

MARINE CONSERVATION UNIT (MCU)
Department of Fisheries Development
Zanzibar

MARINE AND COASTAL ENVIRONMENT MANAGEMENT PROJECT
(MACEMP)

PROGRESS REPORT JULY 2006 TO MAY
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1. INTRODUCTION

The Marine Conservation Unit (MCU) was established in November 2005 by the Department of Fisheries and Marine Resources Zanzibar and recognized by fisheries Act No. 7 of 2010. It 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. Presently the existing marine conservation areas in Zanzibar include the Menai Bay Conservation Area (MBCA), Mnemba - Chwaka Bay Marine Conservation Area (MIMCA), and Pemba Channel Conservation Area (PECCA) which are community based and Chumbe Island Coral Park (CHICOP) which is privately managed.

The unit has also been given the responsibility of identifying new areas and support their establishment and designation as marine conservation areas. While the extension of the managed area is underway at PECCA, MIMCA and MBCA, two new conservation areas of Changu-bawe and Tumbatu areas, are in the process of being gazetted.

MCU is implementing activities under MACEMP **Component 2: Sound Management of the Coastal and Marine Environment**. The objective of this component is to establish and support a comprehensive system of Marine Managed Areas (MMAs) in the territorial sea built on Integrated Coastal Management (ICM) strategy that empowers and benefits coastal communities.

The following chapters report on the progress made by the Marine Conservation Unit in implementing the planned and emerging activities aimed at ultimately achieving conservation objectives. The report includes all activities carried out by the unit with financial support from the World Bank financed Marine and coastal Environmental Management Project (MACEMP) on the period from June to November 2011. Furthermore it discusses the outputs of the implemented activities, provides the financial statement, and finally describes the implementation challenges and the perceived way forward.

2. OBJECTIVES

2.1. Main objective

The main aim of establishing the Unit is to promote the coordination of all activities undertaken in Marine Conservation Areas in Zanzibar

2.2. Long term objectives

- Encourage conservation of marine environment and coastal resources.
- Improve capacity among the different stakeholders.

- Coordinate and conduct researches within Marine Conservation Areas.
- Identify new areas that require protection and establishing them as conservation area.
- Support fishing communities in acquiring appropriate fishing gears/facilities for the improvement of their livelihood.
- Collaboration and experience sharing with counterparts.

2.3. Short term objectives

- Create awareness on the existence of the unit.
- Improve operational capacity.
- Give environmental education and create awareness to target groups as well as the general public.

3. INDICATORS RELEVANT TO THE COMPONENT/TARGETS

Indicators set for the activities to be implemented in the MCU and in its respective MPAs include:

- Own-revenue generation as percentage of recurrent costs from 40 % at baseline to 150 % by the end of the MACEMP project from the system of MMAs.
- An increase in area from open access to effective managed access from 4 % to 10 % by 2011 within the territorial seas.
- Cabinet endorsement of proposed MPA network design (including at least two new conservation areas) by end of the MACEMP project.
- National MMA M&E system designed and approved by EOP year 1
- First national MPA/CMA master plan developed and approved by EOP year 2
- Monitoring and evaluation (M&E) system for all MMAs developed by EO-PY1; fully operational by the end of EO-PY2; updating and expansion throughout project cycle.
- Management plans implemented and operationally effective in all existing MPAs/MMAs/CMAs by EO-PY 1 and 5 emerging MPAs/MMAs/CMAs by EOP

4. PLANNED AND IMPLIMENTED ACTIVITIES

4.1. SUPPORT TO EXISTING MPAS/MCAS/MMAS

4.2. Awareness raising and strengthening of community management committees

Awareness raising is a crucial component in promoting stakeholders support on conservation initiatives and within a community based conservation model.

