August (Khatib and Jiddawi, 2005). Nesting sites have been found in few different locations in Zanzibar e.g. Matemwe, Mnemba and Nungwi, but are threatened by coastal development and illegal hunting and harvesting of turtles and eggs for meat, eggs and shells. The degree of protection and sustainable utilization of these species requires a great deal more effort to understand species dynamics and distribution, and to ensure sustainable utilization of these valuable resources.

Ongoing research is highlighting the importance of maintaining ecosystem health and linkages between different ecosystems and natural processes. Zanzibar's marine environment consists of a mosaic of many different ecosystem community types. Cliffs, rocky shores, islands, beaches, mangroves, tidal flats, and offshore habitats are all important to the ecological functioning of the coastal environment. While they are often difficult to quantify or map, further attention should be given to understanding and maintaining these linkages and managing the system as a whole rather than as individual parts.

2.4. Socio-economic activities

Coastal communities have traditionally depended on a diversity of livelihood strategies and income generating sources including fishing, agriculture, animal husbandry, and seaweed farming. Zanzibar is primarily an agricultural-based economy with generally small scale mixed cropping agriculture in the coastal areas. While such diversified systems of livelihood provided security, particularly for poorer households, subsistence-based livelihood activities are now competing with the commercial endeavours such as seaweed cultivation and tourism activities.

Fisheries are central to the national economy of the country and livelihood of Zanzibari's both in terms of income and employment and subsistence. Fisheries contribute to about 98% of animal protein in the diet of low-income populations. It employs an estimated 25% of the population as fishers and supporting service providers in fisheries-related activities such as production and marketing (DoE, 2009). The fisheries sector in Zanzibar remains largely artisanal with a small semi-industrial component and operates on an open access basis where people are free to fish anywhere if they abide by certain conditions such as obtaining a fishing license. The artisanal fishing sector is characterized by non-selective fishing and the use of traditional gear and equipment. While attempts are underway to encourage fishermen to operate further offshore (support was provided through the MACEMP project to promote artisanal fishing in deeper waters), fishing activities are still concentrated in the inshore waters. Despite the fact that fishing is considered a high-risk activity, it still forms an integral part of the lives of coastal Zanzibari's. Some of the issues noted as challenges to the industry include illegal fishing and the use of destructive fishing gears; a lack of fish processing and marketing infrastructure and poor marketing information and poor storage facilities (DoE, 2009).

The artisanal fishers in Zanzibar use a diversity of fishing gear, from more traditional gears such as hand lines, basket traps and fishing weirs to troll lines, long lines, gill nets, shark nets, and small-scale purse seine nets. Fishing management prohibits the use of destructive

gears such as the use of small mesh sized nets in the conservation areas, catch of under sized fish in all areas and no-take zones in marine conservation areas[1]. Some gears are outlawed including beach seine, drag nets and spear guns, but are still used illegally in many areas. Seasonality is an important factor in Zanzibar's artisanal fisheries activities and therefore, also in marine conservation. In some parts areas such as in the North for Unguja, in Nungwi, fishers operate throughout the year with most catches taken during the southeast monsoon. The North East monsoon, (October to March), brings calmer seas and higher catches with less travel by fishers to distant fishing grounds to exploit migratory fish species. Due to this effect of monsoons, fishers have a migratory pattern locally known as *Dago* where fishermen travel to more productive fishing grounds and camp away from their home grounds during various seasons. A great deal of migratory fisheries occurs between different areas in Unguja and Pemba as well as between Zanzibar and mainland Tanzania. This aspect of the fisheries sector needs particular attention by the fisheries management and marine and coastal conservation authorities as many conflicts arise as a result of this practice.

Fishing-related conflicts occur on a periodic basis in Zanzibar and may be driven by a number of reasons including use of illegal gear and methods, cultural and historical rivalry, influx of migratory fishermen and conflicts between fishing and tourism-related activities. All of these conflicts have an important bearing on marine conservation for instance Menai Bay Marine Conservation Area in Unguja and the surrounding villages are struggle to manage the conflicts related to the opening of the area and influx of migratory fishermen during the Dago season. Effective mechanisms need to be developed within the marine management legal and institutional framework to manage and resolve such conflicts efficiently and equitably.

Seaweed farming was first introduced in 1984 by the University of Dar es Salaam and was produced commercially in 1990. Seaweed farming brought about new opportunities and resources for the local communities and particularly for women. While the practice has led to a modification of traditional ways of life in some coastal communities, seaweed farming is proving to be a growing alternative to improve the development opportunities to isolated communities, particularly in the more remote rural areas. Market and price fluctuations however, continue to hamper the profitability (DoE, 2009).

2.5. Nature and Culture-based Tourism in Zanzibar

2.5.1. Marine resource management and tourism development

Zanzibar's unique cultural heritage and natural marine environment provide a wealth of resources and form the basis of the country's tourism industry and the two sectors (marine management and tourism) are intimately connected. The country's tourism is primarily nature and culture-based with a large emphasis on the beauty of the physical environment

[1] These zones have been identified in some MCAs but are not yet adequately demarcated or managed as no-take areas.

and on the rich history and culture of the country. On the other hand, tourism provides a valuable source of essential revenue for supporting marine management. Tourism in Zanzibar is a major contributor to National GDP (35%) with indications of good potential for further growth of the industry. The main tourism activities in which Zanzibaris participate include tour guiding (including marine-based activities such as diving), product marketing, handicraft production and hotel employment (DoE, 2009). The service sector which tourism supports, contributed 51% to the GDP in 2007, far outstripping other sectors such as agriculture and industry which contribute 27% and 15% respectively. Despite the large contribution of the tourism industry to the country's GDP, the benefits are slow to reach the poor and vulnerable population of Zanzibar. The proportion of benefits reaching the poor from tourism was recently assessed and revealed both an under-utilisation of cultural resources as well as a movement of the main flow of tourism revenues primarily through hotels which have a low pro-poor impact (Steck et al, 2010).

The large contribution of the marine and coastal-related natural and cultural resources to the tourism industry also deserves greater recognition and should be highlighted as a key justification for boosting capacity for stronger governance. Figure 3 below illustrates the reliance (38%) of the tourism industry on activities related directly to utilisation of marine or coastal resources. It is worth noting also that while 74% of the 80,000 trips or tours are taken through tour operators, the vast majority (60%) of revenue from excursions is generated by the dive centres (Steck et al, 2010). The reliance of the tourism industry on well-functioning and healthy marine and coastal ecosystems is an issue that needs to be highlighted in all relevant sectors including land-use planning, tourism investment, coastal development, fisheries management, conservation and transport sectors.

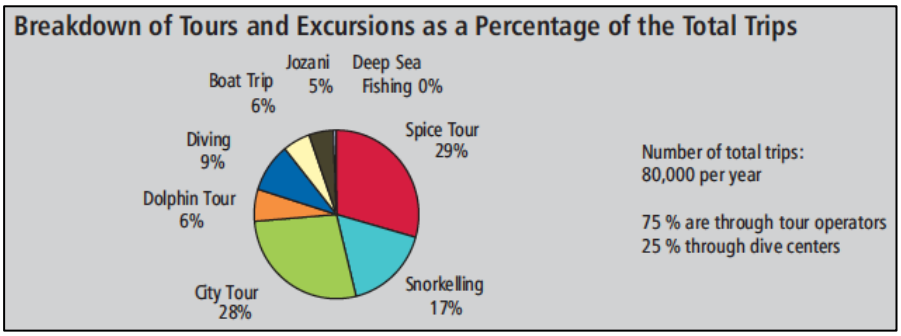


Figure 4: Percentage breakdown of annual tourism excursions (from Steck et al, 2010)

The new draft Zanzibar Environmental Policy identifies key environmental concerns associated with tourism industry in the islands including destruction of coastal habitats through negative land use change dynamics such as land reclamation, construction of jetties, clearing of mangroves, or establishment of wave breakers that are incompatible with original sea wave dynamics, and an increase of solid waste and wastewater generation (DoE, 2012). Since both the sensitive coastal and marine ecosystems and the cultural integrity of the Island have the potential to degrade due to bad tourism practices, the impact of improperly managed tourism development and activities requires attention to prevent the erosion of the foundation on which the industry is developed. Likewise, the contribution of the tourism industry to supporting the improved governance of Zanzibar's marine and cultural resources, requires further recognition and management. Revenues generated by tourism within each of the MCAs, could potentially support operational responsibilities of managing the protected areas effectively.

2.5.2. Underwater cultural heritage

Some of the resources, particularly the underwater cultural heritage, are considered somewhat under-utilised and inadequately managed. For instance the institutional mandate for managing and utilising the numerous ship wrecks and other underwater cultural heritage resources that occur off the coast of Zanzibar is unclear. As a result, conflict has occurred between sectors over the protection and utilisation of these resources. The recent removal of some of the shipwrecks by the Ports Corporation, has caused increasing concern by the Department of Antiquities and Marine Conservation authorities and has highlighted the fact that these resources are undervalued and have insufficient protection.

From a legal perspective, underwater cultural heritage is not referred to directly in the Antiquities legislation. However, no reference is made to the location of monuments or antiquities protected under the law either, so the law as it exists could be taken to cover any kind of antiquities if they are gazetted.

2.5.3. Strengthening the tourism-marine conservation link

Despite the increasing contribution to Zanzibar economy, the tourism sector is considered to be responsible for an increase in social and environmental problems from coastal and marine pollution and degradation to crime, cultural erosion, and land invasion (DoE, 2009). If Zanzibar's tourism industry is to continue to grow in contribution to the GDP and rely so heavily on the country's marine and coastal natural and cultural resources, greater attention by the tourism industry is needed to managing the impacts arising from the industry. Similarly, a great number of opportunities are available to marine conservation and management through partnerships among the authorities and selected private sector operators who prioritise sustainability in terms of socio-economic, cultural and environmental aspects and who can facilitate improved conservation activities and relationship with coastal communities. Mechanisms to establish and manage such partnerships should be developed within the legal and institutional framework for marine conservation and management in Zanzibar.

3. Marine Conservation in Zanzibar

3.1. History of Marine Conservation

While terrestrial conservation in Tanzania has a long history, pre-dating independence, marine conservation activities developed much later. A few small marine reserves were designated by the GoT off the coast of Dar es Salaam in 1975. These were however, commonly considered to be 'paper parks' due to a lack of enforcement. Marine conservation gained impetus in mainland Tanzania with the ratification of the Marine Parks and Reserves Act in 1994. In Zanzibar, marine conservation gained momentum somewhat later, in the early 1990s with the establishment of the Chumbe Island Coral Park in 1994, Mnemba Island Conservation Area and Menai Bay Conservation Area in 1997 and Misali Island Conservation Area in 1998. All these marine conservation efforts were initiated and in some way supported and managed by organizations other than the government – either international NGOs or private sector eco-tourism operators, and each had a component of community involvement (Levine, 2004).

The dependence on this external support for strengthening marine conservation in Zanzibar is characteristic of many other developing countries whereby the government agencies with the mandate for managing protected areas, lack the resources and capacity to manage these protected areas themselves. A further withdrawal of international development funding to the Zanzibar Government following Zanzibar's elections in 1995 and 2000, resulted in an even greater dependence on the private sector and international NGOs for support (Levine, 2004). An increased availability of funding for strengthening marine management from the development and implementation of the MACEMP initiative, provided the RGoZ with a unique opportunity to improve the capacity of government and involvement of stakeholders for marine and coastal conservation. While key achievements were made, much is still needed to strengthen conservation planning and management.

3.2. Current Status of Marine Conservation

Zanzibar currently has 3 formally established Marine Conservation Areas (MCAs), 1 in Pemba, the Pemba Channel Conservation Area (PECCA), and 2 in Unguja, namely the Mnemba Island-Chwaka Bay Marine Conservation Area (MIMCA) and the Menai Bay Conservation Area (MBCA). The boundaries of two additional areas near to Stone Town are noted and awaiting finalisation through the MCU Regulations. These include the Changuu-Bawe Marine Conservation Area (CHABAMCA) and Tumbatu Marine Conservation Area (TUMCA). An additional area, Kojani Marine Conservation Area (KOMCA) is also mentioned in the Draft MCU Regulations but has yet to be formally demarcated. Chumbe Island Coral Park operates via a contractual between the RGoZ and the private sector and neither the Department of Fisheries nor the MCU has much involvement in the management.

While there is no legal definition of a "Marine Conservation Area", it is generally a region of

the ocean that is protected according to the law. MCAs can be created to protect biodiversity and habitats, maintain healthy marine ecosystems, and to protect the fish stocks in order to enhance local fisheries. Other reasons for the establishment of the MCAs are to:

- conserve and enhance fishery resources (providing refuge for spawning fish, rebuilding depleted stocks, protecting critical breeding stocks, providing insurance against events such as climate change, and improving scientific knowledge required for fisheries management);
- maintain diverse and healthy ecosystems (protecting a wide range of species and ecological connections between habitats);
- protect critical or unique habitats (providing nursery and feeding grounds, nesting areas, migration stopovers);
- protect endangered or threatened species (such as sea turtles, dolphins)
- advance scientific research and monitoring (providing a good baseline for environmental monitoring and management);
- minimise conflicts between resource users (i.e., tourism operators and fishers); and
- contribute to socio-economic benefits for coastal communities (through the creation of sustainable fisheries and enhanced recreation and tourism opportunities).

Most MCAs in Zanzibar are partially protected areas that are managed with a focus on fisheries management. Completely closed areas (where no use of natural resources is allowed) are rare due to the high reliance of the population on fisheries for livelihood and the open-access nature of the marine environment. The MCAs are largely multiple use areas where human activities are allowed if they are compatible with the conservation objectives. Experience has shown that the size, configuration and level of protection required for demarcating a marine protected area, varies considerably from case to case and is most successful if it is decided upon with input from all stakeholders involved or affected. There is no standard or model for MCAs in Zanzibar, nor are there specific criteria or processes by which MCAs are identified and designated. Most of the early MCAs in Zanzibar have evolved for different reasons and under different circumstances. Some were driven by community or NGO interest (i.e. Misali Island, Mnemba Island and Menai Bay), while others grew from private sector involvement (Chumbe Island). The most recent extensions of the MCAs have been more top-down driven by government.

Following the intervention of the MACEMP project, the number and formal area of coverage of Zanzibar's MCAs has increased substantially. The pending Draft MCU Regs. also propose a significant increase in the number of coastal communities (number of Shehias) that are to be directly involved and benefit from the MCAs. For instance, the proposed extension of coverage of the MBCA will increase from 21 to 31 Shehias. The proposed extension of coverage of MIMCA is even greater, and will include 27 extra Shehias, increasing the number from 4 to 31 Shehias. At 34 Shehias, PECCA covers the largest number of coastal villages. The 2 proposed MCAs, TUMCA and CHABAMCA, will each cover 28 and 13 Shehias respectively. This large increase in the number of communities directly involved in the MCAs will require a dedicated and well-planned effort by the MCA management and the MCU to increase their resources and capacity for coordinating stakeholder involvement. Demarcation of specific no-take or multiple use zones within each of the MCAs has yet to be operationalized.

In Zanzibar, the Marine Conservation Unit (MCU), under the Department of Fisheries Development is currently the responsible entity for coordinating management of all Marine Conservation Areas in Zanzibar and for promoting the coordination of other forms of MMAs such as the sanctuaries (privately/contracted managed conservation areas). The percentage of the 30800 Km^2 territorial sea (from the high water mark to 12 nautical miles) that is currently legally protected is 2009 Km^2 or approximately 6,5%. This includes areas that are proposed and have yet to be formally gazetted (TUMCA, CHBAMCA and Kojani) and excludes the protected area of Chumbe Island. Table 1 below outlines the size of these MCAs.

Table 1: Area of Territorial Sea under formal government protection

Name of MCA	Declaration	Area covered by MCA (Km^2)	% of Territorial Sea protected
Menai Bay Conservation Area	9 August, 1997	470	1.5
Mnemba-Chwaka Bay Conservation Area	22 November, 2002	290	0.9
Pemba Channel Conservation Area	23 September, 2005	1000	3.2
Tumbatu Marine Conservation area	Proposed	133	0.4
Changuu-Bawe Conservation Area	Proposed	116	0.4
Kojani Marine Conservation Area	Proposed		
Total area under protection		**2009**	**6.5**

It is worth noting that none of the Exclusive Economic Zone (EEZ) of the URT (i.e. the area extending from 12nm to 200nm) is currently protected. Management of EEZ fisheries are considered a Union matter under the Deep Sea Fishing Authority Act. Tanzania faces a dearth of information on its offshore resources, similar to the situation found in neighbouring Kenya and Mozambique (Samoilys & Pabari, 2004). Challenges to identifying areas for protection within the EEZ therefore include a lack of information on the EEZ area, as well as a lack of resources and capacity to undertake planning and management in this area. Any efforts to develop marine managed areas in the EEZ should be grounded in an ecosystem-based approach and should also consider spatial and temporal management regimes (i.e. closed areas and gear limitations and closed periods/seasons). The issue of conservation of areas of the EEZ is discussed further in the report on the MMA Network System.

3.3. Overview of Zanzibar's MCAs

As mentioned above, Zanzibar currently has 3 formally established Marine Conservation Areas, Menai Bay Conservation Area, Mnemba Island-Chwaka Bay Marine Conservation Area and Pemba Channel Conservation Area. Two other MCAs, Tumbatu Marine Conservation

Area and Changuu-Bawe Marine Conservation Area, are awaiting formal Gazettement. Privately managed protected areas include Chumbe Island Coral Park and Mnemba Island. The formal extent and coverage of the MCAs in Zanzibar as increased significantly over the last 8 years with the support of the MACEMP project. The philosophy behind MCAs in Zanzibar is however, not to create large 'no take zones' which would not be realistic given the heavy reliance on marine resources by large number of fishing families for their primary income and survival. Rather, the focus should be on promoting sustainable resource utilisation in large areas, using a variety of techniques and methodologies (including core zones that can function as 'fish refugia'). The following section provides a brief overview of each of the MCA areas.

3.3.1. Menai Bay Conservation Area (MBCA)

The Menai Bay Conservation Area (MBCA) is situated in the southwest of Zanzibar. It covers an area of 470 km² including 6 islets, with a seaward boundary of almost 61 km offshore. The MBCA lies between latitude 6°10'S - 6° 30'S and longitude 39°10'E - 39°36'E. The area extends from the high water mark of the south-eastern end of Unguja Island, around the peninsula at Kizimkazi to Mtende Mnarani and on the western side, past the peninsula where Fumba forms confluence with Nyamanzi (MLFD; 2010a). The MBCA was gazetted as a multiple-use marine conservation area in August 1997 under section 7(1) of the Fisheries Act No. 8 of 1988. The initiative for protection of the area came from local fishermen in 1989, who were concerned about that the numbers of visiting fishermen, their length of stay, and the use of destructive methods had increased (Horrill, 1992). Visiting fishermen come from elsewhere during the Northeast monsoon season (October to March), when there are better weather conditions (Horrill, 1992; Ngaga et al., 1999). To regulate fishing pressure, local communities around Fumba Peninsula, with the assistance of the Commission of Natural Resources formed an informal management committee to monitor fishing activities of visiting fishermen but experienced challenges due to a lack of resources and capacity.

A series of organisations have supported initiatives in the Menai Bay area since the early 1990s. From 1994, WWF supported the Menai Bay Conservation Area Program to enhance management measures originally initiated by local communities of Fumba Peninsula at the invitation of the Commission of Natural Resources (Torell et al, 2007). The aims of the Program were to establish of a multi-user marine conservation area, ensure local participation in conservation and monitoring of the protected area, and to increase public awareness and education. Local village conservation committees (VCCs) were established in participating villages and a system of local patrolling developed with fishermen who would report incidences of illegal fishing (Levine, 2004). Subsequent to 2002, support to the MBCA Program by WWF was decreased. Conservation activities lulled until additional support was allocated through the MACEMP project from 2005. In 2003, the IMS introduced bivalve farming villages on the Fumba Peninsula and in 2004 the initiative was joined by the Sustainable Coastal Communities and Ecosystems (SUCCESS) program[2] (Torrell et al, 2006).

[2] The SUCCESS Program is supported through funding from the United States Agency for International Development (USAID) and facilitated by the Coastal Resources Centre of the University of Rhode Island.

Zanzibar: Menai Bay Marine Conservation Area

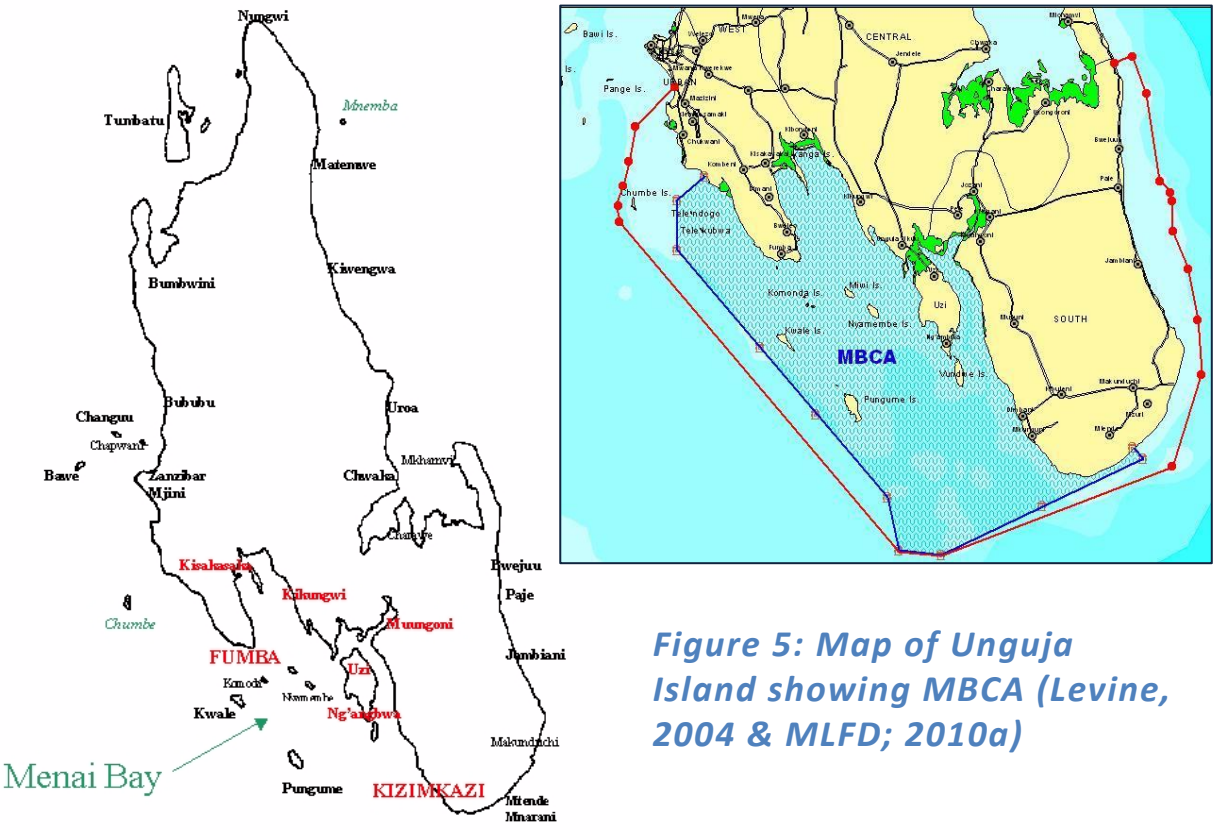


Figure 5: Map of Unguja Island showing MBCA (Levine, 2004 & MLFD; 2010a)

The Draft GMP for MBCA proposed an extension of the MCA on both the eastern and western boundaries of the MCA (see Figure 4 below). The area encompasses the Chumbe Island Coral Park (CHICOP) however, it remains a private entity managed by CHICOP management. The MBCA is administered and managed by the Department of Fisheries Development through the management committee. This comprises a small team of approximately 3 staff seconded from the DFMR who are responsible for daily management of the area. An additional 14 other staff are permanently employed as patrol officers and other duties based in the area for patrolling, recording and educational activities. Individuals on contract number approximately 18 and these are generally people from the communities within the conservation area. A total of 3 staff were reportedly sent for training supported by MACEMP (MLFD, 2010a). Menai Bay does not have any exclusion zones where fishing is not allowed, but it has slightly stricter fishing regulations than other parts of Zanzibar.