During the reporting period the more than 6 topic including ad hoc of awareness were provide to the MPA communities including *Fisheries law and surveillance, Conflict resolution, Resources conservation, responsibility of VFC, Biodiversity of marine resources, Subproject assessment etc*, through school education programs, regular publications (production of calendars, newsletters, guide books and brochures, documentaries), TV/radio programmes, community outreach programs and celebration of internationally recognized days (for example the international year of the reef, world turtle day etc)

Awareness results in empowering of the communities in all aspects such as participation in conservation of marine resources and wise use of their resources. Most of the Fisheries committees have been legal registered.

Table shows the means of awareness conducted to the communities

Sn	Items/activities	MCU	MBCA	MIMCA	PECCA	Total
1	Staff meetings	24	24	24	24	96
2	Collaboration with counterparts	17				17
3	Stakeholder meetings	4	6	6	6	22
4	Executive Committee meetings	24	24	24	24	96

4.2.1. Procurement of office and field equipments

Seven vehicles, seventeen motor cycles and five patrol boats were purchased and distributed to MPAs for outreach programs and regular field trips possible hence frequent patrols within conservation areas. Moreover, all marine conservation offices received office furniture and equipments including computers, printers, photocopiers, binders, fax machines, digital cameras, scanners and generators. Additionally, 12 sets of diving equipments including dive computers, 2 compressor, 2 underwater cameras and 1 generator were procured. The MCU grass boats are in the process of procured.

Table shows the office and field equipments procured

Sn	Items/activities	MCU	MBCA	MIMCA	PECCA	Total
1	Vehicles	1	2	2	2	7
2	Motorcycles	3	4	6	4	17
3	Patrol boats		1	2	2	5

4.2.2. Construction of offices, field office and accommodation

Construction of three office buildings were completed and in use at PECCA, MBCA and MIMCA to enable good working environment.

4.2.3. Office running equipments and services

Office running equipments were purchased including Stationery, computer utilities to maintain documentation references and services provided for Office equipments, communications, building premises and vehicles, motorcycles, boats etc. for good communication in implementation of activities as well as regularly outreach programs and regular field trips possible hence frequent patrols within conservation areas.

4.2.4. Management meetings

A total of 231 management meetings were conducted to harmonise collaborated effective management in all MPAs. Additionally, Collaboration with counterparts (MPRU, MMT, etc) effort has been directed towards collaboration with counterparts in the country, focusing on learning and sharing knowledge, experiences, achievements and challenges about marine conservation activities.

Table shows the means of management meeting conducted in MPAs

Sn	Items/activities	MCU	MBCA	MIMCA	PECCA	Total
1	Staff meetings	24	24	24	24	96
2	Collaboration with counterparts	17				17
3	Stakeholder meetings	4	6	6	6	22
4	Executive Committee meetings	24	24	24	24	96
	Total	69	54	54	54	231

4.2.5. Develop MCU website and Marine Biodiversity Information System

MCU website and Marine Biodiversity Information System (data base) were developed and accessed through www.mcu.go.tz to disseminate the information of Zanzibar marine and coastal biodiversity which provide information that include distribution, richness and progressive status. The data to be disseminated via the internet www.mcu.go.tz/mbis and through other means, The system set as a prototype for other governmental and nongovernmental organizations including various stakeholders including researchers, academic institutions, public decision makers etc.

4.2.6. Facilitate and support local communities.

A total of illegal fishing gears **445** were exchanged with **445** legal fishing gears whereby 233 for MBCA fishermen, 195 for MIMCA fishermen and 12 for PECCA fishermen. The communities was willing to submit their illegal gears to be exchanged to legal gears,

4.2.7. Community engagement including mitigation action plan (CMAPs)

22 CMAPs were developed in MBCA, MIMCA and PECCA villages. These programmes were completed by the Department of Environment – ICM through MACEMP safeguard section

and report submitted to MMT. Community subprojects (CMAPs) are evaluated as per safeguard standard

Table shows the numbers of CMAPs developed in MPAs through MCU

Sn	Items/activities	MCU	MBCA	MIMCA	PECCA	Total
1	CMAPs produces		12	5	5	22

4.2.8. Support gazetment and bylaws necessary

Legal order for PECCA was developed and by laws for MBCA, MIMCA and PECCA were produced. These bylaws are waiting for Minister Approval for MCU regulation.

4.2.9. MCU regulations

On the legal framework for MPAs, MCU regulation were developed and the draft waiting for Minister approval. In order to ensure the observation of existing laws and regulations within conservation areas regular patrols are required. Additionally, since management of conservation area is a dynamic process, the need for adaptive laws and regulations arises. During the reporting period regular patrols were conducted and a number of new regulations were proposed/adopted.

4.2.10. Boundary demarcation and extension of existing MPA

4.2.10.1. Installation of Mooring and Demarcation buoys

MCU organized training on installation of mooring buoys for tourism and fishing vessels at most of potential coral reef gardens in MBCA and MIMCA. Participant included divers from Scuba doo, One Ocean, Mnazi bay and Ruvuma estuary Marine park (MBRP), Mafia Island Marine Park (MIMP), Mnemba Island lodge, Safari blue, MBCA, MIMCA and PECCA.

In practical session three buoys and six HALAS PINS were installed at MBCA whereby two buoys and five manta rays sand anchors were installed at MIMCA.

4.2.10.2. Extension of existing MPAs

MBCA were extended by 2.27% from 401km² to 700km², while the MIMCA extended by 0.9% from 56km² to 290km². These cause the Zanzibar Territorial Sea under protection after 2012 extended by 7.27% from 526km² to 2,239km².

4.2.11. Control and surveillance in MPAs

During the reporting period, a total of 2,157 patrols were conducted in all protected areas and 3,509 illegal fishers with 506 illegal gears were captured and sent to the court with the total of 342 guilt. The enforcement network was strengthened through the provision of

more VHF radio at different stations and provision of mobile phones to some members of the Village Fishermen Committees participating in patrols. The network was further strengthened by the involvement of other government enforcement agencies (e.g. KMKM and police force) as well as trained community members and through the use of new patrol vehicles and boats.

Table shows the numbers of patrol activities conducted through MPAs

Sn	Items/activities	MCU	MBCA	MIMCA	PECCA	Total
1	No. of patrols		1,152	720	285	2,157
2	No. of suspects		492	696	2,321	3,509
3	No. of Vessels catch		79	68	359	506
4	No. of gears catch		38	34	97	169
5	Crime incidence		226	62	19	307

Table shows the numbers of guilt

MPA	Qty Suspected/ Poachers	Permits/Gear used						Total
		No License	Small net	Explosive	Gun	Poison	Other gear	
MBCA	168	53	140	0	12	0	4	209
MIMCA	101	18	59	0	28	0	0	105
PECCA	28	28	0	0	0	0	0	28
Total	297	99	199	0	40	0	4	342

4.2.12. Echo tourism development

In improving echo tourism several activities were done at PEECA including producing of Publications, Cleaning of nature trail, Construction of tourist shed (huts) and Procurement of tourist bed sets

4.2.13. Development of Code of Conduct for Tourist Operators for MPAs

One Stakeholders meeting for Certification program for Dolphin Watching Tourism were conducted by introduce the aim of this activities which will collaborated with various stakeholders. The Committee has been established 16/08/2010 at Kizimkazi to oversee the activity in Kizimkazi Dimbani and Mkunguni, The Certification program for crafts that take tourists for dolphin watching is in progress. Marine Conservation Unit (MCU) has assumed the facilitation role.

4.2.14. Development of General Management Plan (GMP) for MPAs

Three General Management Plans for MBCA, MIMCA and PECA respectively were developed and the report documents are in place for effective collaboration management of respective MPAs.