The Kizimkazi area of MBCA on the southwest end of Unguja is well known for a locally driven dolphin tourism industry. Dolphin tourism started as long ago as 1992 when fishermen began taking tourists out to see the dolphins. There are currently approximately 45 boats operating within the dolphin tour industry (Gautam; 2010). As stewards of the resources within the MBCA, the Menai Bay Conservation Area management unit has regulatory authority over the dolphin tour industry. The industry is however, considered essentially unregulated with no price regulations, minimum safety standards or certification of operators. Suggested guidelines were developed (Berggren et al. 2007) for appropriate behaviour exist but these are currently not followed or enforced (MLFD, 2010a).

3.3.2. Mnemba Island-Chwaka Bay Marine Conservation Area (MIMCA)

The east coast of Unguja Island stretches from Ras Nungwi in the north to Makunduchi in the south. The relatively straight coastline is flanked by sandy beaches and a coral barrier reef that shelters mostly shallow lagoons on the landward side. The coastline is interrupted only by the Michamvi Peninsula that protrudes in a south-north direction to form the outer barrier of Chwaka Bay, a shallow water body opening northwards into the open ocean. Chwaka Bay supports the largest stand of mangrove forest in Zanzibar as well as other habitats such as seagrass beds and mudflats. Mnemba Island, the only island off the east coast of Unguja, is located inside a coral atoll formation. Jozani-Chwaka Bay National Park was established in 2004 under the mandate of the Department of Commercial Crops, Fruits and Forestry (DCCFF); and the Kiwengwa Controlled Area was established in 2000 however, effective management of the area was never put in place (EcoAfrica 2005).

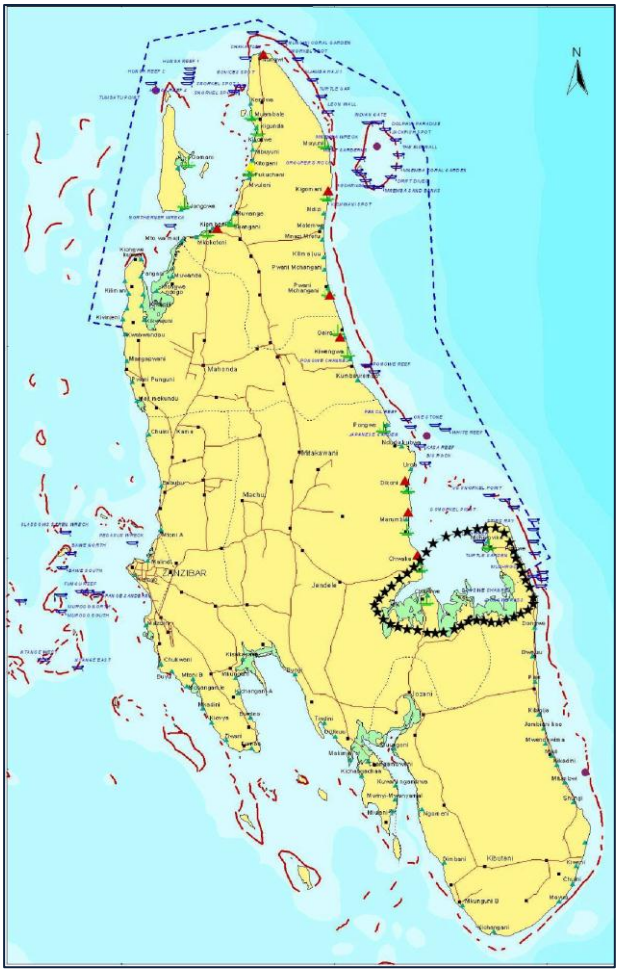


Figure 6: Map of Unguja Island showing MIMCA (MLFD,

The establishment of MIMCA is provided for under section 7(1) and (32) of the Fisheries Act No. 8 of 1988 and under the Draft MCU Regs. The area was officially gazetted as conservation area by an order published in the legal supplement (part II) of the Zanzibar Government Gazette vol. CXI 5974 No. 68 of 22 November 2002. Figure 5 indicates the area of MIMCA. The gazettment MIMCA protected Mnemba Island, a small atoll off the northern tip of Unguja Island that includes a private concession area.

Mnemba island is separated from the Unguja on the western side by a deep water current greater than 100m and is essentially part of a coral atoll formation that supports a vast array of reef fish and other marine life. Prior to 1989, the entire atoll was accessible to artisanal fishers. A thirty-three year renewable lease granted to an Italian concern in 1989, designated the island for private high-end tourism development and including a 200 m exclusion zone from the mean high water mark surrounding the island. More recently a “no take” House Reef was declared, where corals have since been recovering and are in better shape than anywhere else on the atoll.

The Mnemba Island Marine Conservation Area (MIMCA) was established in 2002 MIMCA was created with the four villages of Matemwe, Kijini, Pwani Mchangani and Nungwi to address the then almost rampant disputes between local artisanal fishers and tourist investors. The idea of creating a conservation area considered the rational utilization of the resources to enhance the area's unique ecosystem and biodiversity richness (MLFD, 2010b).

The business concern has since been sold to the Conservation Corporation Africa, now called "& Beyond", who have reportedly improved relations with the local villagers through participation in the MCA Advisory Committee[3] and support for greater sharing of benefits to the four villages through the Africa Foundation. The broader MIMCA area is currently administered and managed by the Department of Fisheries Development by the management committee. This is comprised of a team of approximately 6 staff seconded from the DFMR who are responsible for daily management of the area. A total of 7 staff are on contract and are largely members of the community. One staff member is undergoing training supported by MACEMP. In the Draft GMP for MIMCA, the Department has proposed an extension of the MIMCA area and the number of involved villages. This has caused concern among the existing 4 villages about the degree to which the current levels of revenues can be extended to an additional 27 villages.

3.3.3. Pemba Channel Conservation Area (PECCA)

Pemba Channel Conservation Area (PECCA) is located on the western seaboard of the Pemba Island straddling the entire coastline from the southern tip to the northern point (See Figure 6 below). PECCA lies between the latitudes 04º 54'S and 05º 26'S, and is bisected by the longitude 30º 45'E. The coastline is heavily indented with many bays and a braided network of deep channels separated by shallow sandbanks, peninsulas and archipelagos of islets of different shapes, sizes and geology (MLFD; 2010c). Strong tidal currents occur around Pemba Island, especially at the northern end. The permanent north flowing East African Coastal Current (EACC) influences the western side of the conservation area. The currents in the Misali Channel are very strong due to the deep waters on the western side of the island and reverse with each tidal cycle resulting in strong eddies close to shore.

Misali Island is one of the very significant islets covered by PECCA. Misali was designated a marine conservation area in 1993. The west coast of Pemba plays the major role in generating and maintaining the region's high marine biodiversity which justified the designation of PECCA to ensure sustainable resource utilization. PECCA was declared a Conservation Area on September 23rd 2005, through the declaration order under the Fisheries Act of 1988. PECCA stretches from the south of Pemba Island at the southern tip of Ngazi Islet with a two-mile width band stretching along the rest of the western coast of Pemba Island to its northern tip at Ras Kigomasha covering an area of 42 nautical miles. On the western side of PECCA is a deep Pemba channel which drops sharply to a depth below

[3] At the time of researching, the MIMCA Advisory Committee and the established processes of revenue sharing from the MCA was no longer operational. The Advisory Committee and associated co-management system with the investor, communities and Department of Fisheries Development was reportedly suspended and an alternative system had been established by the government that was perceived to be less participatory, transparent and accountable.

1000m separating Pemba Island from the mainland Tanzania and characterizing it as a true oceanic Island. The PECCA Order was published in the Government Gazette as the legal supplement (Part II, Vol. CXIV No. 6111). The order prohibits the use of certain destructive fishing gear and methods such as beach seine, spear fishing, explosives, poison and dragging nets *(kigumi*). It provides for a system of permits and fees for the use of the area by non-residents.

Community involvement in the management of Misali Island was relatively strong prior to 2005 and the declaration of PECCA. Between 2001 and 2006, the Misali Island Conservation and Development Project, was overseen by CARE and implemented by the Misali Island Conservation Association (MICA) NGO in collaboration with the Department of Cash Crops, Fruits and Forests. MICODEP involved successful implementation of conservation, environmental education and sustainable resource use livelihood initiatives. The Misali Island Conservation Area Order was repealed by the Order establishing PECCA. Following this, the MICODEP project diminished reportedly due in large part to lack of clarity over a modification of responsibilities and mandates of the Department of Fisheries and rising conflicts between the government and MICA. All terrestrial areas are currently excluded within the overall boundaries of PECCA but the terrestrial area of Misali Island remains protected under the Misali Forest Order. The area around Makaongwe has been identified by the community as an area of restricted fishing activities. While the fishers have reportedly restricted fishing activities in the area already, they are awaiting formalization of the zoning by the Department of Fisheries Development.

PECCA is currently largely managed by the Department of Fisheries Development through the PECCA management committee. The MCA is significantly understaffed, under skilled and under-resourced with a total of approximately 9 permanent employees seconded from the DFMR who are responsible for daily management of the area. Approximately 4 rangers/patrol officers are based in the area for patrolling, recording and training activities. At the time of researching, the Manager of PECCA was also responsible for the post of Officer in Charge (Head of Fisheries Development) – Pemba.

3.3.4. Tumbatu Marine Conservation Area (TUMCA)

The Tumbatu Marine Conservation Area (TUMCA) is in the process of being gazetted. TUMCA extends from Kendwa towards Bumbwini Mnarani to include Ras Uso wa Membe and the Islands of Mwana wa Mwana, Tumbatu popo and Kisiwa pili (see number 1 in Figure 7). This north–western area of Unguja is an important fishing ground and tourist destination. The identified fishing grounds include Bunga, Mwamba Said, Bonza and Mwana wa Mwana. Some key tourist destinations include Boza, Mwana wa Mwana, Kendwa Beach, Kisiwa Donalo, Makutani Ruins and Uvinje. According to the proposal for an order of the establishment of the TUMCA (Fisheries Act No. 8 of 1988), the area starting from the high water mark will be conserved as part of the TUMCA. The proposed TUMCA as stated in the Order of the Fisheries Act No. 8 of 1988 starts at the high water mark at 6° 44.4'South, 39° 17.3' East on the beach of Kendwa village in Shehia of Kilindi at the point of South 6° 02.0'South 39° 11.7' East on the beach of Nyanjale villege in the Shehiya of Kiombamvua and

also for the proposed TUMCA 's coordinates). The area contains a number of small Islands, of like the Mwana wa Mwana, Daloni and Popo Islands.

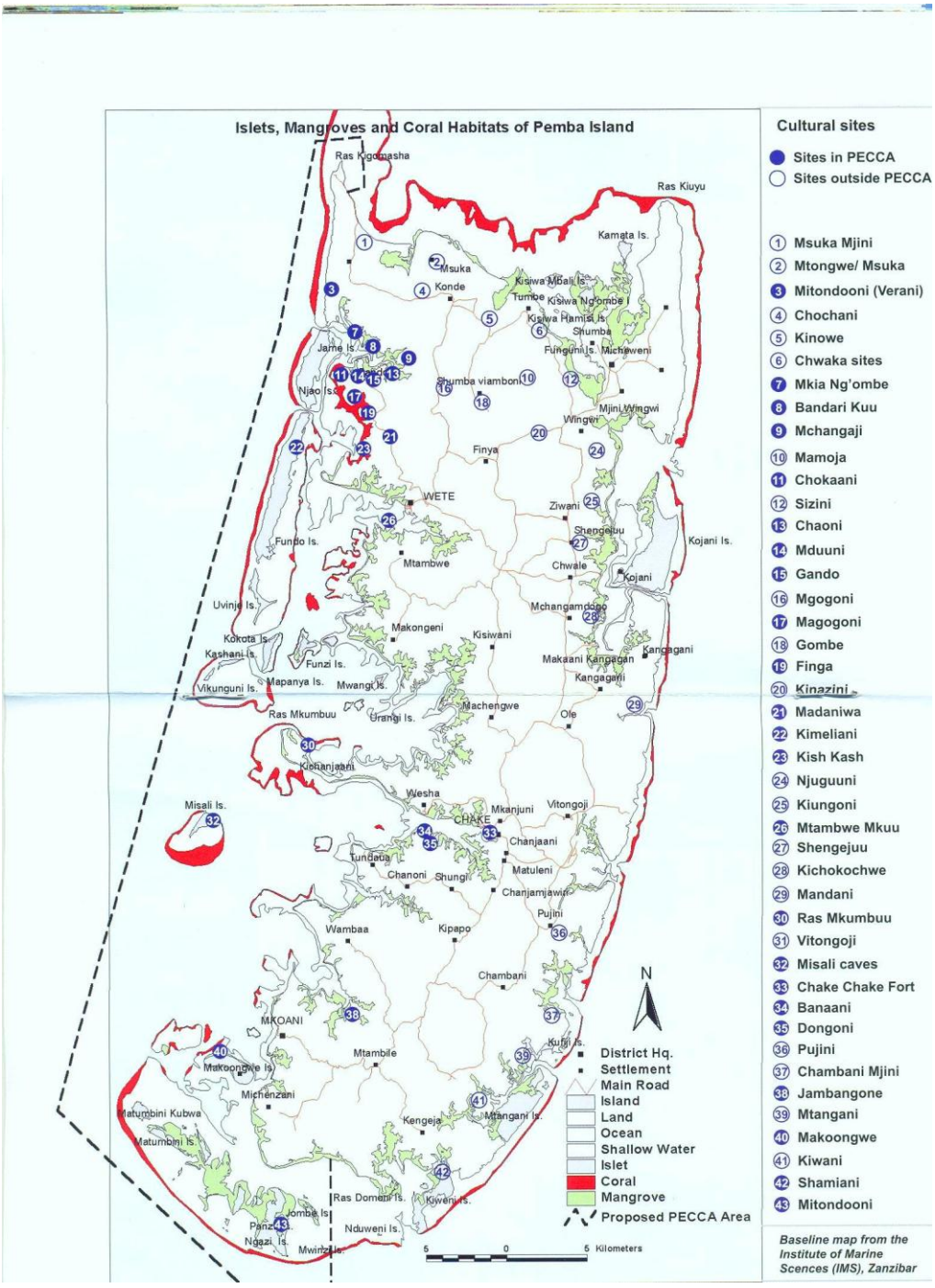


Figure 7: Map of Pemba Island showing demarcation of PECCA (MLFD, 2010c)

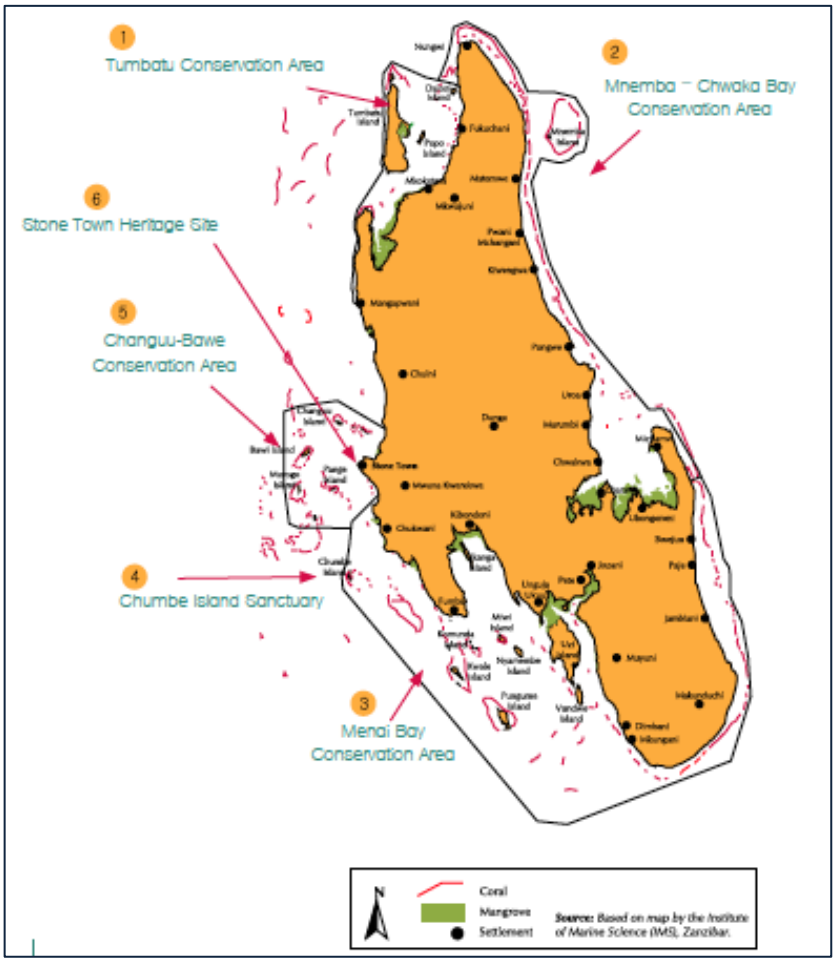


Figure 8: Map of Unguja showing TUMCA and CHABAMCA (RGoZ, 2007)

A rapid assessment was completed for the TUMCA area in 2009. Some of the key threats to the proposed MCA identified by fishers through the assessment included deforestation of mangroves, destructive fishing methods and illegal fishing and diving, low public awareness of the importance of the area, inadequate conservation measures, sand mining, pollution from a sugar factory. The rapid assessment also revealed that 79% of the fishers interviewed during the assessment were in favour of establishing TUMCA as a conservation area (MLFD, 2009a). A GMP has not yet been developed for this proposed MCA.

3.3.5. Changuu-Bawe Marine Conservation Area (CHABAMCA)

The archipelago in front of the word Heritage site of stone Town contains four islands and a number of sandbanks and submerged reefs as well as many shipwrecks. These have been identified for inclusion into the proposed Changuu-Bawe Marine Conservation Area (see number 5 in Figure 7 above), and will be formally designated once the Gazettement process is formalised. Two of the Islands, Changuu or Prison Island and Chapwani or Grave island played an important role in the history of Zanzibar and Stone Town and still house historical

buildings. On Changuu there is also a population of giant Aldabra tortoises - descendants of 4 tortoises that were donated from the British governor of Seychelles to General Sir Lloyd William Mathews in 1919. Changuu and Chapwani Islands have sites of historical interest – the old prison of Changuu Island and the graves on Chapwani Island.

A rapid assessment of the CHBAMCA area in 2009 highlighted a number of threats as identified by fishers who use the area regularly. These included use of destructive and illegal fishing methods such as dragging nets, small-mesh nets, spear gun fishing, bad diving and the killing of small fish, environmental pollution from garbage, oil spills from anchored ships, sewage from hotels and from Kikwajuni buildings, political conflict, inadequate law enforcement and the lack of environmental awareness. A total of 63% of the interviewees supported the establishment of the MCA (MLFD, 2009b).

3.3.6. Other MMAs – Chumbe Island Coral Park (CHICOP)

Marine conservation in Zanzibar formally began in 1992 with the establishment of the first marine sanctuary, Chumbe Island Coral Park Ltd. (CHICOP). Between 1991-1994, CHICOP negotiated with the Government of Zanzibar that the western coral reef and forest reserve on the island be gazetted as a park and managed and funded by the company (Nortlund et al, 2011). CHICOP represents the first full "no-take zone" (NTZ) for marine conservation in Zanzibar. Permitted activities in the park include recreation (swimming, snorkelling and underwater photography), education and research. The marine zone within the Reef Sanctuary on the west side of the island is permanently closed to all fishing activities and provides a vital refuge for biodiversity conservation. As a result, the area has an almost pristine coral reef ecosystem. CHICOP contains 90% of all coral species ever recorded in East Africa, as well as over 350 fish species. Restrictions on fishing, boating, anchoring and tourist and research activities are in place within the Reef Sanctuary on the west side. The agreement drawn up between the government and CHICOP specified the role of the company and outlined a representative Advisory Committee for the Park as illustrated in Figure 8 below. This advisory committee with representatives from government departments, research institutions and local community leaders has been operational since 1995. Through this committee and various other outreach activities, CHICOP supports improved governance through participation and capacity development of government officials, conservation authorities and community members (Nortlund et al, 2011).

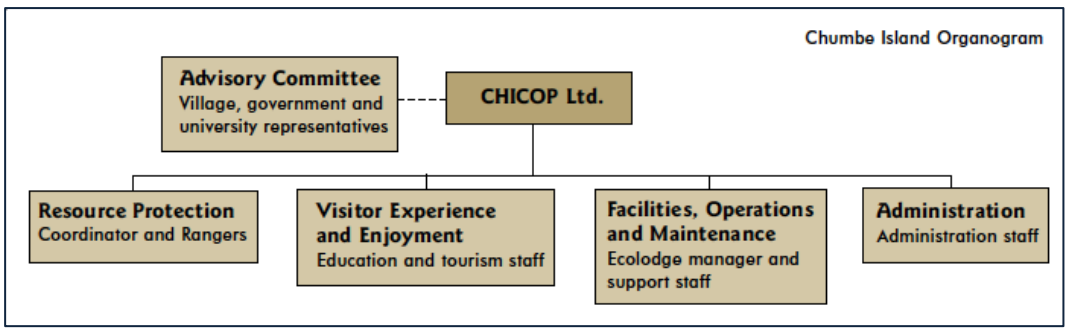


Figure 9: Organogram of Chumbe Island Coral Park Advisory Committee (IUCN, 2010c)

3.4. Conservation of Marine Organisms and Endangered Species

Common endangered species occurring in Zanzibar include whales, dolphins, sea turtles and some species of sharks (DoE, 2009). Research shows that turtles, whales and dolphins are normally caught accidentally while sharks species are targeted by fishermen. A recent incident of the unintentional catch of the ancient and endangered coelacanth fish occurred near Nungwi, off the northern coast of Unguja in July 2007. While such catches are rare, the presence of a known population of Coelacanth on the Tanga coast, could indicate additional distributions in Zanzibari waters. To date, at least 3 coelacanths have been reported at the same sites in Nungwi (DOE, 2009).

Conservation of endangered species of marine fauna or marine mammals are not explicitly provided for under the current legislation in Zanzibar. The definition of fish in the Fisheries Act of 2010, includes all forms of aquatic or amphibious life (including turtle, crab and shell fish) as well as any aquatic or amphibious animal or the young of any such animal. The Minister and Director have the powers to regulate the catch, use and trade of fish under the provisions of the Act. Marine turtles and other endangered marine fauna were protected by the 1993 Fisheries Regulation which prohibited fishing of turtles as well as possession of hawksbill or any other species of 'fish' which are considered endangered or threatened under international conventions or agreements (Muir, 2005). No reference is made to management or conservation of marine fauna, endangered or otherwise, in the draft MCU regulations that will enable the Fisheries Act of 2010 and that are discussed under Section 4.3 below.