4.2.15. Community Training

The numbers of trainings were conducted that involved both community and MCAs staff through meetings, exchange visits etc. within Zanzibar, outside Zanzibar and even outside Tanzania. The themes of the trainings varied from mariculture, aquaculture, marine resources conservation, tourism with sustainable environmental conservation to community participation in conservation. Community members, MCAs staff and government officials exposed to conservation experience from other regions.

4.2.16. Monitoring of coral reef and other marine resources

4.2.16.1. Regular monitoring for coral reefs

A total of 16 sites were surveyed within MPAS, regular monitoring for coral reefs and fish species were conducted in all MPAs which shows the improvement of fishing grounds. As all sites are established tourist destination the survey was focused mostly on the status of the reefs. Evidence of both anthropogenic and natural stressors was observed. The Crown of Thorns Starfish outbreak of 2008 had a very strong impact on the Utalimani reef as the site had only 8% hard coral cover and increase in surface cover by algae and other encrusting animals like soft corals. Findings have been presented to fishermen representative from all around MPAs and discussions are ongoing to make the two areas no take zones. General results show the fishing grounds are improved gradually thus more effort needed in order to maintain the fishing grounds.

4.2.16.2. To combat unforeseen outbreaks

- **Removal of crown of thorns starfish outbreak**

During the reporting period, Six times there was an enormous outbreak of Crown of thorns starfish one at Unguja and five times at Pemba. A collective total of over 5,000 COTS were injected with ph-minus solution and others were buried.

- **Coral reef cleaning**

Four times Coral reefs cleaning were conducted at MIMCA including remove remained fishing nets covered on the reefs etc.

The numbers of volunteer, local communities and MPAs staff were collaborated to undertake these outbreak events as well as to make sure that Coral and other species are in good health and safe environment.

Table shows the sites surveyed sites for monitoring

Sn	Activities	MCU	MBCA	MIMCA	PECCA	Total
1	Regular monitoring		8	2	6	16
2	Coral reef Cleaning			2	2	4

4.2.17. Studies, Research and Assessment of existing MPA's

- Rapid assessment surveys were conducted for MBCA, MIMCA and PECCA and reports submitted to MPAs which are used to provide baseline information for implementation of MPAs activities.
- Social and Ecological base for MPA Network Consultant is in ongoing and the first draft available is submitted to MMT
- National MPA/CMA master plan, Preparation ongoing and specific GMPs for MPAs are completed and submitted
- MCAs M&E system is completed and submitted to MMT.

4.3. SUPPORT TO EMERGING MPAS/MCAS/MMAS/LATHAM ISLAND

4.3.1. Studies, Research and Assessment of emerging MPA's

The base line information (Rapid assessment) for TUMCA and CHABAMCA were conducted and reports is in place.

4.3.2. Establishment of PECCA, TUMCA, CHABAMCA and KOMCA

Establishment of PECCA is completed and gazette on 23/Sep/2005 by Fisheries Act No. 8 of 1988, Section 7(1) Part II, Vol. C XIV No. 6111 which cover the area of 1,000km² from 5o25.8'S; 39o40.4'E and 4o53.7'S; 39o42.0'E. PECCA including 34 shehias westernised of Pemba Island

TUMCA and CHABAMCA are new proposed MPAs in Unguja Island and the legal documents for these two conservation areas are waiting for the approval by Minister while the KOMCA is still in the process of awareness on the important of conservation areas.

- TUMCA is located in the North West side of the Island and will include about 21 Shehias in the North Region. It will also covers marine waters around Kilindi to Nyanjale in North West and involves various famous fishing grounds such as Mwana wa Mwana, Tumbatu, Ras Usowa Membe and Kiongwe Mnarani.
- CHABAMCA is located west of the Island and it start at Kilimani Matora in the south end at Kama in the north. It will also incorporate potential fishing grounds adjacent and within Changuu and Bawe islets in stone town areas, which are also potential for Tourism and related activities.

- KOMCA is located at North-east of Pemba Island. The conservation will involve 17 coastal villages starting at Msuka village on the North of Pemba move to east wards to Kiuyu Mbuyuni and then south wards to Kangagani.

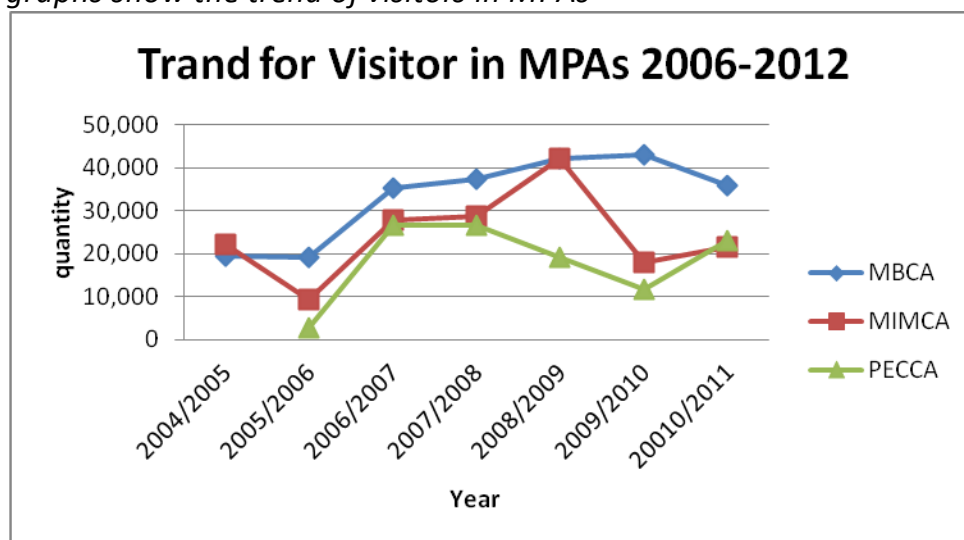
In implementing this activity, the MCU has managed to convene several villages' consultative meetings with different stakeholders in the representative villages as well as establishment of Village Fisherman Committees. The meetings discussed various issues regarding the establishment of these MCAs and provided forum for sharing and exchange of ideas and experiences with grass root stakeholders.

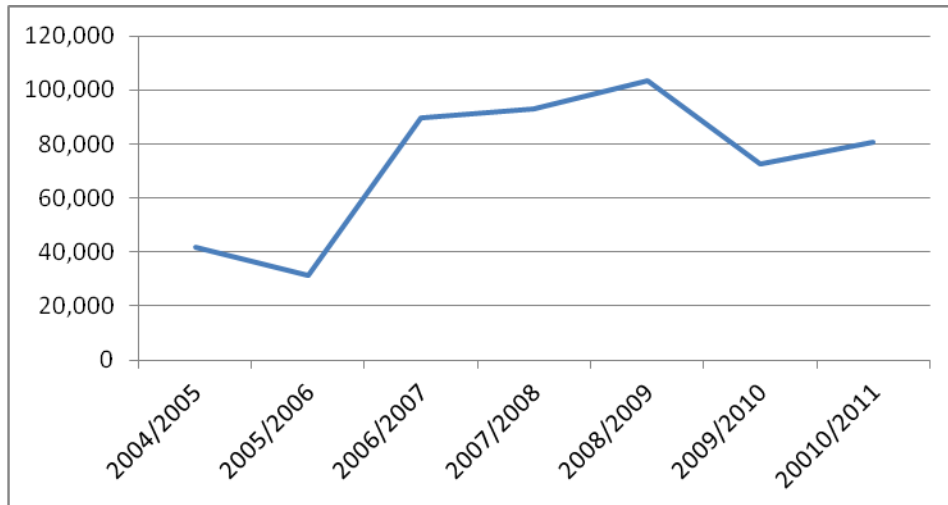
5. GENERAL ACHIEVEMENTS

During the period of 6 years for MACEMP activities implementation, the following categories improved:-