Despite the lack of adequate legislation to protect endangered marine species and marine mammals, it appears that there exists a fairly strong focus on certain marine faunal species, such as dugongs and turtles, among the NGO, CBO and research community. Good collaboration is also apparent on a national level between NGOs coastal communities and authorities. September 2003 saw the establishment of the national Tanzania Turtle Committee. The aim of this committee is to conserve and manage marine turtles by formulating and implementing a National Turtle Recovery and Action Plan, as part of Tanzania's commitment as a signatory to the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-east Asia under the auspices of the Convention on Migratory Species. When established, the committee included representatives from mainland Tanzania, including the Fisheries Division, Environment Division, Marine Parks & Reserves Unit and University of Dar es Salaam; and from Zanzibar, from the Department of the Environment and Fisheries from Zanzibar.

3.5. Community Involvement and Collaborative Management in MCAs

3.5.1. Community-driven conservation

According to the research, it appears that most of the marine conservation initiatives in Zanzibar were either initiated by communities due to a concern over the depletion and degradation of resources or to conflicts of resource utilisation. In some areas, community involvement has been significant, to the point of driving conservation activities. Misali Island provides a good example of the in-depth and successful involvement of CBOs and NGOs in marine conservation. Prior to the establishment of PECCA, management of Misali Island was characterised by an intense involvement of community through MICA. Another example of strong impetus provided by local coastal villages includes Mnemba Island conservation initiatives.

The research also revealed a growing perception by local stakeholders of a decrease of meaningful involvement of community stakeholders in management of these MCAs. A perceived change in modalities of management of the MCAs by the Department of Fisheries Development over the last 5 years appear to have reduced the involvement of the broader coastal community group, a perception that is creating some disquiet among stakeholders. A greater effort is needed by the MCU to clarify roles and responsibilities, mechanisms for stakeholder involvement, and revenue sharing modalities if the extended conservation areas are to have any positive impact for coastal communities, fishers and other users of the marine environment.

Prior to looking at options for improving involvement of local communities and other stakeholders outside of government in MCA management, it is perhaps useful to outline the concept of co-management. Ruitenbeek et al. (2005) describe co-management as a situation in which some or all relevant stakeholders in an MCA, usually the local community, jointly manage a MMA with the conservation agency that has jurisdiction over it (2005). Co-management is a participatory and flexible management strategy that provides and maintains a forum for action on: participation, rule making, conflict management, power sharing, leadership, dialogue, decision-making, negotiation, knowledge generation and sharing, learning, and development among resource users, and government. It represents a shift away from centralized, top-down form of management towards joint management of marine resources.

Co-management refers to an arrangement between more than one player on sharing of the rights and responsibilities associated with a resource among a cross section of stakeholders often including government, communities, individuals, and NGOs. Such an arrangement usually does not pertain to shift ownership over the resource but serves rather to legitimize community involvement and respects the community's need for socio-economic development and use of their traditional rights, while maintaining government interest and concern for a given MCA.

Two types of co-management arrangements exist which may be instituted either formally or informally[4]:

Simple co-management - No specifically defined rules of how rights and responsibilities are shared. Instead only processes for defining the rules of sharing are fixed. For example, the arrangement may only state who is in charge of monitoring and who will enforce responsibilities, and that the costs and income are shared equally.

Adaptive co-management (ACM) – This arrangement goes further to include agreements on the review process that allow time to time change of the arrangements to adapt and reflect to the experience and new emerging conditions. For example where there are changes due to ecological, social or political uncertainties, operating rules may need to change too. The spirit behind adaptive co-management is strengthened through ongoing learning and negotiations.

Experience of co-management, and particularly with ACM within Tanzania have revealed promising results. The Tanga Coastal Zone Development Programme is an often-cited case study of successful ACM. Recent initiatives in the RUMAKI area involving the establishment and implementation of Collaborative Fishery Management Areas (CFMAs) are also yielding useful lessons in marine management.

3.5.2. Indigenous knowledge, traditional custom and marine conservation

Coastal communities in Zanzibar have long interacted with and depended on the marine environment for livelihood, sustenance and well-being. Unique customs and taboos have developed to ensure the productivity of these areas over time and the safety of those who use them. Masalu et al (2010) refer to Indigenous knowledge as the large body of knowledge and skills that have developed outside of the formal education system, where local culture and knowledge and institutions provide useful frameworks, ideas, guiding principles, procedures, and practices for effective development options, and for restoring social, economic and environmental resilience. Traditional management strategies that have served to protect the marine environment include:

- Taboos and beliefs restricting access to certain areas (i.e. reefs) in certain periods;
- Closed seasons, usually enforced by elders who determine and enforce the restrictions; and
- Restrictions on fishing gear (Masalu et al, 2010).

The modernization of fishing gear, vessels and methods, has led to a reduction of the application of old belief systems. In addition, current fishery and marine management approaches are failing to recognize or incorporate the important role of indigenous knowledge and traditional custom of coastal communities, or to incorporate provisions for traditional custom in marine conservation and management legislation (Akwilapo, 2007; Masalu et al, 2010). Communities also utilise customary laws and practices that bestow

[4] A more extensive discussion on co-management is provided in the mainland Tanzania report that serves as a point of departure for this report.

ownership rights that exclude outsiders. These practices were established over many years and it is critical that these are reflected in the law to encourage better management, and voluntary enforcement of the laws. Customary laws or practices, if consistent with the MPA laws may also form the basis for community support for MPAs, (Akwilapo, 2007).

A number of useful recommendations have emerged from a detailed examination of indigenous knowledge and tradition custom in fisheries and coral reef management in Tanzania. Of particular relevance to this study are suggestions to:

- Develop national strategies to support the use of indigenous knowledge in natural resource management, including the incorporation of indigenous knowledge systems into development programs;
- Formulate village bylaws to govern the sustainable utilization of marine resources and incorporate indigenous knowledge into these bylaws;
- Promote the combination of indigenous knowledge with scientifically developed and improved technology
- Involve elder fishers prior to the establishment of MMAs to identify their priorities and incorporate indigenous knowledge into the identification of MMAs and development of management options.

The consideration of traditional custom and indigenous knowledge will be of particular importance in the process to strengthen networks of MMAs in Zanzibar and to develop a national network system for the country as a whole. The development of guidelines for the incorporation of traditional custom and indigenous knowledge into marine conservation and management mechanisms (such as laws, regulations and management plans) by decision-makers, would prove useful.

3.5.3. Community involvement in the management of the MCAs

As will be discussed further below, the main mechanism for stakeholder involvement in marine conservation is currently within the individual MCAs. Communities at their village level elect representatives to form committees known variably in the literature as Village fishermen committees (VFC), Village Conservation Committee (VCC) or Fisheries Coordination Committee, (FCC). These bodies are involved at different levels of marine resource management that also includes enforcement of environmental laws and regulations. In some areas, consultation between MCA management and community members, a system of community sea and land patrols was created through a Village Patrol Group (VPG). Some MCAs have also established Advisory Committees which provide for greater involvement of different stakeholders in decision-making for the MCA management. The operational success of these bodies relies on regular communication and established processes of cooperation and experience of late appears to suggest a breakdown of these mechanisms.

Other examples of community involvement in marine conservation in Zanzibar have been largely through the support of donor initiatives. Lessons from such initiatives suggest that there is a need to try to disperse programme benefits across villages in a consistent and equitable way. There is also a need to recognise differences in local contexts, histories and

social structures and to work with existing structures (Levine, 2004). Structural relationships between the government and the external institutions or private sector stakeholders in Zanzibar has some useful lessons to draw from (i.e. through the Misali Island and Mnemba Island initiatives. These arrangements need to be built on and strengthened to ensure ongoing meaningful involvement of local stakeholders and other NGO, research and private sector representatives to both reduce conflicts around the resource utilisation in the MCAs and to take advantage of cost-sharing opportunities. Some options and suggestions for strengthening stakeholder involvement in marine conservation in Zanzibar are discussed in the sections that follow.

3.5.4. Community control of marine areas

Experience from elsewhere has shown the benefit of providing for increased jurisdiction over marine areas at the local level. For instance, Australia has successfully demarcated an area of three nautical miles is for control by States and Territories which has improved governance of the resources in these areas (Akwilapo, 2007). Ruitenbeek et al (2005), propose the establishment of a community territorial sea which would clarify and entrench the rights and responsibilities of coastal communities by establishing a, with explicit management rights conferred to coastal Shehias. This is a key point to consider, particularly given the nature of fisheries in Zanzibar in the broader Tanzania area where freedom of movement is a predominant feature in the fisheries landscape. A great deal of movement between areas is done by fishermen, between areas within Zanzibar waters, between Zanzibar and mainland, and between Tanzania and neighbouring countries. This includes traditional seasonal movement (i.e. during fish camping season as is experienced in Menai Bay with the influx of fishers during specific periods), as well as movement based on fish abundance, social relations, commercial trading etc. The frequent incidences of conflict occurring between local coastal fishers and “outside fishermen” over utilization of resources could be reduced through establishment of a stronger management and ownership rights and more insight is required into this issue to understand options for MMA management.

4. Policy, Legal and Regulatory Framework

Soon after the Zanzibar's revolution of 1964, all natural resources including fisheries were placed under state ownership. Thereafter a highly centralized management system was instituted based on a regime of open access. It was not until 1988 when a Fisheries Act (No. 8), was legislated based on a Fisheries Policy of 1985. In 1993 the Minister responsible for Fisheries issued the Fisheries Principal Regulation that declared the use of certain fishing gear such as bottom seine nets, dynamite and poisons to be illegal. Under the prevailing conditions of financial constraints, however, law enforcement progressively became difficult and harvesting of fisheries resources continued to be governed by the old regime of open access. Unregulated competition among fishermen led to rampant use of destructive fishing techniques in all waters of Zanzibar and mainland Tanzania.

4.1. Sector Policies and Strategies

This section discusses some of the key policy and strategy provisions guiding the governance of Zanzibar's marine resources and ecosystems. While very few of them refer directly marine conservation, or more specifically to development of networks of MMAs, some of the provisions can be seen to support better management of the resources as a whole.

4.1.1. The Constitution

Matters pertaining to the environment and conservation are not listed as Union Matters in the Constitution of the United Republic of Tanzania. Zanzibar therefore retains autonomy over such issues. The Constitution of Zanzibar, 1984 provides that every person has the duty to protect the natural resources of Zanzibar (Article 13). Article 23(2) provides that all resources in Zanzibar are jointly owned by the people of Zanzibar (Majamba, 2005).

4.1.2. Zanzibar Development Vision 2020 (ZDV 2020)

The key objective of the long-term development plan for Zanzibar, Vision 2020, is to eradicate absolute poverty in society. The first version of the Plan was developed over a 2 year period and adopted in 2000 but was never explicitly implemented due to the lack of an implementation framework. This first version of the Vision 2020 highlighted a number of objectives that are either directly or indirectly relevant to strengthening marine management and increasing the benefits of conservation of marine and coastal biodiversity. The document highlighted Zanzibar's wealth of coastal and marine resources and culture for the *Promotion of Sustainable Tourism* and promoted the utilization of tourism while protecting the environment, Zanzibar's culture and traditions.

The plan also recognized the *Promotion of Sustainable Fishing* as essential to ensuring the welfare of Zanzibari's and the continued contribution of fisheries to the GDP. The plan promoted the raising of awareness of the scenic value of marine habitats and ensuring ecological balance through establishment of community based management areas for marine resources and development of professional groups, joint-venture, partnership and cooperative associations relevant to the development of fishing activities.

The Vision 2020 was recently revised to fill in identified gaps and address new challenges and the revised ZDV 2020 was finalized in October 2011. While the revised ZDV touches on sustainable fishing, tourism and environmental management, it places less explicit emphasis on the importance of conservation of marine and coastal resources for economic development than its predecessor. Promotion of good governance and the Rule of Law is however strongly emphasized. Section 7 of the report highlights the imperative of accountability and transparency and outlines the government's intention "to improve and strengthen the systems of governance by creating the capacity for the government to effectively play its planning and regulatory role in influencing the allocation of resources in the public and private sectors, in a liberalized market environment and a truly democratic and pluralistic society" (RGoZ, 2011: 42).

4.1.3. Zanzibar Strategy for Growth and Reduction of Poverty or Mpango wa Kukuza Uchumi Zanzibar (MKUZA)

The Revolutionary Government of Zanzibar recently adopted the second Zanzibar Strategy for Growth and Reduction of Poverty (ZSGRP II or MKUZA II). It replaced the first MKUZA I, which lasted for three years (2007-2010). MKUZA II has three clusters. Environmental management is included in the second cluster on Wellbeing and Social Services which deals with such issues as education, health, water and sanitation, settlement, environment, safety nets and social protection, nutrition, sports and culture. MKUZA II recognizes that illegal fishing techniques, (such as spear fishing, drag netting and dynamiting) are having a negative environmental impact by destroying coral reef and mangrove habitats and promotes the need to diversify livelihoods by supporting seaweed farming small scale livestock and artisanal fisheries. Goal 4 of the strategy on *Improved Sanitation and Sustainable Environment*, highlights the issues of environmental degradation and Inadequate understanding of environmental issues and promotes key interventions that encourage afforestation and conserve marine ecosystems for sustainable fishing (RGoZ, 2011b).

4.1.4. The Fisheries Development Sector Programme (FSDP)

The Fisheries Sector Development Programme (FSDP) was designed as an integral part of the country's participatory processes and fits within the framework of the NSGRP (MKUKUTA II) of the URT and other development planning frameworks. The FSDP, prepared in December 2010, highlights the fact that law enforcement is weak due to low capacity to respond effectively to illegal fishing and trade practices and an ineffective institutional framework. The FSDP identifies the need to strengthen the legal and regulatory framework for the fisheries sector by increasing transparency, predictability, minimum discretion and resource

ownership within the legal and regulatory framework of the fisheries sector. The FSDP also highlights the need to strengthen the institutional capacity for effective development and management of the fisheries sector by implementing the Fisheries Policy of 2010 which provides for clear roles and responsibilities of stakeholders including private and public sectors.

In terms of environmental management, conservation and sustainable utilization of fisheries resources, the FSDP identifies the need for protection of ecosystems and resources from adverse environmental impacts resulting from land based and direct human activities as well as global climatic change. The importance of environmental impact assessment is highlighted as a tool to ensure sustainability of the resources and protection of the environment.

4.1.5. The Agricultural Sector Policy

There is no dedicated fisheries management or marine and coastal resource governance policy for Zanzibar. Provisions for fisheries management are dealt with as a sub-sector under the government's Agriculture Sector Policy (ASP) of 2000. Section 2.4 of the ASP, the Fisheries Sub-sector, recognizes the importance of fisheries in the economy and highlights 13 key sub-sector issues pertaining to fish catch, fishing vessels, acquisition of raw materials for fishers, industrial fisheries, misallocated credit facilities to reduce overfishing, fishing gear, conflict management, export of fisheries resources, aquaculture, storage facilities, economic status of fishermen, conservation and integrated coastal zone management.

Sections 2.4.2.12 and 2.4.2.13 on Conservation and Integrated Coastal Zone Management respectively, are particularly relevant. Degradation of marine and fresh-water environmental quality and a lack of a holistic approach in managing coastal zone areas to avoid user conflicts are identified as principal issues and underpin the Government's stated intentions to: i) arrest degradation, and conserve the quality of the marine and fresh water environment; and ii) facilitate co-management of coastal zone areas to ensure sound management practices and sustainable coastal environment.

The ASP emphasizes community participation in artisanal fisheries management throughout, promoting traditional fisheries management practices, conservation of the marine environment and the involvement of community groups and fishers associations to enforce relevant laws and regulations. To strengthen the institutional and legal framework for fisheries governance, the policy proposes the establishment of a Commission of Fisheries and a complete review of fisheries legislation. Since the adoption of the ASP, some revision of the fisheries legislation was undertaken as outlined in the following section. The policy also recommends the establishment of a special unit to co-ordinate proper mainstreaming of environmental norms into agricultural sector development activities.

4.2. Related Sectoral Policies

Other sectoral policies and plans that are relevant to marine conservation include the National Environmental Policy of 1992, the Forestry Policy of 1999; the Tourism Policy of 1992, and the National Land Policy of 1982 and National Land Use Plan of 1995 (currently under revision through the MACEMP Project).

4.2.1. National Environmental Policy of 1992 and Draft National Environmental Policy of 2012

The focus of the National Environmental Policy (NEP) of 1992 was on the conservation and development of environmental resources to ensure they are utilised in a sustainable manner. The policy emphasised compliance with ecological and biological principles and highlights the importance of improving capacity for environmental management and conservation. In view of a growing population and numerous new threats, challenges and opportunities to Zanzibar's natural environment since 1992, the RGoZ undertook to revise the environmental policy.

The main goal of the revised policy is to: "bring together all sectors responsible for environmental protection, conservation, management in the islands for a long-term integrated approach in tackling environmental pollution and degradation of natural resources." (DoE; 2012:iv). Importantly, Chapter 2 of the revised NEP acknowledges the inadequate enforcement of the numerous legal and regulatory mechanisms related to environmental and natural resources management and conservation in the areas of forestry, fisheries, and land use, agriculture and water resources. This chapter also highlights the important role of private sector and civil society in environmental governance, recognizing that the involvement of these stakeholders, is currently too limited.

4.2.1(i) National Protected Areas Board

Concern for marine and coastal biodiversity features strongly in the revised NEP. Chapter 2, (Section 2.6.2) highlights the importance and threats facing marine biodiversity. Section 4.4.6 of Chapter 4 of the revised NEP, outlines the issues, objective and implementation strategies for improving governance of biodiversity. This Section strongly promotes an integrated approach to ecosystem management, highlighting the need for an Integrated Coastal Zone Management system and the establishment and management of conservation and protected areas in both marine and terrestrial environments. Importantly, the Section introduces a key institutional opportunity for strengthening the linkages between marine and land-based protected areas in the provision for the establishment of a "National Protected Areas Board to deal with marine and forestry protected areas" (DoE, 2012:7). The provision calling for the development of a national biodiversity strategy and action plans could provide another useful mechanism for strengthening marine conservation in Zanzibar and in Tanzania as a whole.

4.2.2. Forest Policy (1996)

The Forest policy is one of the few sector policies in Zanzibar that effectively considers environmental concerns (DoE, 2012). The overall environmental goal of this policy is to protect and conserve forest resources including wildlife, flora and fauna and enhances the role of forest resources in maintaining soil and water conservation. Since conservation of mangrove forests is included within the provisions of this policy, it is therefore important to consider in the development of MMA networks as a mechanism for establishing, managing and linking other forms of MMAs.

4.2.3. Tourism Policy (2005)

The Tourism policy emphasizes the need for conservation and protection of the environment and sustainable utilization of the natural resources. The policy strongly supports sustainable tourism development that is consistent with best practices of environmental management. The Tourism policy directly recognises the importance of allocating specific areas for conservation purposes and recommends creation of a zonal system to encourage the establishment of the Marine Parks to strengthen management and sustainable tourism development.

While the policy stresses that tourism is a multi-sectoral industry that requires broad institutional collaboration and cooperation, the policy fails to recognise the marine conservation or fisheries authorities as important collaborators. Instead, the responsibility for plant and animal conservation is included under the Department of Environment. Despite this oversight, marine conservation and sustainable use features strongly in the policy. The policy recommends promoting low impact tourism activities over the consumptive and motorized activities such as the use of jet skis, water skiing, and parasailing. It also recommends the enactment of codes of conduct and visitor education to reduce potential cultural impacts and establishment of a research programme to monitor tourism impacts for better management.

Section 5.9 of the Tourism Policy recognises the value of critical or high-pressure natural areas in managed, protected systems for tourism. The Section also provides important guidance for land use of small offshore islets, recognizing their importance, sensitivity and value in terms of traditional use, marine conservation, scenery, aesthetics and exclusivity for upscale resort development. Section 5.9c states that tourism development on islets will be based on study findings of inter-disciplinary teams that conduct island assessments and recommended the most appropriate use.

4.2.4. National Land Policy (1982)

One of the key aims of the National Land Policy (NLP) for Zanzibar is to protect the interests of future generations by conserving soils, water, natures, forests and energy resources. The NLP is limited in its coverage of protection and conservation of marine resources and coastal areas as it was written at a time when tourism and environmental degradation in coastal

areas was uncommon. However, paragraph 3.5 provides for local ownership and management of resources by stating that: 'In fishing villages communal/clan lands extended seawards to the reef in that rights to use the beach and lagoon for processing coconut fiber, collecting shell-fish, trapping fish, and collecting other ocean products were also apportioned according to local customs'. This provides important recognition for customary ownership and use rights and should be considered if the decision is taken to demarcate a community territorial sea area as mentioned in Section 3.5.4 above.

4.2.5. National Land Use Plan (1995)

The National Land Use Plan (NLUP) for Zanzibar is currently under revision and is reportedly in the final stages of drafting[5]. The 1995 National Land Use Plan recognizes that agriculture forms one of the largest land consuming sectors in Zanzibar and considers the critical environmental issues relating to rapid increase of population; uncontrolled encroachment of urban settlement into fertile land for agriculture and water catchments; urban expansion without considering any integrated environmental regulations and guidelines; and problems of un-registered land parcels. The 1995 NLUP fails to promote land zoning (DoE, 2012).

4.2.6. Policy for Allocation and Use of Zanzibar's Small Islets (1994)

The Policy for Allocation and Use of Zanzibar's Small Islets was developed in 1994 for guidance on tourism investment on small islands. The policy fell under the mandate of the Integrated Planning Unit of the Commission for Lands and Environment. It is under this policy that exclusive use of Mnemba Island was guaranteed to Archers Ltd by an agreement with the Ministry of Information, Culture, Tourism and Youth in 1989. The division in mandates for areas such as small islets, that are important to marine conservation, and marine conservation and management (which falls under the Fisheries Department), is an issue that needs to be addressed. Integration and cooperation among such sectors and the recognition of the importance of these areas to resource users such as fishermen, is essential for the effective management of marine areas.

4.2.7. Zanzibar Disaster Management Policy (2011)

The focus of the Disaster Management Policy is to reduce disaster risk and to support livelihoods. The policy highlights the need to develop national capacity to coordinate and collaborate on comprehensive disaster management programs among the principal players at all inter-sectoral levels. Issues discussed in the policy that relate to marine conservation include erratic rainfall patterns, food shortages, marine accidents, fire outbreaks, terrestrial and marine degradation, depletion of mangrove forests, and waste management.

[5] The draft revised national Land Use Plan (2012) was unfortunately not available for review at the time of writing

4.2.8. Draft Integrated Coastal Management (ICM) Strategies and Action Plan

The draft National ICM Strategies and Action Plan for Zanzibar was formulated in 2009. The objective of the document is to formulate basic ICM principles based on Zanzibar's policies as well as international policies ratified by the RGoZ. The draft Strategy describes and analyses the ecological, economic, social and legal context in Zanzibar's recommends steps to support the ICM process to bring about conservation and protection of the coastal zone (DoE, 2009). The draft ICM Strategies document defines the coastal zone for Zanzibar as all islands of Unguja and Pemba, small islets, internal waters and twelve nautical miles of the territorial sea of Zanzibar.

A number of issues are highlighted within the draft ICM Strategies document under 6 main Topic areas. Many of the issues and the related strategies to address them, both directly and indirectly pertain to marine conservation and strengthening governance of marine conservation areas. Topic 2, Coastal and Marine Habitats, is particularly relevant. Issue 2 of Topic 2 deals with destruction of Marine Habitats and proposes two mitigating strategies with a number of interventions: i) To control and manage sustainably utilization of marine resources; and ii) To protect marine endangered, rare and threatened species. Key interventions suggested include:

- Establishing an effectively enforcement mechanisms for existing legislations.
- Enhancing collaboration between technical and legal institutions.
- Organising outreach programs for communities on fisheries-related issues, policy and legislation.
- Establishing coral reef restoration programmes on affected areas.
- Strengthening patrol activities in fishing grounds to ensure compliance of fisheries legislations.
- Establishing an environmental tribunal to deal with fisheries and other environmental-related issues.
- Enhancing community capacities to monitor and evaluate marine resources for better management.
- Establishing/strengthening fisheries committees to sustain integrated management of fisheries.
- Promoting establishment of marine controlled areas (core zones).
- Establishing monitoring mechanisms of marine ecosystems.
- Strengthening institutional capacity responsible for coastal and marine resources.
- Undertaking an inventory of species diversity, abundance and distribution.
- Reviewing species conservation laws and legislations.
- Ensuring information on incidental catches of the species is among the information reported in observer program.
- Initiating and enforcing by-catch excluder devices in fishing nets to reduce incidental catches of turtles and dolphins.
- Promoting awareness programmes on specific species.

To strengthen the institutional capacity to manage marine and coastal issues in an integrated way, the draft ICM Strategies document suggests 5 different levels (See Figure 9 below):

Level 1: Zanzibar Steering Committee on Integrated Coastal Management (ZSC-ICM) - The Chairperson will be the Principle Secretary of the Ministry responsible for Environment. The Director responsible for the Environment shall be the Secretary. Members of the ZSC-ICM will be directors of relevant sectors, representatives from the local authorities and the private sector and/or CSOs.

Level 2: Zanzibar ICM Unit (Zanzibar ICM Secretariat) – This will fall under the Department responsible for Environment and the Director of Environment will lead the Unit and shall appoint a Coordinator and other members of the ICM Unit.

Level 3: Zanzibar Technical Committee on Integrated Coastal Management (ZTC-ICM) – The ZTC-ICM is chaired by the Director of Environment and comprises members of sector experts or professionals from all relevant sectors. The Secretary of the ZTC-ICM is the Coordinator for the Zanzibar ICM Unit.

Level 4: District ICM Committees - District ICM committees will comprise members from relevant sectors at the district and local government authorities level. The chairman of the district ICM committee is an Administrative Officer of the District while the secretary might be any officer collectively appointed by the members.

Level 5: Community groups (Shehia ICM committees and sector committees) - Five sector groups (sector committees) will be established in each Shehia in addition to Shehia council. Sector groups include environment, fisheries/mariculture, seaweed farming, agriculture/livestock and forestry/tourism.

More elaboration and clarification is needed for the proposal to introduce an environmental tribunal. Challenges on staffing, knowledge, resources, finance etc. should be well resolved prior to the establishment of an environmental tribunal. It could be flexible, cheap and time saving where matter of environmental conflicts being reframed and resolved within the existing legal system (e.g. regional courts or land tribunals or high court).

The ICM Strategies and Action Plan will provide an essential mechanism for strengthening networking of MMAs in Zanzibar. As is discussed in Section 7 on Networking of MMAs in this report, and in the synthesis report that serves as a point of departure for this report, ICM provides an important overarching framework for the network approach and facilitates integration among sectors and levels of government and between government and other relevant parties. Adoption and implementation of the ICM strategies and Action Plan will therefore be an essential step to take.

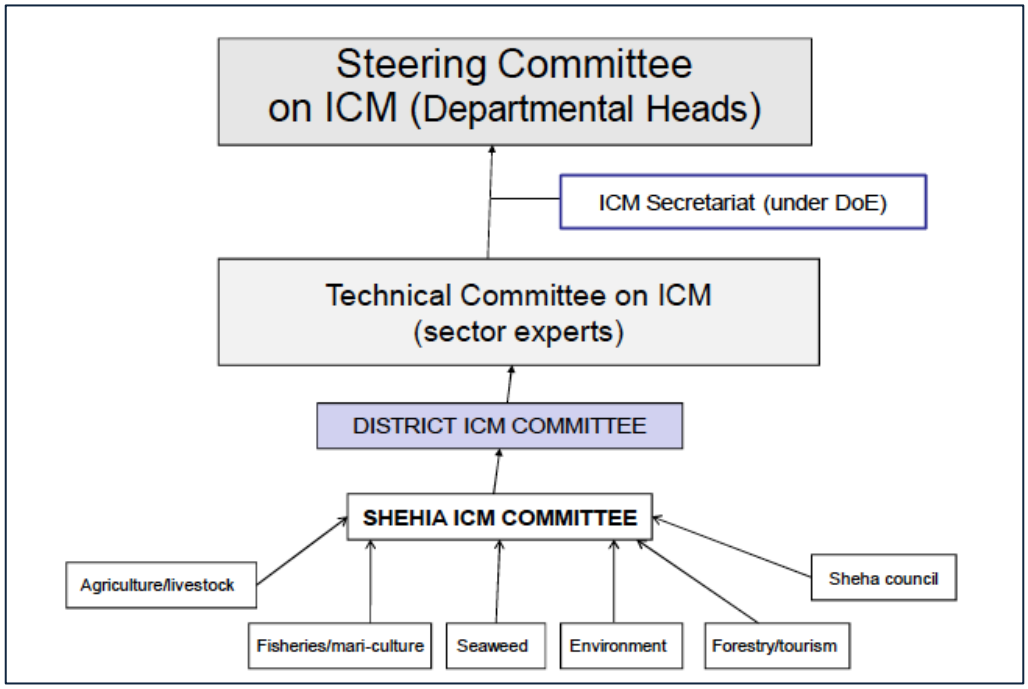


Figure 10: Proposed Zanzibar ICM Organogram (from DoE, 2009)

4.3. Laws and Regulations

4.3.1. Laws covering the Territorial Sea and Exclusive Economic Zone

The Territorial Sea and Exclusive Economic Zone Act (3 of 1989) and the Deep Sea Fishing Authority (Amendment) Act (17 of 2007), provide the legal basis for enforcement activities in the broader Exclusive Economic Zone (i.e. beyond the territorial sea of the URT) and cover both mainland Tanzania and Zanzibar. These are discussed further in the synthesis report covering the system of MMA networks for the URT. Management of marine resources within the territorial sea of each side of the Union falls within the non-Union legislation.

According to the existing laws in Zanzibar, the entire sea is publicly owned and every individual has a user right. Traditionally however, marine environments adjacent to any village are under the use interest and monitoring of that village. Such traditional, community-based systems have proven susceptible to external market pressures and local pressures from increased populations and resource users and have collapsed into open access regimes. Zanzibar's legal, regulatory and institutional framework for natural resource management in general and marine protected area management in particular, has gone through some substantive changes over the years. The laws and regulations governing the management of marine managed areas are very new or in draft form[6] and institutional changes are still under way.

[6] At the time of writing, the draft Fisheries regulations that would enable the operationalization of the MCU had yet to be finalized and adopted.

The following section describes some of the main legal and regulatory tools that pertain to conservation of marine and coastal areas.

The principal law governing the management of marine ecosystems and resources in Zanzibar is the Fisheries Act (No 7 of 2010). The overarching framework law governing the use of natural resources in Zanzibar is the Environmental Management for Sustainable Development Act (2 of 1996). Other environment-related legislation that may have bearing on marine conservation includes the Establishment of Zanzibar Nature Conservation Areas Management Unit Act (10 of 1999); and the Forest Resources Management and Conservation Act (10 of 1996). Laws and regulations governing private investments in tourism hotels and activities, tax regulations, and the laws pertaining to the lease and development of land on islands and along the coast are also of particular importance to marine conservation but are not directly harmonised with the fisheries/marine conservation legislation.

4.3.2. The Fisheries Act (Act 7 of 2010)

4.3.2(i) Scope of the provisions

The enactment of the Zanzibar Fisheries Act (Act 7 of 2010), repealed the existing Fisheries Act (1988) and introduced stronger provisions for the management and development of fisheries in the internal and territorial waters of Zanzibar (RGoZ, 2010). The Act delineates the mandate of the Zanzibar Department of Fisheries as the area that lies within Zanzibar's territorial waters and internal waters. The territorial waters include the ocean area measured from the mean low water line along the coast of Zanzibar and the adjacent islands to a distance of twelve nautical miles. The internal waters are defined as the waters on the landward side from the baseline of the territorial waters and the waters lying equidistant between Tanzania Zanzibar and Mainland Tanzania (RGoZ, 2010).

The mandate for management of resources within the EEZ remains somewhat unclear in the new Fisheries Act. No reference is made to the EEZ act or DSFA Act and some of the provisions in Fisheries Act include the EEZ as falling within the mandate of the Department of Fisheries. For instance, Section 10 (1) provides that: "The Minister may, by order published in the Gazette, declare any area in the internal waters, territorial waters or Exclusive Economic Zone to be a controlled area in relation to all fish, fish products or aquatic flora, or in relation to any species or kinds of fish, fish products or aquatic flora." Section 34 (1) of the Fisheries Act states that: "The Minister may make regulations for the better carrying out of the purposes of this Act; and without prejudice to the generality of the foregoing make regulations:… (c) establishing the conditions to be observed by foreign fishing vessels, which are within the internal or territorial waters or Exclusive Economic Zone of Zanzibar;… (r) prohibiting, regulating or controlling the activities of foreign fishing vessels within internal waters territorial waters and Exclusive Economic Zone of Zanzibar." (RGoZ, 2010:13).

The Fisheries Act provides a number of provisions for protection of the marine ecosystems and resources of Zanzibar. The Act does not particularly promote an ecosystem approach to

marine conservation and management but rather enables the establishment of controlled areas primarily as a fisheries management tool. Part III of the Act covers the "Development and Control of the Fishing Industry" and in Section 9(1e), enables the Director to impose by order or as a condition of a license, a number of measures for the proper management of fish and fishing industry including the establishment of marine parks and sanctuaries for any purpose whatsoever.

4.3.2(ii) Provisions pertaining to marine conservation

Part V of the 7 main Parts of the Act contains provisions for "Conservation Measures" and enables the establishment of the Marine Conservation Unit with the responsibility of coordination towards sustainable management of controlled areas established under the Act (Section 19). Part V also covers a number of fisheries prohibitions, powers of enforcement officers and guidance for processing of offenses. The conservation-related provisions could be strengthened to provide more specifically for conservation measures within protected or controlled areas rather than simply for fisheries-related activities. For instance the provisions could be improved by providing definitions for the different types of conservation area.

While a definition is provided in Section 3 for controlled areas (any portion or area of internal or territorial waters declared under the Act to be a park, reserve, sanctuary, protected or conservation area or otherwise restricted for any purpose whatsoever), no clarification is provided for the different types of controlled areas such as marine conservation areas, sanctuaries, or parks, nor for the activities allowed within these areas. Similarly, a definition is given for a "closed period" (any period during which, in relation to any species or kind of fish, fish product or aquatic flora, such fish, fish product or aquatic flora, as the case may be, may not be captured, killed, injured, gathered or collected by any means whatsoever) but no provisions are currently included in the Act (or in the draft regulations that will enable the Act) for closed periods.

The Act provides a clear outline of a number of restrictions of fishing gear (i.e. Section 17 prohibits the use sale, possession or importation of beach seine, weirs and spear guns, and electrical and diving devices); prohibited methods of fishing (Section 20) and other activities including possessing or using explosives or poisons, fish nets or traps of an illegally-sized mesh. The powers given to an authorized officer to enforce the provisions of the Act under Section 23, are also fairly strong in that they allow for enforcement activities in the absence of a warrant, including boarding and inspection of vessels, documentation and products, arrest of offenders and seizure of possessions which were used in the offense. The effectiveness of the implementation of these provisions are however, currently weak as will be discussed in subsequent sections in this report.

4.3.2(iii) Gaps and challenges

One of the key challenges of the Act is the high degree of discretionary power granted to authorities under the Fisheries legislation and the lack of provisions for processes of stakeholder involvement or consultation in decision-making. For instance, Section 9 empowers the Director to impose by order or as a condition of a license a number of

measures for the management of fish and fishing industry in the absence of consultative processes. In terms of the declaration of controlled areas, Section 10(1) enables the Minister to declare any area in the internal waters, territorial waters or EEZ to be a controlled area. Section 33 of the Act empowers the Minister to exempt any person or organization from any of the provisions of the Act or of any regulation made thereunder. While this provision is allowed "for the purpose of public interest" (RGoZ, 2010:13), no further clarification is given to the circumstances under which this could occur. The neglect of provisions supporting the principles of good governance relating to participation, transparency and rule of law, undermines the enforceability of the Act as well as the spirit of local management of marine resources and leaves implementation of the legislation open to potential abuse by the authorities.

This weakness in the Fisheries Act could be addressed to some extent through the enabling regulations if provisions were made for greater representation of stakeholders, more meaningful stakeholder participation and transparency in decision-making. Clarifications on the definitions of the different types of controlled areas and the purpose of each type or specific activities allowed in the different types of controlled areas would help to strengthen management arrangements. While the draft regulations had yet to be finalised during the period of research for this report, a few comments can be made of the current draft regulations[7].

4.3.3. Draft MCU Regulations

4.3.3(i) Status and scope of the Draft Regulations

The Fisheries Act of 1988 was enabled by the principle Fisheries Regulations of 1993. The 1988 Act was repealed by the Fisheries Act of 2010 and new regulations are under development. The finalisation of the draft regulations, to be entitled "The Marine Conservation Unit Regulations" (hereafter referred to as the draft MCU Regs) have been pending for an extended period. The draft has reportedly gone through a process of a number of internal revisions and is currently awaiting finalisation by the Department of Fisheries Development before approval by the Minister. The majority of stakeholders interviewed for the research had not yet seen the draft regulations indicating that the drafting and approval process has not been fully participatory. It is assumed that until such time that the draft Fisheries regulations are approved, the Fisheries Regulations from 1993 will remain applicable.

Once finalised and adopted, the draft MCU Regs will enable the establishment and operation of the Marine Conservation Unit. Section 12 of the draft MCU Regs repeals the existing Orders and Rules[8] that were adopted to enable the existing conservation areas and that included details on the landward extent of the area (typically from the high water mark to

[7] A number of different drafts of the regulations were provided to the consultants. The most current version was dated 11 May 2012 and entitled 2nd Draft MCU Regulation 2011 plen. The comments of this report therefore relate to this most recent draft.

[8] These include: Order (L.N. No. 43 of 1997); Order (L.N. No. 42 of 2000); Rules (L.N. No. 16 of 2001); Order (L.N. No. 47 of 2002); Order (L.N. 68 of 2002); and Order (L.N. No. 56 of 2005).

points identified in the marine area), the communities included in or affected by the conservation area, the activities allowed or prohibited within the area and the fee structure for such activities. Schedule A of the draft MCU Regs provide for the modification/formalisation of the boundaries of the following controlled areas: i) Menai Bay Conservation Area (MBCA); ii) Mnemba - Chwaka Bay Marine Conservation Area (MIMCA); iii) Pemba Channel Marine Conservation Area (PECCA); iv) Tumbatu Marine Conservation Area (TUMCA); v) Changuu-Bawe Marine Conservation Area (CHABAMCA); and vi) Kojani Marine Conservation Area (KOMCA). The draft MCU Regs also outlines the fee structure for the activities undertaken within the controlled areas.

4.3.3(ii) Provisions to enable the MCU

The responsibilities of the MCU as outlined in the draft MCU Regs indicate that the Unit has the primary responsibility for developing, managing, regulating and implementing all activities of the controlled areas established under the Fisheries Act and to do so under the advise of the Director. If a controlled area is managed under contract by any person or institution other that the Unit, the MCU is required to ensure that all provisions of such a contract are implemented accordingly including submission of relevant reports to the Unit and any other relevant institution (Section 6). No provisions are given about the process for identification and establishment of controlled areas. Section 4(2f) of the draft MCU Regs requires that the Coordinator of the MCU prepare long term management plans for controlled areas being managed by the Unit and their implementation annual plans, budgets and progress reports. Draft General Management Plans or GMPs have been developed for 3 of the MCAs[9] including MIMCA, MBCA and PECCA. These have yet to be finalized and formally implemented.

Section 8 of the draft MCU Regs establishes that the MCU shall have its own bank account and signatories of the account and provides guidance for sources of funds – ostensibly for operationalization of the Unit, including: a) funding from the Government for the implementation of the Unit activities; b) voluntary payments, donations or bequests; c) all proceeds from user and entry fees, tourism oriented activities or proceeds from other charges imposed by the Unit in respect of the use or development of, or any other activities, in any controlled area; and d) any other sum or property which may be vested in the Unit or controlled area as a result of performance of its functions. Section 8(2e) establishes the percentage breakdown of revenues to be shared between the government and community from the proceeds from user and entry fees as per provision 8(2c) such that:

a. **seventy percent** (70%) is allocated to operational costs of the controlled areas including costs for executive committee meetings, patrols and administration activities; and
b. **thirty percent** (30%) is allocated to supporting community activities.

The provisions under Section 8 mentioned above, provide a preliminary basis for collection and allocation of funds for operationalization of the MCU and for proceeds from conservation to benefit the communities. The provisions do however, require elaboration to

[9] A draft overarching Management Plan for the MCU was reportedly developed under the MACEMP project but was not available at the time of researching.

establish a transparent process for revenue collection, allocation and spending and to allow for greater participation in decision-making by the representative members of the relevant communities and greater accountability of dissemination and spending of the funds.

4.3.3(iii) Degree of autonomy for the MCU

The degree of decision-making autonomy of the MCU according to the current draft Regs is low. This is evident in numerous provisions. For instance the generation and collection of revenues from the controlled areas are to be managed by the Unit as directed by the Director (Section 3e). Furthermore, the MCU is required to perform any other obligation as may be directed by the Director for the benefit of the Unit or controlled areas (Section 3p). In addition, while the MCU Coordinator is answerable to the Director for all the functions of the management of controlled areas and has authority over all employees of the Unit (Section 4(1), managers of each controlled area are appointed by the Director (Section 5). Provisions (3) and (4) of Section 8 further hint at the lack of decision-making autonomy by the MCU in that the Director shall ensure that the Coordinator maintains such accounting records as required in conformity with Government financial regulations; and the Coordinator requires the approval of the Director to expend other funds from the MCU account for the development of a controlled area or for any purpose relating to the functions of the Unit. While this lack of decision-making autonomy is understandable given the relatively new status of the MCU, effective management of the different conservation areas will ultimately require a management body that is able to work efficiently respond to a multiplicity of issues relating not only to fisheries, but also to tourism, coastal development, marine transportation, and other marine resource uses.

Once adopted, the draft MCU Regs will provide a useful mechanism for enabling stronger marine conservation in Zanzibar. The current regulations will however, need to be strengthened to bring them in line with good governance principles of meaningful and representative stakeholder participation transparency, accountability, and consistent application of the rule of law. While the current draft of the MCU Regs includes some provisions to promote participation by local communities in management, the overall approach is similar to the top-down approach taken in the Fisheries Act. The regulations once again defer a high degree of discretionary power to the authorities and provide few mechanisms for meaningful local-level decision-making. This is most evident in provisions for the composition and functioning of the MCU in that the Coordinator of the Unit is appointed by the Director and approved by the Principal Secretary and other members include “any other officer or any local community member appointed by the Director.” (RGoZ 2012a:2).

4.3.3(iv) Involvement of local communities

Section 6(1) of the draft MCU Regs supports the involvement of selected local community representatives in the management of each controlled area by enabling the establishment of a fishermen’s executive committee (FEC) for each controlled area. Members of each FEC comprise the chairmen of the Shehia Fishermen’s Committee (SFC) for each shehia within the controlled area (which, in turn, are comprised of fishermen from the shehias), and “any other staff or officer to be appointed by the Director” (FGoZ 2012:7).

This proposed mechanism for involvement of community members in the management of the controlled areas is limited by the lack of representivity of the broader coastal community and wide array of users of the marine ecosystems. According to the draft MCU Regs, the FECs and SFCs are comprised solely of fishermen. Furthermore, the draft MCU Regs require that the manager of each controlled area take up the position of the secretary of the FEC for that controlled area. Given that the manager is appointed by the Director, this reduces the ability of each FEC to elect their own representatives.

The Involvement of seaweed farmers (who are predominantly women), is only nominally allowed through Section 7(6) which provides for the establishment of seaweed farmers committees in each shehia which "shall participate in the management of the Unit only when required by the Coordinator, the Director or the Principal Secretary[10]" (RGoZ, 2012a: 8). No clear process or mechanism is provided in the draft MCU Regs for community or broader stakeholder involvement in identification and development of new controlled areas or in the modification of existing controlled areas.

Such involvement is essential to addressing the many different pressures facing the marine ecosystems from diverse activities such as tourism, marine transport, coastal development, deforestation and so on. While some mechanisms for community involvement (i.e. MCA management and advisory committees) are contained in some of the Orders and Rules establishing the existing MCAs, these will be repealed in the adoption of the draft regs and will therefore no longer apply. Thus the draft MCU regulations, could be strengthened to allow for better participation of a greater diversity of stakeholders and user groups from different sectors and interests.

4.3.3(v) Provisions for stakeholder engagement

Another indication of the top-down approach to management of the controlled areas is inherent in the absence of a stakeholder engagement process in implementation of Sections 10 and 11 that enable: i) the Principal Secretary to, for the public interest, exempt any person or organization from all or any of the provisions of the Regulations or any rule order made under the Regulations; ii) the Director, in consultation with the Principal Secretary, in the interests of science or research, to exempt any person or organization from all or any of the provisions of the Regulations or any rule or order made under the Regulations; iii) the Minister to make any rule or order for better carrying out the provisions of the Regulations or anything related to the Unit or any controlled area; and iv) the Director, subject to the approval of the Minister, to amend the Regulations. The lack of a mechanism to ensure such a participatory process in the implementation of the above provisions has the potential to further disempower local stakeholders.

[10] In one of the versions of the draft MCU Regs, this provision for the establishment and involvement of seaweed farmers was removed completely. It is advisable that some provision is made for greater involvement of members of the coastal communities other than fishermen.

4.3.3(vi) Need for a Board of Trustees

A final aspect of the draft MCU regulations that will prove essential in the successful and efficient management of the controlled areas is the establishment of an overarching Board of Trustees that is comprised of representatives of relevant sectors, the research community, NGOs, the private sector and coastal communities. The role of such a Board will be to oversee the management of the MCU and thus the different controlled areas, and to ensure that the wide range of issues, opportunities and threats facing marine conservation in Zanzibar are dealt with in an integrated and effective manner. The establishment of such a Board is not included in the current draft MCU Regs and should be an essential aspect of the implementation of the MCU.

4.3.4. Forest Resources Management and Conservation Act (No. 10 of 1996)

The Forest Resources Management and Conservation Act includes provisions for the conservation of coastal and marine habitats and species including mangrove forests and species such as dolphins, whales and porpoises in coastal territorial waters. The provisions of the Act strongly support community management of forest resources. For instance, Section 33 of the FRMCA provides for the development of agreements among relevant authorities, local residents or other persons for the integrated management of Forest Reserves with other land areas and marine areas in the vicinity. Section 34 that follows in the Act, provides for the formal establishment of Community Forest Management Areas that are managed by the local communities by way of a community forestry management association (CoFMA) with assistance from the Forest Administrator.

Any efforts to strengthen the integration among sectors for stronger marine conservation and management should work to harmonise the provisions of the Forest resources Management and Conservation Act, and that of the Fisheries Act. Institutional cooperation is essential between these two agencies. Adopting a network approach to managing the marine areas within Zanzibar, will similarly require closer cooperation among these two agencies.

4.3.5. Environmental Management for Sustainable Development Act (Act 2 of 1996)

4.3.5(i) Scope and provisions

Much of the Environmental Management for Sustainable Development Act (EMSDA) pertains to improving management and conservation of Zanzibar's marine ecosystems. The Act strongly promotes integrated coastal area management, community involvement and harmonisation among sectors. Significantly, Part VII of the EMSDA forms the legal basis for the establishment of a protected area system in Zanzibar and is a key provision for

establishment of a system of MMA networks in Zanzibar. According to Section 71 of the Act, the purposes of this system are:

a) Preservation;
b) Sustainable utilization by residents in and near the protected areas;
c) Propagation of genetic resources for conservation in other areas;
d) Education;
e) Management of biological diversity;
f) Scientific research; and
g) Environmentally sound tourism and recreation.

Section 72 (1) of the Act provides a list of criteria for inclusion of areas in the national protected areas system. These include: i) richness of biological diversity; ii) uniqueness of biological resources at species, community and ecosystem levels; iii) representation within the area of a variety of Zanzibar's ecosystems; and iv) diversity of uses for its component resources.

Section 73(1) of the Act deals with the category of protected areas of significant importance. Six different categories of protected areas are specified including:

h) controlled area;
i) reserve;
j) sanctuary;
k) park;
l) conservation area; or
m) other category defined in rules made by the institution responsible for the national protected areas system.

The EMSDA also includes sections on general environmental obligations, administration, planning, EIA, control and management of specific environmental threats, protected areas and biological diversity, and miscellaneous provisions. The activities which may impact directly on marine and coastal ecosystems and which require the development of an Environmental Impact Statement (EIS) include Development of a port, harbour or marina, land reclamation, developing of hotels or resorts of 100 beds or more, development of aquaculture operations, development in environmentally sensitive areas, including forests, mangroves, small islets and water catchments, and degazettment of an existing area protected under the laws of Zanzibar. The Environment Act is thus a key piece of legislation governing both the threats facing marine ecosystems in general and the more specifically, the management of the protected area network system in Zanzibar.

The EMSDA vests the power to oversee the implementation of the provisions of the Act in seven major institutions, one of which is Institutions Responsible for National Protected Areas Systems (section 70). The administration and final decision-making authority on environmental matters in Zanzibar is vested in the Special Committee of the Revolutionary Council on Environment led by the Chief Minister (or a representative), members of the Committee are to be appointed by the President (Majamba, 2005).

4.3.5(ii) National Protected Areas Board

A provision in the EMSDA that will prove very important for formalising the network of marine protected areas in Zanzibar is Section 80, which enables the establishment of the National Protected Areas Board (NPAB). The NPAB will be the institution responsible for the national protected areas system in Zanzibar and is responsible for:

(a) formulating, advising and coordinating the implementation of the policies of the Government on protected areas;
(b) recommending to the Minister responsible for the national protected areas system those areas, which are suitable for national protected area status;
(c) approving management plans for national protected areas; and
(d) designating the appropriate lead institution to manage a national protected area.

The membership of the NPAB according to Section 80, involves representatives at the level of Principal Secretary from different sectors including Forestry, Fisheries and marine resources, Environment, Tourism and Finance. Financing of the national protected areas system in Zanzibar is envisaged through the establishment of a National Fund for Protected Areas Management (Section 87). While the NPAB and associated National Fund have yet to be established, they provide useful legal provisions that could be called upon for use in establishing the system of networks of marine managed areas in Zanzibar. Both the Fisheries and Forestry Acts mentioned above have provisions for protection of habitats for conservation and sustainable use purposes. While these deal with specific sites, the Environment Act is aimed at governing the whole national system of protected areas.

4.3.6. Other legislation relevant to marine conservation

4.3.6(i) The Establishment of Zanzibar Nature Conservation Areas Management Unit Act (No. 10 of 1999)

The Establishment of Zanzibar Nature Conservation Areas Management Unit Act of 1999 (ENCAMU) enables the establishment of the Zanzibar Nature Conservation Areas Management Unit (Section 4). The main purpose of the Unit is to conserve Zanzibar's terrestrial aquatic or marine ecosystems including their indigenous plants or animals through the establishment and management of nature conservation areas. The provisions of the ENCAMU Act pertains directly to the conservation of marine areas and resources and also to the mandate of the MCU. The ENCAMU Act defines a nature conservation area as "any area of land or water designated for nature conservation and shall include any national protected area, any controlled fishing area designated under the Fisheries Act 1988 and any marine sanctuary or other nature reserve established under the laws of Zanzibar" (RGoZ, 1999:1). The Act therefore enables the development of an umbrella body for conservation in Zanzibar, the Zanzibar Nature Conservation Areas Management Unit (ZNCAMU), as a semi-autonomous body corporate. Implementation of the ENCAMU Act is envisaged to fall within the mandate of the National Protected Areas Board which, according to Section 7, would oversee the activities of a Chief Conservator who in turn would manage the ZNCAMU. Should the concept of the NPAB come to fruition, the mandates and operationalization of the Nature Conservation Areas Management Unit and that of the Marine Conservation Unit

will need to be harmonised. The ZNCAMU could provide a useful framework for the MCU to work within or collaborate with to strengthen conservation and ecosystem management in Zanzibar in general.

4.3.6(ii) Zanzibar Investment Promotion Act (1986)

The Zanzibar Investment Promotion Act (1986) is relevant to marine conservation in that it requires investors to minimize pollution by providing acceptable sewage disposal arrangements and ensuring that the chemical, biological substances and agents under their control pose no health risk. The Zanzibar Nature Conservation Trust (ZNCT) supports the government in undertaking conservation activities through formal agreements.

4.3.6(iii) Ancient Monuments Preservation Decree of 1927 (amended 1971, 2002)

Zanzibar has a rich and fascinating cultural heritage that is integral to the lives of it's people and is also an important asset to Zanzibar in terms of its value as a tourism draw card. Coastal and underwater cultural heritage (such as ship wrecks and other sites of cultural significance) are underdeveloped from a tourism asset perspective and are not effectively covered by the regulatory framework[11]. The principal legislation relating to monuments and sites on Zanzibar and Pemba is the Ancient Monuments Preservation Decree of 1927, (amended 1971, 2002). This law protects historical sites and monuments and other related sites, and regulates and controls research into the heritage under its authority. It allows the Minister to "declare any monument or antiquity to be a protected monument or antiquity under the Decree" by notice in the Gazette and also to prohibit construction in close proximity to a protected site and to compulsorily purchase a protected monument or antiquity that is in danger of destruction or decay. Where there is no owner, the Minister may assume guardianship over the monument or antiquity (Moon & Blanchard, 2006).

Underwater heritage is not specifically referred to in the Antiquities legislation. If underwater sites are gazetted, the law as it exists could be assumed to cover the sites. Without gazetting, the Department of Archives, Museums and Antiquities (DAMA) has no basis for action in law to protect these properties (Moon & Blanchard, 2006). While Gazettement of these sites is important, demarcation of gazetted underwater sites should be avoided unless effective monitoring and enforcement of the sites is possible, particularly if the sites that are not well known or frequently utilized in a non-extractive way. That said, the use of the underwater cultural heritage resources that are located in the MCAs by the tourism industry is low and these assets represent good of potential for improvement and revenue generation. Through effective collaboration and revenue sharing between the MCU, DAMA and the private sector (i.e. dive tour operators), such sites could be well protected and utilized and could provide an additional revenue source that could be used for improving management of these sites.

[11] At the time of researching, an issue had arisen whereby the Zanzibar Ports Corporation had authorized the removal of historical wrecks, reportedly to remove any obstructions to marine transport channels. The DAMA was not consulted prior to the removal and concern was mounting of the further loss of additional valuable cultural assets. The issue signifies the need for greater clarification of mandates and coordination between the DAMA, the ZPC and the MCU.

4.3.6(iv) Various Land-use Management Decrees

A series of decrees are in place that pertain largely to land-use management but are either directly or indirectly related to marine conservation. These include the: i) Zanzibar Land (Distribution) Decree (1966) that makes any land grant conditional upon good husbandry and soil conservation; ii) Land Alienation Decree (Cap. 94); iii) Town and Country Planning Decree (Cap. 85) that requires adherence to town plans and prohibits construction close to the beaches; iv) Public Land Decree (Cap. 93); and the v) Removal of Natural Produce Rules deals with collection of stones, sand, gravel and rocks that require a permit.

4.3.6(v) Various Natural Resource-use Management Decrees

These include the: i) Forest Reserve Decree (Cap. 120) and woodcutting Decree (Cap. 121) provide for the establishment of forest reserves and the protection and management of forest and bush; ii) Wild Animals Protection Decree (Cap. 128) provides for the protection of wildlife species of Zanzibar (including the green turtle and marine mammals).; and the Wild Birds Protection Decree (Cap. 129) that prohibits hunting and trade of many bird species throughout the year, but allows hunting from 1st October to 31st March.

4.4. Issues and Recommendations for Strengthening the Policy, Legal and Regulatory Framework for Marine Conservation in Zanzibar

4.4.1. Weaknesses and gaps

The Sections 4.1 4.3 above has described a few of the key policy, legislative and regulatory tools that are either in place or proposed that may directly or indirectly impact marine conservation in Zanzibar. While the policies and laws cover some of the key aspects of fisheries, natural resource regulation and environmental protection, implementation and enforcement of the laws are often weak and erratic. For instance, as mentioned in the introduction, the use of destructive fishing techniques is a significant issue in Zanzibar. These practices have been banned by the Fisheries Act since 1988, but still occur on a wide scale. Some practices such as spear fishing, are illegal according to the law but local fishermen and some tourism operators and tourists use spear guns regularly. Enforcement of the laws and regulations is therefore a key issue to improving governance of Zanzibar's marine areas.

4.4.2. Recognition of traditional and customary practices

Experience has shown that in societies that have young and weak formal judicial systems and that operate on a largely open-access systems, such as Zanzibar, traditional customs and institutions often play a more important role of day-today regulation and enforcement. A

formal judicial system for MPAs, including the development of by-laws, usually works best if they are based as much as possible on the existing traditional systems to the extent these contribute to sustainable use of the marine resources (McClanahan et al., 2006). Indigenous knowledge also tends to play an important part in traditional governance of marine resources. This is particularly true in the past in Zanzibar where traditional customs and systems of fisheries management played an essential role in the methods used by fishermen. The commercialisation of fisheries coupled with a loss of traditional beliefs and an increase in the number of fishers have reportedly contributed to a breakdown of the customary fisheries management methods and a degradation of marine ecosystems (Masalu et al, 2010). This suggests the need for a governance framework that combines both stronger enforcement of the regulatory mechanisms and support for remaining customs that contribute to sustainable governance of the resources.

4.4.3. Requirements for strengthening the policy, legal and regulatory framework

The following points provides a brief overview of some of the key needs to strengthen the policy, legal and regulatory framework for marine conservation in Zanzibar:

- **Greater emphasis on promoting an ecosystem approach and integrated governance of marine areas**. Provisions are lacking in the fisheries sector legislation for establishing networks of MMAs. MCAs are still managed in isolation with a contrived separation between sectoral mandates in areas that requires strong cooperation to ensure maintenance of essential ecosystem linkages. For instance the demarcation of MCAs seawards from the high water mark rather than including essential coastal ecosystems such as mangrove forests. To this end, harmonisation of sectoral regulations will go a long way to promoting intersectoral MCAs (i.e. forestry, ICM, community-run MMAs).
- **Reduction of high level of the discretionary power** granted to authorities under the framework law of Zanzibar and establishment of oversight bodies are needed to promote intersectoral coordination and accountability. This can be achieved through revision of the Draft MCU Regulations. For instance there is an urgent need for operationalization of the National Protected Areas Board, a Board of Trustees for the MCU and advisory committees for each of the MCAs.
- **Stronger mechanisms for stakeholder participation** More explicit allowances made in the institutional structure for involvement of the broader stakeholder groups. It is important to include concrete and detailed provisions providing mandatory directives in the process of incorporating views from the public in making executive or legislative decisions affecting the creation of MCAs and management of Zanzibar's marine environment using different models such as closed areas and seasons (Majamba, 2005)
- **Include provisions for a conflict management and appeals** process in the law for conservation-related conflicts. Build conflict management expertise within the MCU. Also recommend a process to get fishermen input into designing a system for the MCAs that allows for closed seasons
- **Greater transparency of collection and dissemination of revenues from MCAs.** The mechanism for collection, allocation and dissemination of revenues from the MCAs to the participating villages should be clearly outlined in the regulations. This promotes local-level decision-making on how the funds will be spent.

- **Stronger and more regular implementation and enforcement of laws and regulations**. Support is needed for the MCAs for greater enforcement of the laws and regulations. Partnerships with participating villages and private sector tour operators have previously proved useful in this regard.
- **Clarification of the fee structure provisions** by revising Schedule B of the Draft MCU Regs. to differentiate between "Outside visitors" who pay $20 per day and "Tourists" who pay $5 per day.
- **Greater support for co-management arrangements**. The current emphasis on top-down decision-making should be shifted towards greater autonomy of local stakeholder decision-making and clearer allocation of processes for stakeholder involvement and co-management such as collaborative management in enforcing fisheries laws or community participation in endangered marine species management A useful model could be through "Beach Management Units" as defined in the Tanzania Fisheries Act.
- **Support more comprehensive awareness and environmental conservation education on marine conservation to coastal villages**. Zanzibar people depend heavily on marine and coastal resources and the natural integrity of these resources must be sustained.
- **Promote conservation planning and monitoring** through development of a Fisheries Strategy and strengthened fisheries policy framework to include conservation priorities.
- **Stronger enforcement and increased awareness raising of the regulations**: Government must urgently devise strategies to make the law known to citizens, stakeholders and all those who are charged with its implementation. An obvious first step is to enforce a ban on destructive fishing methods.
- **Develop stronger regulations for protection of endangered species** and marine organisms that are the subject of tourism attention (dolphins, whale sharks, whales, turtles, coelacanths, etc.). Tighten current laws to: i) include conservation of critical habitats (i.e. turtle nesting areas); ii) increase coordination between mainland and Zanzibar to protect migratory species; and iii) specify that live endangered species caught in all fishing gear must be returned to the water immediately and that Turtle Excluder Devices are required on all trawlers before licenses are issued.
- **Development of provisions for protection of sensitive coastal areas from improper development.** Guidelines and provisions should be developed for investment on islands along with strict EIA and development requirements for low-impact construction and operation.

5. Institutional Framework for Marine & Coastal Conservation

The system for marine resource management in Zanzibar began as a centralized, top-down approach based on an open access regime. Following Zanzibar's revolution of 1964, all natural resources were placed under state ownership. A Fisheries Policy adopted in 1985 was enabled through legislation in the form of a fisheries act 1988. In 1993 certain fishing gear including bottom seine nets, dynamite and poisons were declared illegal through the Fisheries Principal Regulation (Lindheim et al, 2003).

Prior to 1994, fisheries resource users were considered unable to self regulate and management was allocated to dedicated personnel who controlled enforcement. When this enforcement strategy proved too costly and resulted in an increase in destruction of the marine environment, the government modified its policy to promote community-based resource management and the joint management of resource utilization (Mohamed & Juma, 2010).

Marine protected area management in Zanzibar has evolved into three main approaches that occur within a partially protected regime: government controlled areas; contracts or agreements with tourism companies that manage lodges within the conservation areas (Chumbe Island and Mnemba Island); and participation of local communities and the government. The degree of participation or involvement of local communities in the management of marine areas is variable.

5.1. Institutional Mandate for Marine and Coastal Management

5.1.1. MCU, Department of Fisheries Development (Ministry of Livestock and Fisheries)

The Zanzibar Islands have five administrative regions: Zanzibar South, Urban West, Zanzibar North, Pemba South and Pemba North. The regions are sub-divided into Districts, Constituencies, Wards and Shehias. The overall mandate for management of marine and coastal areas in Zanzibar, lies with a number of different agencies. The Ministry of Livestock and Fisheries (MLF), currently has the mandate of overall management and development of livestock and fisheries resources and it is within the Department of Fisheries Development that the Marine Conservation Unit is situated. Annex 3 outlines the structure of the MLF, showing the positioning of the Department of Fisheries Development within the Ministry.

5.1.1(i) Institutional home of the Ministry of Livestock and Fisheries

The Vision of the MLF is to have a Livestock and Fisheries sector that is sustainable, commercial, and contributing to livelihood, employment, national income and food security. The inclusion of the Fisheries sector occurred during the institutional changes following the elections in November 2010. Feedback from interviewees during the research, revealed that it was not a positive move. The implications of the merger of Fisheries with Livestock has reportedly resulted in lowered visibility of the sector and difficulties in maintaining attention, support and funding to the sector. The further separation of the sector from Environment and other relevant sectors such as Forestry, Tourism does not support coordinated approach to managing the marine and coastal resources for the island. While promising steps have been made by the RGoZ in recent years to strengthen the institutional framework for marine conservation in Zanzibar. It does however, remain significantly under-capacitated. The linkages between fisheries or marine resources conservation and other relevant and key sectors (Forestry, Environment, Tourism and Land Management), are weak and will require dedicated effort to ensure effective ecosystem-management that is required for improved governance.

5.1.1(ii) Institutions relevant to marine conservation

Between 2000 and 2010, the mandate for the management of the fisheries sector, and therefore marine conservation, lay within the Ministry of Agriculture, Livestock and Environment (2000 – 2010). Following the 4th Zanzibar's multi-party General Election in November 2010 that put the Seventh Phase Revolutionary Government in power and shifted the mandate for Fisheries to the MLF, the mandate for management of Forestry, Environment and Agriculture was placed with the Ministry of Agriculture and Natural Resources (MANR). The MANR comprises six Departments (Planning, Policy and Research; Administration and Human Resources; Agriculture; Forest and Non Renewable Natural Resources; Irrigation; and Food Security and Nutrition), two Institutes (Kizimbani Agricultural Training Institute and the Institute of Agricultural Research) and the Liaison Office in Pemba. The activities of the MANR are integral to the effective governance of marine ecosystems for instance it has responsibility for mangrove and coastal forest resources management under the Forest and Non Renewable Natural Resources Department.

The mandate for environmental management also shifted after the 2010 elections to the Department of Environment under the First Vice President's Office. Activities of this Department are critical for ensuring healthy marine and coastal ecosystems given its mandate for ICM, environment assessment and the establishment of the National Protected Areas Board and Nature Conservation Areas Management Unit. Once the NPAB and ZNCAMU are established and once the Integrated Coastal Management Strategy is implemented, cooperation between the Department of Environment and the Marine Conservation Unit will be essential.

Some of the other important institutions that have a central role to play in the management and utilisation of marine and coastal resources include the: i) Department of Archives, Museums and Antiquities of Zanzibar (DAMA); ii) Department of Urban and Rural Planning;

iii) Department of Tourism; iv) Zanzibar Investment Promotion Authority (ZIPA); v) Ministry Responsible for Transport; and vi) Ministry of State for Regional Administration. Other organisations that have important roles include parastatals such as the Zanzibar Ports Corporation; research institutions such as the Institute of Marine Science (IMS) and WIOMSA; private sector investors and tour operators; Community-based organisations; and NGOs.

The way in which these diverse stakeholder groups currently coordinate or participate in marine conservation is on a somewhat ad-hoc basis. There appears to be is no functional mechanism for collaboration of the Marine Conservation Unit with other stakeholders beyond the Fishermen's Executive Committees (FEC) at the level of the MCAs and the consultation of stakeholders in the development of the GMPs for each MCA. Thus, a number of issues that could either provide opportunities for strengthening management of the conservation areas or for generating additional revenues[12], are not being realized. In addition, some of the threats associated with for instance marine transport or inappropriate coastal development, could be more effectively addressed. Suggestions are made in subsequent sections of this report of how the cooperation among the different sectoral agencies could be strengthened to support marine conservation.

5.2. Marine Conservation Unit

5.2.1. Scope, vision and goals of the MCU

The Marine Conservation Unit (MCU) was established in November 2005 by the Department of Fisheries and Marine Resources Zanzibar and was legally enabled through the Fisheries Act No. 7 of 2010. The MCU was established as the entity responsible for coordinating the management of all marine conservation areas in Zanzibar and also for promoting the coordination role with other forms of marine managed areas (MMAs) such as privately managed sanctuaries. As mentioned previously, the existing controlled areas in Zanzibar as established by legislative Orders or Rules, include the Menai Bay Conservation Area (MBCA), Mnemba Island Marine Conservation Area (MIMCA), and Pemba Channel Conservation Area (PECCA).

Management of these areas involves community stakeholders to a greater or lesser extent. Chumbe Island Coral Park (CHICOP) is a privately managed Park that includes the Chumbe Reef Sanctuary (a no-take area) and the Chumbe Forest Reserve. Three new conservation areas, CHABAMCA, TUMCA and KOMCA Island areas, are in the process of being gazetted and will be formalised through the adoption of the draft MCU Regs. The MCU has also been given the responsibility of identifying new areas and support their establishment and designation as marine conservation areas.

[12] Such opportunities include partnerships between the private sector tour operators and the MCU for monitoring of ecosystem health, training of divers, enforcement, use and management of underwater cultural heritage to name a few.

The vision of the MCU is properly managed and sustainabl[e] use of the conservation area[s]. The mission of the MCU is to conserve the biological diversity and other natural and cultural values of the area in the long term, while providing recreational, social and economic benefits for the present and future generations (MCU, 2012).

Currently, the main objective of MCU is Sound Management of the Coastal and Marine Environment. The MCU is guided by four main goals, three Core values and five Strategic Objectives:

Goal 1 To manage the use and harvesting of marine and fisheries resources at ecologically sustainable levels and to manage the development of marine tourism to maximize economic benefits to the community.

Goal 2 To manage the marine area by promoting the sustainability of the existing resources.

Goal 3 To demonstrate the sustainable harvest of marine resources, identifying the habitats and aquatic environments on which marine resources depend; and enhance the social and economic benefits for all people.

Goal 4 To promote community education and dissemination of information on conservation and sustainable use of resources in the area.

Core value 1: Marine and Coastal resources are conserved for sustainable development.

Core value 2: Communities are involved and fully *participate* in the management and conservation of marine and coastal resources.

Core value 3: Efficient management of Marine Protected Areas (MPAs) and delivery of high quality services from them.

Strategic Objective 1: Create an enabling environment for smooth operation of the Marine Conservation Unit.

Strategic Objective 2: Establish and maintain Marine Protected Areas.

Strategic Objective 3: Improve Financial Mobilisation and Management.

Strategic Objective 4: Improve Information, Education and Communication.

Strategic Objective 5: Facilitate Research, monitoring of resources and socio-economic conditions (MCU, 2012).

Five key result areas provide a framework for the monitoring and measurement of the activities of the MCU:

1. Legal framework, organisation and management;
2. Conserve biodiversity, cultural resources and ecosystem processes;
3. Financial mobilisation, accountability and sustainability;
4. Information, education and communication; and
5. Research and monitoring.

5.2.2. Structure of the MCU

The MCU is located within the Department of Fisheries Development. The staffing of the MCU currently totals approximately seven members, including the Head of the MCU, an Assistant Head, and managers of the MCAs and a small number of fisheries officers[13].

The MCU is ultimately responsible for the development, management, regulation and implementation of all activities within the controlled areas including the Menai Bay Conservation Area (MBCA), Mnemba - Chwaka Bay Marine Conservation Area (MIMCA), Pemba Channel Marine Conservation Area (PECCA), Tumbatu Marine Conservation Area (TUMCA), Changuu-Bawe Marine Conservation Area (CHABAMCA), and Kojani Marine Conservation Area (KOMCA) and any other controlled area as may be established under the Fisheries Act 2010.

According to Section 3(2) of the draft MCU Regs. that will enable the MCU to take up the identified responsibilities, the MCU should consist of: i) a Coordinator who is the chief executive of the Unit that is appointed by the Principal Secretary; ii) managers of the controlled areas; iii) members of the fishermen's executive committees; and iv) any other officer or any local community member appointed by the Director.

The draft regulations outline a number of functions for the MCU, some of which include:

- identifying and proposing the establishment or decommissioning of controlled areas;
- managing all controlled areas established under the Fisheries Act and as advised by director in a way that benefits local communities and facilitate their active participation in management;
- coordinating and supervising all activities of the controlled areas;
- generating and managing revenues and financial grants or donations to further the objectives of the Unit;
- allowing research and tourism activities in the controlled areas;
- proposing different zoned areas within controlled areas including 'no-take' or multiuse zones and issuing guidelines for activities in the controlled or conservation areas; and
- promoting awareness and the importance of the Zanzibar controlled areas and advising, stakeholders on MCA issues.

The functions of the MCU according to the draft MCU Regs, while broad in nature, are limited in autonomy due to extensive provisions that require the MCU to obtain approval by the Director. While a certain amount of oversight of the Unit is healthy and necessary, this would best be achieved through an advisory Board of Trustees comprising multiple stakeholders and a transparent process through which decisions are made and implemented. This would allow the MCU to strengthen its capacity over time and allow a greater focus on conservation rather than being limited to fisheries issues which is currently the case.

[13] The exact number of fisheries officers who provide support to the MCU is not clear due to the absence of some staff who are on study leave, the apparent lack of a formal structure of the MCU and the administrative and operational support provided to the MCU by different offices of the Department of Fisheries and Marine Resources.

5.2.3. Operational Capacity of the MCU

The MCU is not yet fully operational and conservation-related roles and responsibilities of each of the MCU members have yet to be clarified. Some of the achievements of the MCU since its inception and with the support of the MACEMP project include: the development of a programme of operation; initiation of baseline data collection towards establishing long-term monitoring activities within some of the MCAs; and development of a website for as part of the move to establish an information management system. Staff changes in the MCU in 2011 resulted in a loss of momentum of activities, which the Unit is now trying to address.

The Unit currently has a Head Coordinator, an assistant Head, Managers of the three MCAs: MIMCA, MBMCA and PECCA and a small number of fisheries officers. While the structure of the MCU has yet to be formalised, the skills and capacity of the staff is currently strongly aligned to fisheries management rather than the necessary conservation or marine protected area management expertise or even marine tourism management. The majority of the staff have qualifications in fisheries management through a Fisheries Diploma or similar. This leaning is expected given the relatively new status of the MCU and it's location within the fisheries sector. It would however, benefit the Unit greatly to either provide targeted training to relevant government officials or to attract staff with experience in appropriate marine conservation or tourism fields. There is also a need for a greater number of staff to build the capacity of the Unit as an effective conservation authority and to fulfil all relevant tasks required to ensure effective conservation activities.

5.2.4. Key Competencies and challenges

5.2.4(i) Key Competencies

Some key competencies which are essential for coordinated and efficient management of marine managed areas and which should be developed within the MCU as the Unit grows and strengthens, include: Marine and coastal ecosystem management (with a particular emphasis on marine tourism management and coral reef conservation); participatory conservation planning; social ecology and community liaison; conflict management and dispute resolution; research, monitoring and evaluation; fund raising and financial management; information technology and data management; outreach education and training; legal and regulatory development and review and enforcement. A concerted effort is needed to ensure adequately capacitated and resourced staff for the MCU.

5.2.4(ii) Strengthening revenue management

In Sections 3(g), 3(h) and 3(i) of the draft MCU Regs, strong provisions are made for the generation and soliciting of revenues and other financial sources to further the objectives of the Unit as directed by Director. Ensuring adequate finances for the sustainability and growth of the Unit is essential. There is however, a need for a mechanism to ensure greater accountability and transparency on the soliciting, utilization and allocation of these finances.

Again this mechanism would be best coordinated and monitored through a multi-sectoral Board of Trustees that would oversee the activities of the MCU. The issues of operational capacity and revenue collection and financial management are linked to a number of challenges to the effective management of the MCAs.

There is a clear need to clarify the role of the rangers and address the risk to the MCU and the Fisheries Officers and Rangers of focusing purely on revenue generation rather than on conservation activities. This concern was voiced on numerous occasions by stakeholders during the research whereby the task of the ranger is often seen to be limited to revenue collection (collecting tourism fees) rather than as a conservator that ensures that resource users abide by all regulations. Another related challenge is the apparent increase in incidents of conflicts between marine resource users. During the research, interviewees mentioned a growing number of conflict incidents among stakeholders the tourism sector and fishermen fishing illegally in the MCAs[14].

Concern was also raised by some of the local community stakeholders who were not members of the fisheries committees, that the process for distributing the 30% share of tourism revenue to the community was not transparent. A more transparent and accountable mechanism for revenue collection and disbursement, will therefore, benefit the MCU and assist to address some of the conflicts. It may also lead to greater opportunities for fund-raising and for partnerships with the private sector and NGOs. The lack of resources facing the MCU following the closure of the MACEMP project could be mitigated by establishing stronger and more targeted partnerships with members of the local communities affiliated either the MCAs, the research community (i.e. IMS and WIOMSA), conservation NGOs and the private sector[15].

5.2.5. Information Management: Marine Biodiversity Information System (MBIS)

The Marine Conservation Unit is responsible for the development of an information management system to support the long-term monitoring of the marine ecosystems. The system is envisaged to be a prototype for other governmental and nongovernmental organizations in Zanzibar. The goal of this centralized, GIS-oriented mechanism known as the Marine Biodiversity Information System (MBIS), is to provide an information system on marine and coastal biodiversity which presents information on species distribution, richness and progressive status. The system will act as a repository for coral reef biodiversity data from reefs throughout the Zanzibar archipelago so as to establish marine and coastal biodiversity database and to promote use of biodiversity information system in policy and

[14] Incidents of conflict included an illegal fisherman threatening scuba divers with a spear gun and the catch of a juvenile dolphin in one of the MCAs by fishermen that was witnessed by tourists who expressed dissatisfaction with paying for using an unprotected area.

[15] Informal arrangements already existing between some of the dive operators and the Department, show promise for improving monitoring and enforcement of illegal fishing and in support to fisheries officers in the form of equipment, logistics and in conservation assessments and net removals from sensitive reef areas. Strengthening or formalising such arrangements could assist the MCU in many operational tasks and in boosting practical experience for staff in conservation activities.

decision making. The aims of the MBIS are to: i) provide a visual account of the physical, biological and socio-economic characteristic of the environment; present an organized way of storing data and rapid renewal of information; iii) provide the general public with easy access information and thereby increase their environmental awareness; and iv) advance research activities and general understanding of the Zanzibar coastal environment by providing researchers, students and the general public with a one-stop data bank (MCU, 2012).

The MBIS is currently under construction by the MCU but has yet to be used to its full potential as an information management system. The basic system was established with support from the MACEMP project but the full operationalization and long-term use of the MBIS by the MCU for marine conservation monitoring, will require additional resources and capacity. Use of the system for conservation decision-making would benefit from linkages with research institutions such as the IMS and WIOMSA an other stakeholders such as marine tour operators[16] to design and implement a targeted research programme that would establish relevant baseline information and identify opportunities for the regular collection and analysis of data on indices such as reef health and species abundance and diversity. The system would also benefit from linkages with fisheries data collected by the Departments of Fisheries Development and Marine Resources, including the monitoring, control and surveillance data. It would also benefit from incorporation of data from different sectors such as tourism, forestry and environment.

5.2.6. Interaction of the MCU with MCAs

The Marine Conservation Unit is located within the Department of Fisheries and Marine Resources, within the Ministry of Livestock and Fisheries. Annex 4 represents an organogram of the Department of Fisheries and Marine Resources indicating how the MCU is situated within the Department[17]. The current organisational structure of the MCU and its interaction with stakeholders (according to the government website), is illustrated in Figure 10 below. The established MCAs, MBCA and MIMCA are generally lead by an MCA manager, and interaction between the coastal communities at the village level and the MCA and Fisheries Development Department is coordinated through Village Fishermen Committees (VFCs). This is also sometimes referred to as a Village Fisheries Coordination Committee or VFCC. MBCA in particular had experience of an advisory committee, which was established to coordinate activities between the Fisheries Department, the Mnemba Island private tourism investor and four communities. This committee has not been operational for the past couple of years and conflicts over the management of the area are reportedly increasing.

Prior to the establishment of PECCA, the Misali Island Conservation Area was managed through a community-run NGO. This NGO has all but given way to management of the area by the Department of Fisheries Development. PECCA is currently managed by the fisheries Officer in Charge for the Department of Fisheries Development in Pemba.

[16] Opportunities exist for the MCU to partner with selected dive tour operators such as Scubado, who have expressed a strong willingness to assist with data collection and monitoring and enforcement activities.

[17] The organogram was provided by the Department but it is unclear whether it is a representation of what the Department is aspiring to, or whether it is an accurate reflection of the current institutional arrangement.

As mentioned previously, operationally the MCU is still in its infancy and currently appears to have little direct authority over the different MCAs. Coordination among the different MCAs in Unguja and the MCU appears fairly strong with regular meetings and strong communication. However, while the MCU is involved in collating data from the different MCAs and in managing the MBIS, much of the decision-making and planning of activities of the MCAs is undertaken at the level of the Director.

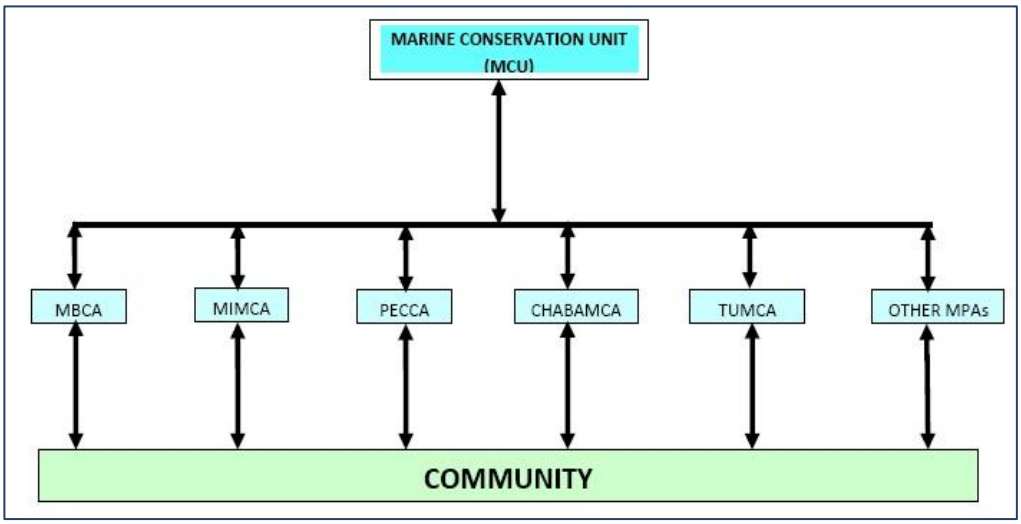


Figure 11: Organisational structure of the MCU (MCU, 2012)

5.2.7. Proposed MCU Institutional Structure according to the Draft MCU Regulations

The structure of the MCU and its stakeholder interaction, according to the Draft MCU Regs., is slightly more detailed than the existing illustrated structure (see Figure 11). In the proposed structure, stakeholder involvement is primarily through the Fishermen's Executive Committee (FEC), one of which is established for each "controlled area". Members of the FEC are the chairmen of each Shehia Fishermen's Committees (SFC) within the MCA area. Section 7(6) of the draft MCU Regs. provides for participation for Shehia Seaweed Farmers' Committee (SSFC) in but only upon invitation by the Coordinator of the MCU, the Director or the PS.

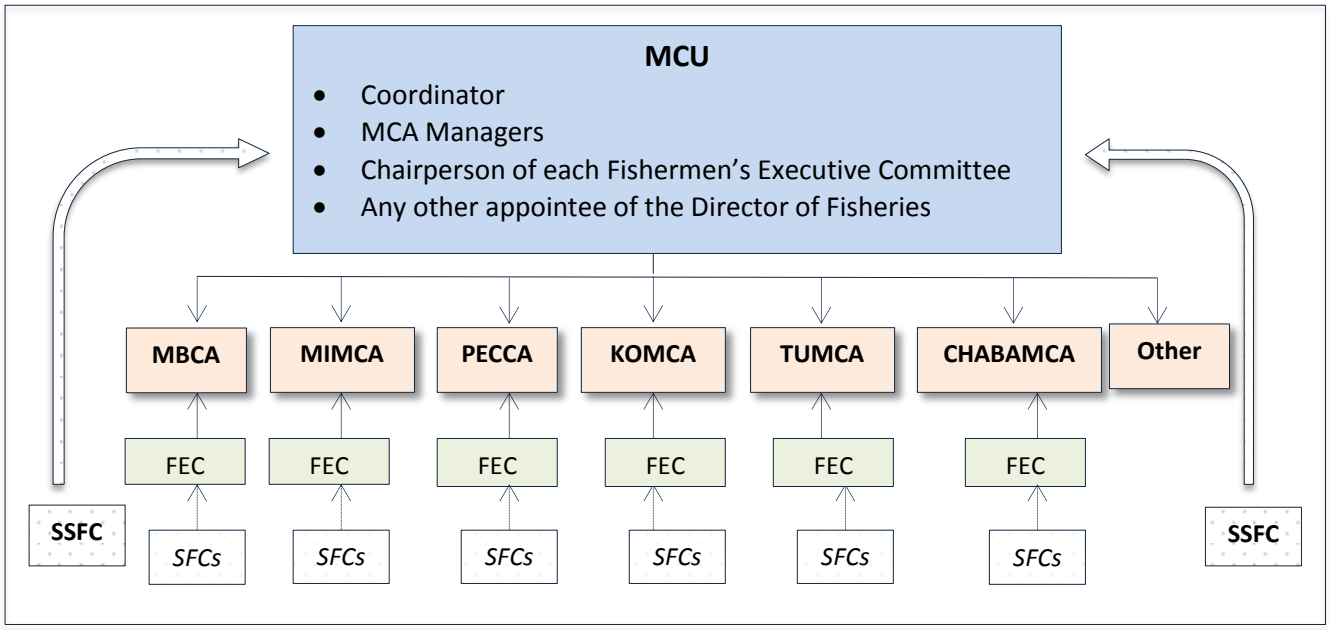


Figure 12: Proposed organisational structures of the MCU (Draft MCU Regs.)

5.3. Management structure for the MCAs

5.3.1. Scope of MCA mandate

According to each of the Draft General Management Plans for MBCA, MIMCA and PECCA, the operational framework for the management of the three MCAs is set out in accordance with fisheries Act No 8 of 1988. The Draft GMPs allocate responsibility for the management of the conservation area to the management committee, which receives advice from the Advisory Committee on the management issues. Daily management and operational issues of the MCAs are the mandate of the Manager supported by delegated professionals and field support staff. All of the MCAs experience challenges with inadequate staffing.

5.3.2. Marine conservation at the village level

The management of the MCAs operates at the village and district levels. The establishment of a Village Conservation Committee (VCC) was initially required in each of the villages covered by the conservation area to articulate the views and concerns of the villages to the staff and the management and steering committees. The role of the District Conservation Committees (DCCs), in turn, was to articulate the views of the VCCs to District authorities and the Standing Committee. The VCC has been replaced by the Fisheries Coordination Committee, (FCC) that works in cooperation with the Shehias and a fisheries officer based in the village (MLFD; 2010a; 2010b; 2010c).

The degree to which these structures are currently functioning in each of the MCAs as outlined in the regulatory framework is unclear. Feedback from stakeholders during the research suggested that the structures are in a state of flux and that there is much confusion and uncertainty, particularly at the local level, around involvement of villagers in MCA decision-making and management.

5.4. Suggestions for strengthening the institutional framework for marine conservation

5.4.1. Diversification of stakeholder involvement

As is, the link between the MCU and the MCAs with the broader community of stakeholders beyond fishermen representatives is too limited. No formal institutional mechanisms exist to promote intersectoral coordination or collaboration with NGOs, researchers and the private sector. While the principal approach of the MCAs is, in effect, fisheries management, and while the focus of stakeholder interaction is currently on fishermen as the key resource users, there is a need for a more inclusive mechanism than the FECs to incorporate the ever-increasing diversity of other marine and coastal resource users. The previously established Village Conservation Committee provided a conceptually broader mechanism for stakeholder involvement and could again provide a better model than the more limited FEC or VFC. Experience has shown that managing marine protected areas as ‘‘islands of protection’’, isolated from surrounding land uses and peoples, and without wide cooperation from agencies, stakeholders, and impacters, is less successful than a more integrated and inclusive ecosystem approach (Salm et al, 2000; Christie et al, 2002; Cicin-Sain and Belfiore, 2005).

5.4.2. Scaling up efforts through ICM and networking of MMAs

To overcome threats from both inside the MPA (i.e. from fishing, marine tourism, marine transport, mineral extraction etc.), as well as from beyond the boundaries of the MPA, which in the case of Zanzibar is the high water mark, options include managing MPAs within a framework of integrated coastal management and scaling up the protected areas through developing networks of MPAs. Both these options are very achievable for improving Zanzibar’s MCAs. The collaboration of the MCU and the different MCAs with representatives from different community organisations; government sectors, the private sector operators; and the research and NGO communities is essential for ensuring the long-term success and sustainability of the MCAs. Strengthening the coordination among the MCAs and linking up of the MCAs and other sensitive and protected marine and coastal areas to form a system of networks of managed areas is also essential to promote ecosystem functioning and greater benefits to those who depend on the marine and coastal resources for livelihood.

5.4.3. Improving the organisational structure

5.4.3(i) Improve intersectoral cooperation for marine conservation

Establishment of a multi-sectoral Board of Trustees (BoT) that would oversee the MCU and would guide the development and operation of the Unit. The Board members could include the Principal Secretary, Director of Fisheries Development, representatives from all relevant government sectors (including but not limited to Forestry, Environment, Tourism, and Finance), the research community, NGOs, the private sector (tourism operators as well as any other relevant business sector) and any other relevant individual who could provide value to the governance of the MCU. The BoT could also draw from input from each of the MCAs through each of the MCA Advisory Committees. The MCU Coordinator could participate in the BoT as the Secretary[18]. Once established, the National Protected Areas Board could also sit on the BoT.

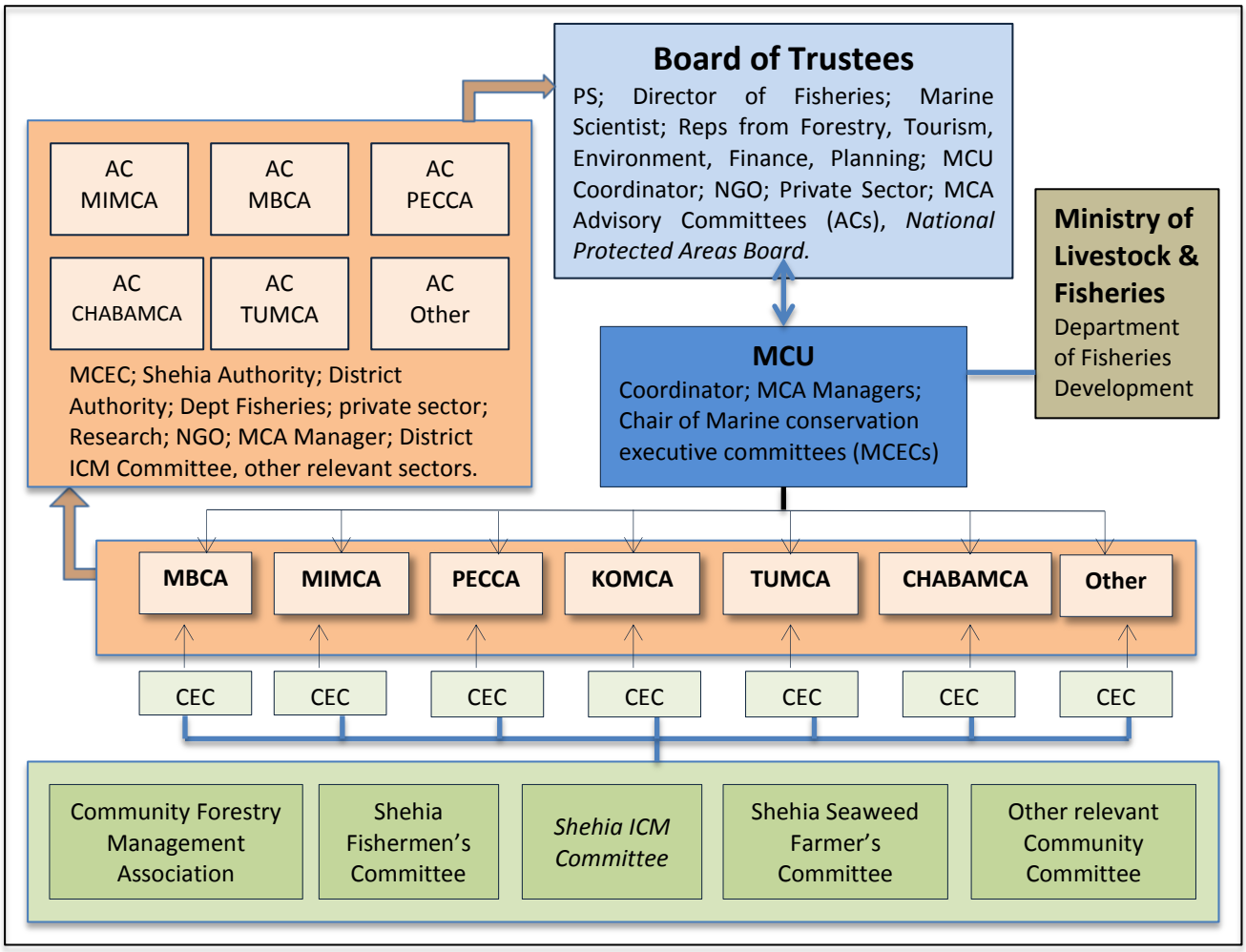


Figure 13: Options for strengthening the organisational framework for marine conservation

[18] While this model has proven largely effective in mainland Tanzania, care will be needed to ensure that the process to select each of the members of the BoT is transparent and participatory. Consideration is also needed to avoid dual reporting structures whereby the MCU Coordinator is answerable to both the BoT and the Director of Fisheries Development.

5.4.3(ii) Provide decision-making support for the MCAs and increase stakeholder involvement

Re/establishment of an advisory committee for each MCA[19]. This advisory body should comprise relevant experts, community members/organisations, local officials, and members of the private sector. It could also include relevant government officials that may have a particular responsibility for resources in that specific MCA, for instance forestry officials for management of mangroves, officials from the Department of Museums and Antiquities who may have a particular responsibility for underwater cultural heritage, District ICM representatives etc. Such advisory bodies assist greatly in the management effectiveness of each of the MCAs by tackling specific issues and threats and identifying opportunities for improving management of the MCA. This is particularly useful given the insufficient of resources and capacity within the MCU.

5.4.3(iii) Increase multi-stakeholder involvement at the community level

Greater representivity of community members from the broader coastal community in the MCA-community liaison mechanism (i.e. beyond only fishermen representatives as in the FECs). The MCAs cover large areas with multiple users and are required to address a multitude of threats and issues. If managed effectively, the MCAs also have the potential to benefit a wide variety of people and organisations. Membership of the FECs should therefore be broadened and made more inclusive and aligned towards sustainable management of the MCAs by all users rather than fisheries alone. They would therefore benefit from including representatives from other relevant CBOs, forestry management groups, seaweed farmers, tourism associations and suchlike. To promote equity and transparency, it is suggested that a conservation executive committee (CEC) be established that incorporates the FECs along with other relevant stakeholders as suggested in the Figure 12 below.

5.4.3(iv) Promote an integrated approach to marine and coastal management

To tackle the external threats to the MCAs and improve integrated planning and management of marine and coastal resources, strong links should be established between the MCU and MCAs and the proposed ICM institutional structures. This could be achieved by linking the recommended Board of Trustees for the MCU to the National Protected Areas Board proposed in the Environmental Management for Sustainable Development Act as discussed under Section 4.3.3 above. The MCU should also be represented on the Zanzibar Steering Committee on Integrated Coastal Management (Level 1 of the proposed ICM institutional structure), which comprises directors of relevant sectors, representatives from the local authorities and the private sector and/or CSOs. It is suggested that the MCU also be represented at Level 3 of the proposed ICM structure, within the Zanzibar Technical

[19] The structure and function of this body could draw from experience of the now suspended Mnemba Island Advisory Committee.

Committee on Integrated Coastal Management. At the sub-national level, the MCU by way of the individual MCAs, could participate in the District ICM Committees. The Fishermen's Executive Committees should also participate in Level 5 of the ICM structure, in the proposed Shehia ICM committees and sector committees to ensure that issues of marine conservation are dealt with at the local level of coastal planning and management. It is also recommended that the Shehia ICM committee (SICMC) be represented within the FECs for each MCA.

5.4.3(v) Strive for more autonomy and decision-making responsibility

The aim of the MCU should be to strengthen its capacity and autonomy over time to become an independent structure that effectively and efficiently coordinates marine and coastal conservation activities in Zanzibar. The current location of the MCU within the Department of Fisheries Development is necessary given the lack of adequate staffing, capacity and resources. The vision and strategy for MCU should however, strive towards an institution that is able to guide the involvement of multiple stakeholders in the conservation and sustainable use of marine resources in a participatory, transparent and accountable manner.

5.5. Challenges and Priority Actions for the MCAs

5.5.1. Improving management effectiveness to keep up with expansion of marine conservation areas

The institutional framework at the level of Zanzibar's marine managed areas still requires some attention to get it to a point where effective conservation management is possible. Support from the MACEMP project has led to a relatively rapid designation of additional marine conservation areas under the mandate of the MCU over the last few years. The extension of existing areas and designation of new MCAs, has extended the area of the territorial sea under formal protection from 526km^2 (1,71%) to 2009 km^2 (6,52%)[20]. While this represents significant potential for greater benefits from the healthy functioning of Zanzibar's essential marine ecosystems, the governance framework for managing the areas will need significant strengthening.

5.5.1(i) Finalisation and implementation of GMPs

An effort was made during the MACEMP project to develop an overarching Management Plan for the MCU as well as General Management Plans for each of the existing protected areas. The overarching management plan was reportedly in draft form but was unavailable for review during the research. The three established MCAs governed by the MCU – MBCA, MIMCA and PECCA - have Draft General Management Plans (GMPs) that are awaiting

[20] This area includes the proposed TUMCA and CHABAMCA MCAs but excludes the area covered by Chumbe Island Coral Park.

finalization. These GMPs provide a great deal of information about the 3 MCAs including options for zoning of the MCAs. Despite not being finalized, the GMPs provide a useful tool for embarking on improved management of these areas. The draft GMPS all outline the mission for the management areas: "To conserve the biological diversity and other natural and cultural values of the area in the long term, while providing recreational, social and economic benefits for the present and future generation[s]" (MLF; 2010a; 2010b; 2010c). The GMPs for the 3 parks outline a number of key issues and challenges for each of the MCAs along with a key recommendations on priority actions. While these are specified for only 3 of the MCAs, similar broad issues will apply to the proposed MCAs once they are gazetted. Some of the key issues and challenges relating to the legal and institutional framework for all MCAs include[21]:

- **Poor management and ineffective law enforcement** which has led to unsustainable growth in the fishing effort, unregulated tourism activities, illegal fishing including undersize mesh size, illegal gear, and use of chemicals. Irregular application of the law has also led to confusion over the legal provisions and has increased the opportunity for infringement of the law[22]. These have contributed to destruction of ecosystems (particularly sensitive coral reefs) by fishers, tour operators and tourists. A lack of resources and capacity is most often cited as the key challenge to enforcing the regulatory provisions and a growing perception was evident during the research of the need for more stringent, armed responses to law infringement. Another issue that has been raised to be a particular challenge to enforcement of the laws in Zanzibar pertains to the close kinship links between individuals in the population. The strong link between many of the islands inhabitants, was raised as a challenge by authorities to enforce the laws on a regular and effective basis. Given the extended areas covered by the MCAs, a combination of approaches could be used whereby greater involvement of stakeholders in management activities could be combined with more stringent application of the law along with a greater awareness-raising of the legal provisions governing the areas and demarcation and implementation of the zoning schemes within the MCAs.
- **Inadequate rules and regulatory framework** which has resulted in the high mortality of threatened and protected marine animals (turtles, dolphins and whales) by fishers.
- **Inadequate financial and management capacity** due to inadequate government budget allocation. This has resulted in inadequate human resources development and poor service delivery to the general public. The inadequacy and uncertainty of funds have impacted negatively on management operations ranging from recruit of staff, training, research and monitoring activities (MLF; 2010a; 2010b; 2010c). Inadequate staffing and a lack of skills and capacity is a pervasive issue that is common to all MCAs. It is an issue that needs to be dealt with in a systematic manner over time through targeted training and increased budgetary support. In the meantime, it is also an issue that can be addressed through greater involvement of stakeholders, a coordinated management approach and stronger partnerships with relevant private sector entities.

[21] A recent study undertaken by El Kharousy and Mohamed, (2012) also highlights some further priority interventions for MBCA, MIMCA and PECCA based on more recent information collection.

[22] A good example of this is the use of spearguns for fishing in Zanzibar. While it is illegal according to the law, both artisanal fishers and tour operators openly use and promote spear fishing in Zanzibar waters, citing permissions that have been granted by the Department of Fisheries Development.

Suggestions for priority actions identified for all MCAs in the GMPs include:

- **Detailed Zoning Plans:** All GMPS highlight the need for revision and implementation of the Detailed Zoning Plans for the MCAs including the definition of their shoreward and seaward boundaries to align them with relevant policies and legislation - especially the Land, Forest and Environment Policies. A system should be developed based on GIS which is linked to a website for easily access to and interaction with by stakeholders.
- **Covering Information needs and gaps:** The bridging of gaps in information required for better management of protected areas as per Table 2 below, as soon as possible (MLF; 2010a; 2010b; 2010c).

Table 2: Information requirements identified for each of the MCAs (MLF, 2010)

Information	MBCA	MIMCA	PECCA
Geological maps	GIS topography map and map of MBCA	GIS topography map and map of MIMCA pending	GIS topography map and map of PECCA
Maps of currents	No updated information	No updated information	No updated information
Bathymetric	No updated information	No updated information	No updated information
Tide tables	No updated information	No updated information	No updated information
Baseline habitat maps	Only for terrestrial vegetation through the Forestry Division	Only for terrestrial vegetation through the Forestry Division	Only for terrestrial vegetation through the Forestry Division
Community descriptions	Environmental Management plan for each village	Environmental Management plan for each village	Environmental Management plan for each village
Village Species list	No information	No information	No information
Status of commercial important species	No information	No information	No information
Endangered, threatened, endemic species status	No information	No information	No information
Aerial photographs	No updated information	No updated information	No updated information
Hydrological survey	Not done	Not done	Not done
Land use plans	Not developed yet	Not developed yet	Not developed yet
Topographical maps	Available	Available	Available
Economic valuation	Not done	Not done	Not done
Cultural valuation	Not done	Not done	Not done
Traditional user	Known	Known	Known
Current use levels	Not done	Not done	Not done

- **Monitoring and Review:** Development of a strategic programme for monitoring the health of natural resources in the MCAs is needed. This includes: i) collation and incorporation of historical monitoring data into a comprehensive monitoring plan; ii) establishment of fish stock monitoring with fishermen; iii) establishment of partnerships with national and international academic institutions to increase the amount of research available to MCA management; iv) establishment of an information collection system for collation and analysis of usage statistics for hotels, tourists, cruise ships, divers and the other key users.

- **Information collation, development and dissemination:** Recommendations are made in the GMPs to develop and updated websites for the MCAs on a monthly basis for conservation and marketing purpose. At the time of researching, the MCU was in the process of developing a website as part of the MBIS system. The MCU website and MBIS should aim to link up all MCAs for both monitoring and coordination purposes as well as information dissemination.
- **Frequent Stakeholder Consultations and Information Dissemination:** The GMPs recommend more regular and structured stakeholder consultation to identify key issues and as a marketing and update platform.

5.6. Financial sustainability for marine conservation and suggestions for improved benefit-sharing to stakeholders

Each of the GMPs outline initial elements of a financial management strategy which is based on the principle of sustainability, whereby the use of conserved natural resources should ideally extend to the financing of the area itself. The vision is that the financing plan for each MCA will be designed to fund long-term operating costs from the collection of permits, conservation area entrance and user fees. The level of payment for each activity within the MCA is outlined in Schedule B of the Draft MCU Regulations as per Table 3 below.

Table 3: Fees payable for activities undertaken within the MCAs (RGoZ, 2012)

Activity	Non-Citizen (US$)	Citizen (T.Shs)
Entrance per day/person:		
Student	2.00	Free
Outside/visitors	20.00	1,000
Tourist	5.00	2,000
Anchoring per day/boat:		
Tourist boat	20.00	5,000
Sport/Game Fishing boat	50.00	20,000
Filming:		
From one day to 6 days	200	100,000
Between 1 and 4 weeks	600	200,000
Above 4 weeks	2000	500,000
Research:		
From one day to 6 days	150	50,000
Between 1 and 4 weeks	350	100,000
Above 4 weeks	600	200,000
Educational:		
From one day to 6 days	10	5,000
Between 1 and 4 weeks	60	10,000
Above 4 weeks	150	45,000

Revenues are currently collected within the existing MCAs based on user fees paid by tour operators and hoteliers that bring visitors to the conservation area. Tickets or vouchers are purchased either from the Department of Fisheries development near Stone Town, or at the offices of the MCAs. Fees or permits for tourists have been based at a low level of $3 for non-citizens since 2004 and are collected by rangers at the MCAs and currently the efforts of patrol officers are weighted toward the collection of fees, rather than the enforcement gear use regulations and zoning provisions. As mentioned previously, Section 8(2e) of the draft MCU Regulations provide a preliminary basis for collection and allocation of funds for operationalization of the MCU and for proceeds from conservation to benefit the communities. The percentage breakdown of revenues to be shared between the government and community from the proceeds from user and entry fees as per provision 8(2c) such that:

a. **seventy percent** (70%) is allocated to operational costs of the controlled areas including costs for executive committee meetings, patrols and administration activities; and
b. **thirty percent** (30%) is allocated to supporting community activities.

A greater elaboration is needed in the regulations on the establishment of an efficient, transparent and participatory mechanism for revenue collection, allocation and spending by coastal villages. The system at the moment appears somewhat ad hoc for each of the MCAs and a need was expressed by stakeholders for more information and involvement in decision-making by the representative members of the relevant communities and greater accountability of dissemination and spending of the funds by the government and by the Fishermen's Executive/Coordinating Committees. The process for inclusion of additional villages within the MCAs and the level of benefits received by each of the villages also needs to be further researched. In instances where a relatively small area of the MCA is the principal revenue generating source, it may not be sufficient to allocate revenues to a large number of villages from the entire MCA. A participatory process is needed between stakeholders and the government to identify acceptable and equitable options for revenue sharing.

A study conducted under the MACEMP project in 2003 to identify sustainable financing options of MPAs in Zanzibar, states that financial sustainability occurs when the available revenues cover the management cost plus an additional precautionary margin to meet unforeseen circumstances (such as normal fluctuations in resource availability, or impacts of natural or man-made disasters). Four elements of financial sustainability were outlined: i) cost effectiveness through using the most efficient means to achieve a given end; ii) revenue collection, through targeting and retaining the highest value resources in a manner that still permits their sustainable use; iii) equitable revenue sharing through using instruments and models that reinforce local management efforts; and, iv) precautionary instruments to provide safety nets that reduce the vulnerability of individual networks, subsystems and managed areas (Lindhjem et al, 2003). The study also identified that a system of MMA networks could reduce the costs of management – in terms of financing, technical input and staff capacity – by sharing costs across sites. Partnerships with the private sector were also highlighted as a useful cost-reduction mechanism.

Suggestions made in Blueprint 2050, outline a two-pronged approach to revenue sharing: i) at the local level where adaptive co-management processes define and entrench clear and certain revenue sharing arrangements that are adequate to provide local incentives for proper resource management; and ii) at a higher local network and system level whereby a pooled funding mechanism is established to collect revenues from multiple sources, while redistributing those funds for priority areas with low own-revenue generation, or providing a buffer for any area during times of urgency (Ruitenbeek et al, 2005). The pooled funding mechanism suggested was the Marine Legacy Fund which would be fed by different sources of financing including but not limited to routine surpluses collected through revenue collection. Addition potential sources of financing for marine conservation exist that may be tested and integrated into the GMPs of the MCAs and into the management strategies for the MCU. Some of these options, drawn from Spergel (2001), are outlined in Table 4[23].

Table 4: Comparative funding sources for MMAs (from Spergel, 2001)

Source category	Types	Purpose description
Government subventions	Annual budget allocations	Recurrent expenses
Direct donor grants and loans	Grants, loans	Seed fund for MCA establishment, technical and infrastructural support, community-based project implementation.
Donor funded conservation trust funds	Endowment funds Sinking funds Revolving funds	Capital provision for establishment of conservation trust funds to finance: - Single MCA - System of MMAs - Cross border MMA - Conservation of endangered species - Local community conservation projects
Self generated revenues	User entry fees	Supplementing, rather than replacing, government budget allocations and donor grants.
	User concession fees	Charge for the right to operate businesses like visitor lodges, stores, restaurants, tour companies, etc.
	Recreational activity permit fees	Charge for specific recreational activities like camping, sport fishing, scuba diving etc.
	Royalties for natural resource extraction: oil, mining, timber and fishing	Compensation for the extraction of natural to conserve another
Self generated revenues	Fees for infrastructural construction.	Utility charges for companies for the right to construct and maintain infrastructures such as power and telecommunication lines, gas pipelines etc.
	Payment for ecosystem services	Carbon offset credits as PES from mangroves, growing corals, and seagrasses.
	Fines for illegal logging and fishing	Sales from confiscated materials that were illegally used and/or taken from protected areas.
	Income from commercial operations run by MCAs	MCU and individual MCAs may aspire to directly own and operate visitor concessions such as lodges, restaurants, and stores inside MCAs.

[23] The advantages and disadvantages of each of these options is provided in the Report on mainland Tanzania.

6. Recommendations for Improving Governance

6.1. The Key Elements and Models of Governance

Broadly speaking, governance can be defined as "the interaction of rules, institutions, processes and principles through which a society exercises powers and responsibilities to make and implement decisions" (IUCN 2010). In addition to the interaction of these four main components of governance, four key interrelated principles[24] are also essential, these are:

- **Accountability**: The requirement to accept responsibility and answer for actions. Decision makers and implementers should be accountable for the way they utilise their powers.
- **Transparency**: Sharing of information and acting to promote the free flow of information such that people can understand and defend their interests. This includes clear procedures for public decision-making and open channels of communication between citizens and officials.
- **Participation**: Playing an effective role in decision-making, either directly or through legitimately appointed representatives.
- **Predictability**: Equal and consistent treatment under the law. This includes the knowledge of how one can expect to be treated under the law.

Four broad types of governance may be observed in protected area management in general. These describe the different types of management authority and responsibility that may exist for protected areas. In Zanzibar, the ownership of MCAs is vested with the state, which either manages directly, leases or delegates management to communities, NGOs or others. The four types of governance include:

i) ***Governance by government:*** a government unit such as the MCU holds authority, responsibility and accountability for managing MCAs and determines conservation objectives, develops and enforces management strategies and plans and reports directly to the government (Department of Fisheries Development, Ministry of Livestock and Fisheries Development).

ii) ***Shared governance:*** Formal and informal institutional mechanisms and processes are established to share management authority and responsibility among governmental and non-governmental actors. These are often referred to as co-management approaches and vary in operational terms. Examples are the previous MICODEP project and the Mnemba Island Conservation Programme.

[24] A number of additional principles can be outlined to promote good governance in general (i.e. subsidiarity, performance, legitimacy and voice etc.) and for marine conservation in particular (i.e. an ecosystem approach to management, financial and social sustainability, and so on).

iii) ***Private governance:*** Individual, cooperative, NGO or corporate ownership and management of marine areas (sanctuaries), e.g. Chumbe Island Coral Park and Mnemba Island. Under this model, authority for managing the sanctuaries rests with the landowners, who determine the conservation objective, develop and enforce management plans and remain in charge of decisions, subject to applicable legislation.

iv) ***Governance by local communities:*** Community conserved areas established and run by local communities through various forms of customary or legal, formal or informal, institutions and rules. In this model, rules generally intertwine with cultural and spiritual values. The customary rules and organizations managing natural resources often possess no statutory legal recognition or sanctioning power but has identifiable institutions and regulations that are responsible for achieving the protected area objectives. MICODEP possibly represented the closest governance model to this but no examples currently exist of complete governance by local communities.

6.2. Opportunities for Improving of Governance

The above brief discussion of governance provides a useful guideline for improving marine conservation efforts in Tanzania. Examining some of the key challenges mentioned above through each component of a governance lens, highlights some opportunities strengthening the legal and institutional framework for effective management of MMAs.

Some of the opportunities for improving governance of MMAs include creating an enabling environment that promotes transparent, participatory, predictable and accountable processes to:

- Clarify the roles and mandates among different stakeholders and establish clear processes and mechanisms for involvement;
- Plan and implement MMA management activities with more meaningful input from a greater representivity of stakeholders;
- Distribute benefits from the MCAs in a more equitable and transparent way;
- Establish stronger partnerships with coastal the private sector and NGOs commercial interests; and
- Work towards more regular and equal enforcement of the laws.

While banning destructive fishing gears is generally identified as one of the first steps towards improved management of an MCA, and while it represents a positive step, fisheries management needs to be strengthened for more significant benefits. The trend in Zanzibar is towards large partially protected areas, such as MBCA, MIMCA and PECCA. Experience and research shows that these areas could yield better results by enforcing smaller, fully protected areas within the larger areas and limiting total fishing effort. The assumption of the benefits offered by large areas of partially protected areas supported by some regulations, may be overambitious and produce a false sense of achievement in light of the challenges related to lack of resources for enforcement and compliance (Tylera et al, 2011).

7. Towards a Network of MMAs for Zanzibar

7.1. Introduction

One element of this study on the legal and institutional framework for effective management of MMAs in Tanzania and Zanzibar, involved the legal and regulatory opportunities for establishing a national system of MMAs network for the Union. Since topic of MMA networks is fully dealt with in the Synthesis Report that serves as a point of Departure for this report, the following discussion is limited to a short discussion of the Zanzibar MMA networks[25].

The establishment of MMA networks and systems has received much attention over recent years, both internationally and in Tanzania. The seminal book, Blueprint 2050 provided a great deal of impetus to establishing such a system in Tanzania establishing a vision of " an extensive national system of eight networks comprised of four core priority networks connected to the mainland, two core priority networks in Zanzibar, a core priority area around Latham Island, and an additional managed network that includes all offshore areas out to the limit of the Exclusive Economic Zone (EEZ)" (Ruitenbeek et al, 2005: 3). The role of the national system is to describe and provide effective mechanisms for coordinating, supporting, and financing the various MMA networks and eventually lead to some form of protection for these areas. The two Core Priority Networks for Zanzibar include the MMAs on the two islands:

1. **Pemba Island**. The area currently consists of the Pemba Channel Conservation Area PECCA with informal plans to extend protection on the eastern side of Pemba Island; and
2. **Unguja Island**. The MCAs and sanctuaries currently established on Unguja include MIMCA, MBCA, and CHICOP with proposed MCAs of TUMCA and CHABAMCA. An additional area, Kojani Marine Conservation Area (KOMCA) is also mentioned in the Draft MCU Regulations but has yet to be formally demarcated.

One additional core priority network is suggested for Latham Island (also termed Fungu Kizimkazi) which is situated off the mainland Tanzania coast but is strongly affiliated with Zanzibar. Further discussions on Latham Island are provided in the Synthesis Report. Figure 13 provides a representation of the proposed national system of MMA networks for Tanzania and Zanzibar.

[25] Please see the Synthasis report for a full discussion on definitions of the network and system and an overarching discussion of the National system of MMA networks for the country.

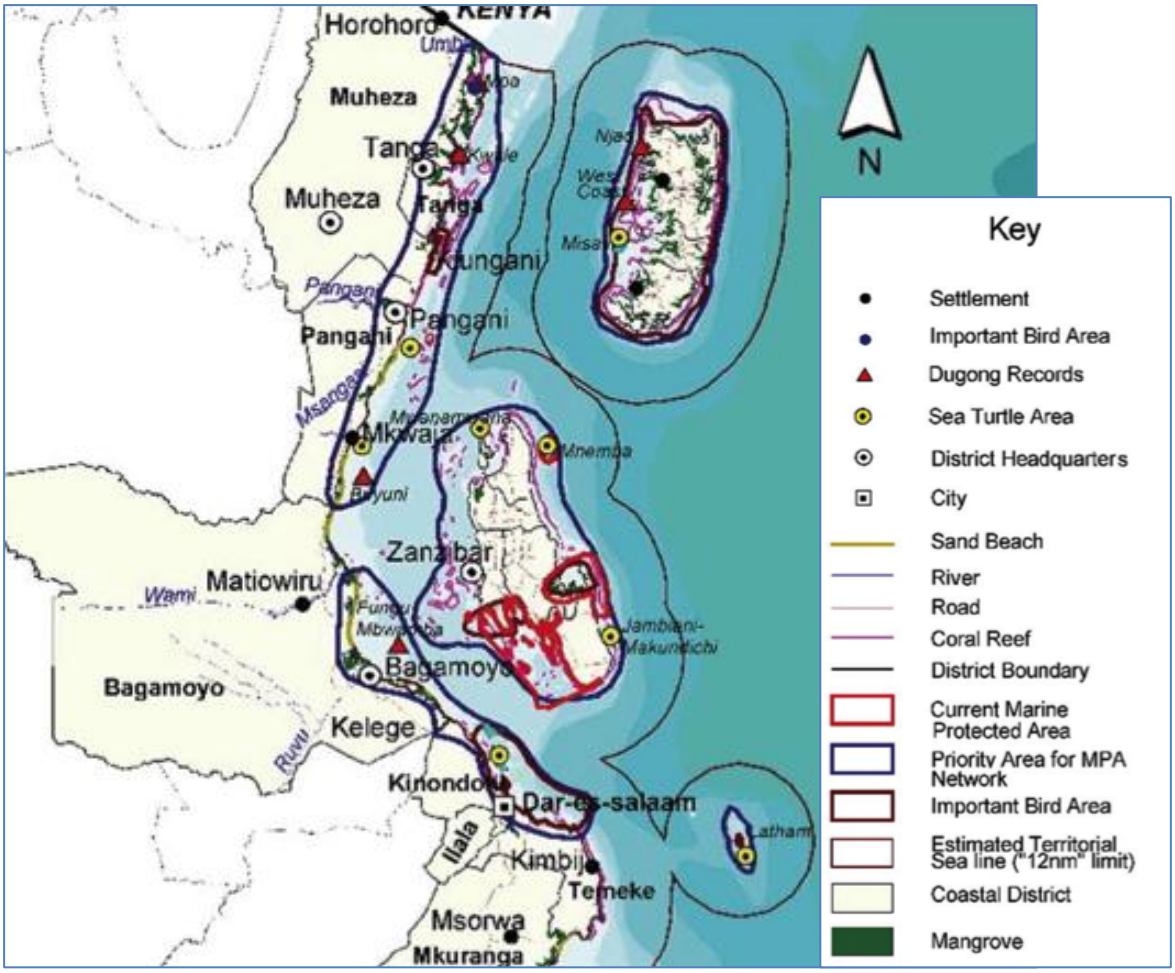


Figure 14: Zanzibar MMA network areas (Ruitenbeek et al, 2005)

Ruitenbeek et al suggest a framework of four pillars to guide the establishment of local networks towards a larger system:

- **Ecological Protection** that encompass ecological characteristics of representativeness, comprehensiveness, adequacy, connectivity and resilience. This is the backbone of the other three pillars.
- **Poverty Alleviation** in tackling widespread poverty in coastal areas. Alternative income generating activities and greater participation through adaptive co-management can improve local livelihoods and reduce the vulnerability of these populations to external shocks.
- **Financial Sustainability** is an overriding concern at both the network and system level. There has to be provision of financially sustainable mechanisms that ensures longevity of the resource base.
- **Institutional Robustness** that looks at the legislative and institutional setup. While these frameworks are relatively comprehensive, they lack capacity for implementation, and some issues and gaps remain. The most pressing issue is the extent to which harmonization of instruments and legislation is necessary both within the country and across the borders.

7.2. A Framework for the establishment of MMA networks in Zanzibar

7.2.1. A multi-level approach to MMA networks

Managing MMAs within a system of networks will go a long way towards utilizing promoting the sustainable utilization of marine and coastal resources in Tanzania. It will however, still not be sufficient for comprehensive protection of marine ecosystems and biodiversity. This will only be achieved by extending spatial planning and ecosystem-based management to the oceans as a whole. To move towards more effective management of marine biodiversity, it may be useful for Zanzibar and Tanzania to aspire to a multi -level system of spatial planning for MMAs proposed by the CBD. This encompasses:

Level 1: A core system of No Take Areas within a large MPA/MPAs.

Level 2: A larger system of multiple-use MMAs, including fishery management areas.

Level 3: A national MMA system embedded within a national ICM programme and overall management framework for the EEZ.

Levels 1 and 2 is possibly most characteristic of the current marine management arrangements in Zanzibar, although the different areas are not yet managed as a cohesive system but rather as individual entities managed by different stakeholders. While a comprehensive 3-level approach may take many years to realize, it is a useful framework to aspire to for constant improvement of management efforts.

7.2.2. Legal and Institutional Considerations

7.2.2(i) Implementing the Environmental Management for Sustainable Development Act

Section 4 of this report provided a detailed outline of the legal and institutional provisions for marine conservation. While the key legislation for marine conservation rests in the Fisheries Act of 2010 and the Draft MCU Regulations, the greatest opportunity for establishing an MMA network in Zanzibar is contained in the Environmental Management for Sustainable Development Act (1996). The EMSDA contains detailed provisions for improving management and conservation of Zanzibar's marine ecosystems and strongly promotes integrated coastal area management, community involvement and harmonisation among sectors. Part VII of the EMSDA provides the legal basis for establishment of a system of MMA networks in Zanzibar. Criteria for inclusion of areas in the national protected areas system are provided in Section 72 (1) of the Act including: i) richness of biological diversity; ii) uniqueness of biological resources at species, community and ecosystem levels; iii) representation within the area of a variety of Zanzibar's ecosystems; and iv) diversity of uses for its component resources. Section 80 of the EMSDA is key to formalising the network of MMAs in Zanzibar as it enables the establishment of the National Protected Areas Board (NPAB) as the institution responsible for the national protected areas system in Zanzibar.

Membership of the NPAB according to Section 80, comprises representatives at the level of Principal Secretary from different sectors including Forestry, Fisheries and Marine Resources, Environment, Tourism and Finance.

Financing of the national protected areas system in Zanzibar is envisaged through the establishment of a National Fund for Protected Areas Management (Section 87). While the NPAB and associated National Fund have yet to be established, they provide useful legal provisions that could be called upon for use in establishing the system of networks of marine managed areas in Zanzibar. In combination with the sector-specific legislation and draft regulations, the EMSDA represents a key piece of the legal puzzle for governing both the threats facing marine ecosystems in general and the more specifically, the management of the protected area network system in Zanzibar.

So to return to the system of network levels outlined by the CBD, it may be worth examining options for a 4-level system for Zanzibar as follows:

Level 1: A core system of No Take Areas within a large MCAs

- Core Zones within MCAs
- Marine Sanctuaries (Chumbe Island, Mnemba)
- Other no-take areas Jozani mangrove

Level 2: A larger system of multiple-use MMAs, including fishery management areas

- MCAs (MIMCA, MBCA, PECCA, TUMCA, CHABAMCA, KOMCA)
- Controlled areas

Level 3: An MMA system embedded within a national ICM programme

- National Protected areas System
- ICZM Strategy
- EEZ management / zoning

Level 4: A national MMA system for Zanzibar and mainland Tanzania and overall management framework for the EEZ

7.2.2(ii) Establishing a framework for a national MMA network system

Feedback from stakeholders during the research for this study was mixed on the prospects of establishing a system of networks. Many of the stakeholders felt that such a system would be beyond the current capacity and resource limits for Zanzibar. Others felt that establishment of such a system may address existing issues and conflicts. From an institutional perspective, the current status of the MCU is too inadequate to fulfil the required coordination function among the existing MCAs in Zanzibar, let alone among the larger national system. That said, the MCU would gain great value from collaboration with multiple stakeholders at the national level. It is worthwhile identifying priority actions and needs for establishment of a framework for the system through a dedicated process involving all relevant stakeholders. Dedicated funding and technical expertise will be needed for establishment of the system of networks. The establishment of the Marine Legacy Fund and an allocation towards the establishment of such a system through the MLF would provide further valuable impetus towards achieving the vision.

8. Concluding Remarks

The research undertaken to inform the development of this report has revealed that a great deal of progress has been achieved by Zanzibar over the last decade in strengthening the framework for marine and coastal conservation. A good trajectory has been laid towards the establishment of significant areas of protection and in putting in place the institutional and legal building blocks for improved governance of the marine ecosystems and resources. That said, a concerted effort will be needed by the government to ensure that the MCAs do not simply remain paper parks and that the ever-increasing range and number of threats from growing numbers of resource users, inappropriate coastal development, climate variability and change to name a few. It will be critical to ensure finalization and proper implementation of the GMPs for the existing MCAs as well as development of additional GMPs for the proposed MCAs. In particular, rollout of the zoning schemes in each of the MCAs will go a long way towards achieving some of the management priorities contained in the plans and yielding valuable benefits to resource users over time.

The apparent trend towards a greater centralization of management of the MCAs by the Department of Fisheries Development and less transparent and participatory involvement by non-state actors will need to be modified if the conservation efforts are to be successful over the long-term. Experience of marine conservation initiatives in Zanzibar and in Tanzania as a whole has yielded some useful lessons in participatory co-management. The open-access nature of much of the marine area in Zanzibar has created a context in which centralized management will simply not fit and will lead to great conflicts and faster degradation of the marine ecosystems. Stronger political will and targeted efforts towards long-term planning, capacity building for the institutional framework – the MCU and MCA staff, and greater accountability to the broader body of stakeholders, is also essential for improving governance of the resources and ensuring sustainability of these areas. This is particularly true in light of the closure of the MACEMP project.

A number of valuable inputs, reports and recommendations have been produced over the past few years for boosting both the effectiveness of both the institutional core of the Department of Fisheries Development and the legal and regulatory framework. What now remains is finalization of the draft regulatory tools, implementation and effective enforcement of the laws and coordinated efforts to ensure that the long-term benefits of the support contribute towards improved marine conservation and fisheries management. A few valuable opportunities are open to the government to partner with research institutions, NGOs, CBOs and the private sector to operationalize the many recommendations emerging over recent years and for building on accomplishments thus far. The establishment of the national system of MMA networks represents one such opportunity and government and stakeholders alike would do well to support the move towards this vision.

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Annex 1: List of Stakeholder Interviewees

Affiliation	NAME
Department of Fisheries Development Director	Mussa Aboud Jumbe
Department of Fisheries Development	Asha M. Ahmed
Deep Sea Fishing Authority	Zahor Mohamed El Kharousy
Coordinator MCU	Omar Hakim Foum
Assistant Coordinator MCU	Daudi Haji Pandu
MCU Fisheries Officer	Peter Shunula
MACEMP Management Team	Yusuf Kombo
MACEMP Management Team	Ramlatalia Omar
MACEMP Management Team	Ame Pandu
Head MCS Department of Fisheries	Haji Shomari Haji
Manager - Menai Bay Conservation Area	Anas Masoud Othman
Manager - Mnemba Island Marine Conservation Area	Mohammed Chum Juma
Ranger - Mnemba Island Marine Conservation Area	Yahya Massemo
Former Manager - Mnemba Island Marine Conservation Area	Mshamba Muhidin
PECCA Marine Conservation Area/ Officer in Charge - Pemba	Sharif Mohammed Faki
Department of Environment	Sihaba Haji Vuai
Department of Urban & Rural Planning	Ali Hamad Ali
Fishing Committee - Nungwi	Ali Makame Madaha
Department of Forestry – Principal Secretary	Bakari Asseid
Department of Forestry - Director	Sheha Hamdan
Department of Forestry	Alli Mwinyi
Department of Museum and Antiquities	Abdalla Khamis Ali
Department of Tourism	Said/Suleiman Mrisho
Marine Environment Development Society (MEDS)	Ali Said Hamad
Zanzibar Ports Corporation	Rashid Salim
Zanzibar Ports Corporation	Ali Haji
WIOMSA	Julius Francis
WIOMSA	Lilian Omolo
And Beyond Mnemba lodge	Makame Mshamba
Community Forestry Pemba	Mbarouk Mussa
Institute of Marine Science	Narriman Jiddawi
Institute of Marine Science	Chris Muhando
Zanzibar Association of Tourism Investors (ZATI)	Julia Bishop
Scubado Zanzibar /ZATI	Tami Holtier
Scubado Zanzibar	Christian M-Chilcott
One Ocean Zanzibar Dive Centre	Gary Greig
Chumbe Island	Sybille Riedmiller
SIT Study Abroad	Helen Peeks
MACEMP	Mwalim Issa
Sustainable East Africa	Nell Hamilton
Kizimkazi Dolphin Tour Guide	Masoud Shaalab Masoud
Kizimkazi Dolphin Tour Guide	Silima Iddi Makame

Kizimkazi Dolphin Tour Guide	Juma Ameir Juma
Fumba Lodge	??
Nungwi Villager	Haji Mohammed Pandu

Annex 2: List of Questions for Stakeholder Interviews

Network of Marine Managed Areas (MMAs, including review on management options, criteria for network and principles

a) Review the existing MMAs network system.

Network system proposed by the government to address four key aims including ecological protection, poverty reduction, financial sustainability and institutional robustness:

i. Four networks associated with mainland Tanzania:
   a) Tanga region network including the districts of Muheza and Pangani (~1600 km2);
   b) Dar es Salaam-Bagamoyo region network (~1200 km2);
   c) Rufiji-Mafia-Kilwa-SongoSongo region (~6700 km2); and
   d) Mtwara/Lindi region (~1000 km2).
ii. Two networks in Zanzibar: a) Pemba Island (~1500 km2); and b) Unguja Island (~2300 km2)
iii. One network around Latham Island: A small fossil coral oceanic island with critical biodiversity (~170 km2); and
iv. An offshore network that includes areas extending to the limit of the EEZ: it may overlap with the marine areas of other networks and will require a co-management approach for different resource users (~ 200 000 km2).

Questions/Actions:

- *What are the experiences from elsewhere, best practices, regional connectivity*
- *Is it adequately supported through the legal and institutional framework (from international conventions, regional policies, national policies and laws right down to local level by-laws)? If not, what is required, what are the gaps?*
- *Are the feasibility and connectivity aspects of these proposed networks realistic?*
- *Will it work practically and how can it be improved?*
- *What is required to make it work economically?*
- *What staffing capacity is needed?*
- *How will authorities collaborate with stakeholders to make sure it works practically?*
- *Drivers for establishing the MMAs*

b) Identify and describe the ecological and socio-economic characteristics of the primary marine and coastal ecosystems in Tanzania.

Questions/Actions:

- *Collate and analyse all available data from the existing sources (government agencies, NGOs, academic institutions and projects)*
- *Include cultural heritage and laws and regs around it.*
- *Include marine transport and laws and regs around it (due to high impacts of marine pollution from vessels).*
- *What are the key gaps in existing knowledge on the ecological and socio-economic characteristics of marine and coastal ecosystems in Tanzania?*
- *Are these characteristics being monitored and evaluated over time? If so, how?*

- *Is/How is this information being collated/shared?*
- *How can the M&E be improved?*

c) Identify a set of management options for MMAs network system and other identified ecological systems which can be incorporated in the MMAs network system.

Questions/Actions:

- *What are the current management approaches being used?*
- *Are these working and how can they be improved?*
- *What are the best practices emerging from Tanzania management of MMAs?*

d) Examine to what extent the ecosystems should be managed as a network system (suggest principles i.e. Adaptive management, collaborative and participatory management, decentralized and integrated decision-making, a precautionary approach that promotes decision-making based on the best available scientific knowledge, and sustainable and equitable management).

Questions/Actions:

- *What context-specific principles may contribute to the success of individual MMA implementation as well as the national MMA network system?*
- *How can the existing networks be better managed as a system?*

e) Develop criteria and guideline for selection of MMAs network system including but not limited to the following;

- Ecological connectivity
- Social and economic connectivity
- Fisheries management
- Sectoral/institutional collaboration
- Common goals
- Potential for sharing research information and lessons learnt from MMAs within and outside the Western Indian Ocean (WIO).

f) Draw experiences from other MMAs network systems within and outside the WIO region

Questions/Actions:

- *Which other countries in the region (and around the world) are moving towards management of MMAs as a network system? Is it working?*
- *What lessons can be drawn from them?*

g) Study on policies, legal and institutional basis for supporting MMAs network system - Review and analyse all relevant legislative and regulatory provisions at the national and sub-national level and consult with key decision-makers and relevant specialists and stakeholders to ask:

Questions/Actions:

- *Assess and describe the institutions that are currently tasked to manage MMAs.*
- *What are the key challenges for these institutions in carrying out their mandate?*
- *What is needed to improve them? (Staffing, resources, capacity etc.)*
- *What are the existing policies, laws and regulations governing MMAs?*
- *Are they adequate? Do they need to be improved? If so, how?*
- *How do they interact with land-use planning legislation and policies?*
- *Do they cover the option for management of MMAs as a network system? If not, how can these be changed to do so?*

- *How effectively are the laws implemented? What are the challenges?*

Co-Management Arrangements

a) Review of the existing co-management approaches and structures (BMUs, Marine Parks, Marine reserves, Marine sanctuaries, ICM , MCAs) in marine conservation

Questions/Actions:

- *What are the commonalities and differences between the different approaches?*
- *How can efforts be standardizedto prevent any unnecessary complexities that may be hindering progress?*
- *How can successes at the individual MMAs be scaled up among the proposed networks?*
- *What are the strengths and weaknesses of each approach*
- *How can any potential weaknesses be mitigated*
- *What kind of collaborative management approaches could be developed to promote empowerment of coastal communities towards effective co-management arrangements?*

b) Propose an effective collaboration approach in terms of empowerment and partnership

Questions/Actions:

- *What will work practically and will be sustainable over the long term?*

c) Review the existing policies, legal and institutional basis supporting co-management approaches and propose areas for improvement

Questions/Actions:

- *What mechanisms exist to support co-management approaches? (i.e. by-laws, Management Plans, MoUs, informal arrangements etc.)*
- *Are these adequate? How can they be improved?*
- *What are the legal and regulatory gaps in terms of supporting co-management?*

d) Identify key stakeholders and develop criteria for setting boundaries of MMAs

Questions/Actions:

- *Who are the key stakeholders for each MMA and how are these stakeholders engaged with by the MMAs?*
- *Are existing engagement mechanisms effective? If not, what are the key issues and how can they be addressed?*
- *Which MMAs currently have boundaries and how are these demarcated and maintained? Are the boundaries viable and if not, what are the issues?*
- *What kind of methodology can be used to identify specific areas for inclusion/exclusion in MMA networks?*
- *What criteria must be considered for setting boundaries of MMAs? Ecological relevance, enforceability, human and financial capacity, political will, conflicting activities…?*

Institutional Strengthening

a) Develop and review of existing structures to facilitate execution of the MPRU and MCU Vision, Mission, and its implementation strategy.

Questions/Actions:

- *Whatis the vision and mission of each institution? Do these reflect the needs of the country? Are they aligned with each other in terms of the network system approach?*

- *How does each institution operate? What are their guiding principles and strategies? Are these sufficient and howcan they be improved?*
- *What kind of budget do they operate with and where does the budget originate from (i.e. revenues, government funding, tourism concessions etc.)?*
- *Do they have sufficient number of staff, skilled specialists, resources to operate efficiently? If not, what is needed?*
- *What are the key weaknesses of the insitutions and how can these be addressed?*

b) Define roles and responsibilities of the proposed management structure of MPRU and MCU.

Questions/Actions:

- *Whatis the mandate of each institution? Does it cover the MMA network management effectively?*
- *Are the roles and responsibilities supported through the legislation and by-laws?*
- *Are there any areas of conflict or duplication in the law with other sectors (fisheries, forestry etc.)? If so, what are the options for resolving the conflicts?*
- *Are any further regulatory instruments needed to support the implementation of responsibilities of the institutions?*

c) Develop a mechanism of MMAs to improve the management/stakeholders relations in the reviewed structure.

Questions/Actions:

- *Do the MMA management plans offer sufficient support for stakeholder engagement?*
- *Whatkind of mechanism(in addition to the management plans could be used to improve the relations between stakeholders and MMA managers?*

d) Review guiding policies, legal status in order to harmonise with international conventions and conservation protocols

Questions/Actions:

- *Compare the status of the conventions and convention protocols, with desktop reviews and the finding of the field work and meeting results*
- *Are there any international conventions that Tanzania has not ratified? Why not? How can the government be encouraged to ratify them and implement them at the national level?*

e) Identify specific roles of MPRU/MCU/MMAs in relation to LGAs, partners and other stakeholders

Questions/Actions:

- *What are the roles of the LGAs, partners and other stakeholders with respect to MMAs?*
- *Are there any areas of conflict or duplication with roles of the MPRU/MCU/MMAs and the LGAs, partners and other stakeholders? How can these be resolved?*

f) Identify capacity requirements in terms of human, infrastructure and equipment for the two institutions

Questions/Actions:

- *What are the key capacity requirements of the 2 institutions?*

g) Propose financial mechanisms for sustainability of MPRU/MCU and other MMAs

Questions/Actions:

- *What options exist for sustainable funding for the MMAs? MLRF? Revenues? Etc…*

h) Review the existing relevant institutional structures, operational strategies and business plans for similar organs within and outside Tanzania, preferably in the Western Indian Ocean region.

Questions/Actions:

- *How are similar institutions with similar mandates functioning elsewhere?*
- *What lessons can be taken and applied to the Tanzanian context?*

i) Develop and recommend appropriate operational strategies and business plan to suit the needs of the MPRU

Questions/Actions:

- *Work with the MPRU to develop a business plan*

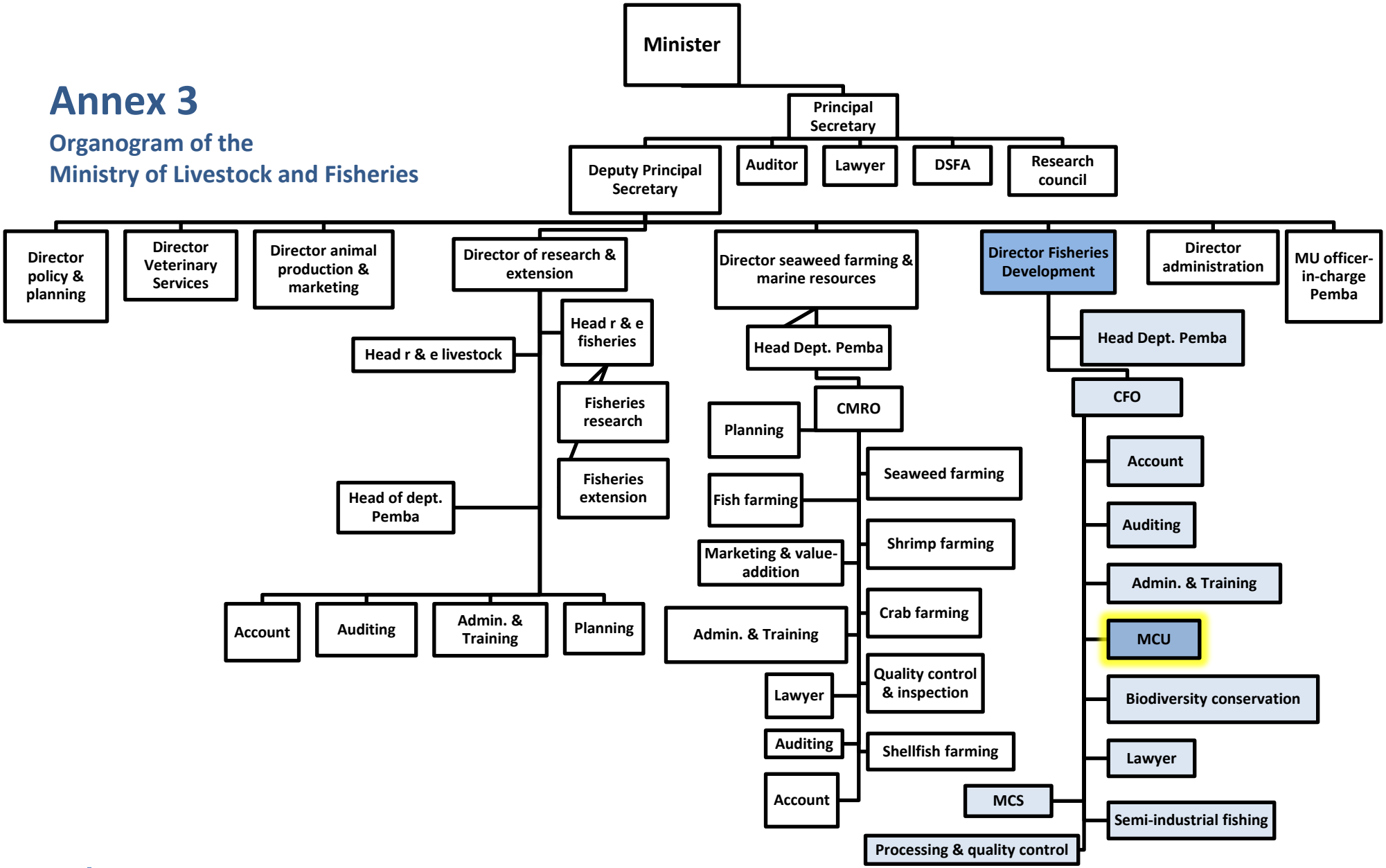
j) Identify and propose the number, positions and qualifications of staff required and their career development for realizing the operations of MPRU/MCU objectives

Questions/Actions:

- *What are the specific objectives of the institutions?*
- *Are there sufficient staff with adequate skills to meet these objectives?*
- *Is there a plan for maintaining and improving on the staff on a sustainable basis?*

Annex 3

Organogram of the Ministry of Livestock and Fisheries



Annex 4

Organogram of the Department of Fisheries and Marine Resources