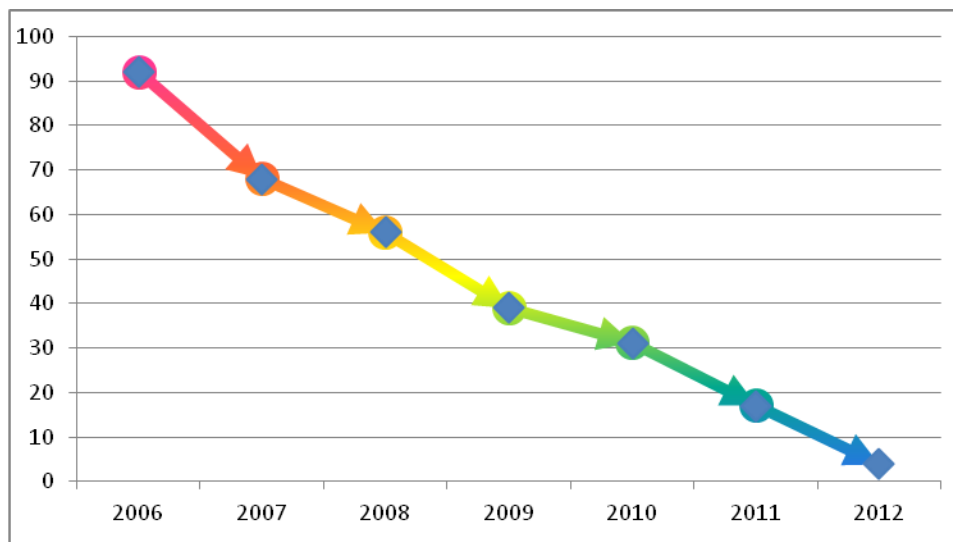
- 5.1. Numbers of conservation areas are increased by 250% (from 2 conservation areas – MBCA and MIMCA to 5 conservation areas – including PECCA, CHABAMCA and TUMCA) in Zanzibar.
- 5.2. Extension of conservation areas tends to be increased by 426% (from 526km² to 2,239km²) as well as the area of Territorial Sea 30,800 Km², thus makes the % of Territorial sea under protection after 2012 is increased from 1.71 to 7.3%.
- 5.3. Village Fishermen Committees are developed and improved from 25 VFC to 137 VFC.
- 5.4. Revenue collection per year increased by 162% (from 125,247,221/= to 202,445,223/=), as well as increasing of tourists (visitors) by 193% (from 41,749 to 80,585) visiting in MPAs.

The graphs show the trend of visitors in MPAs





5.5. Illegal incidences decreased by 96% (from 92 incidences in 2006 To 4 incidences in 2012) per year. This is due to the awareness provided and collaborative enforcement most of the fishermen complied with the fisheries law and regulations including conservation.



5.6. Good network and well collaborated with fisheries communities and tourism operators and other institutions on getting information about any outbreak issues including illegal activities.

6. CHALLENGES

During implementation of MCU activities for the reporting period, several challenges were observed:-

- 6.1. Increasing of population many people of coastal areas employed in the fisheries sectors. Therefore, there is competition in marine resources harvesting and use of destructive fishing gears which leads to over fishing.
- 6.2. Low level of education for fisher to go outside of the MPAs instead of converging at particular fishing areas.
- 6.3. Damage of coral reef due to the natural phenomenon (climatic changes) and high increasing rate of crown of thorn star fish in the MPAs.
- 6.4. Invasion of strange fishers from outside the MPAs who come to fish by using illegal fishing method with the high speed vessel.
- 6.5. Insufficient of conserved areas.
- 6.6. Insufficient of awareness for new generation engaging to the fisheries industry.
- 6.7. Increasing rate of expenditure for patrol activities due to the increasing rate of fuel cost.

7. WAY FORWARD.

- 7.1. To created enabling environment for smooth operation of MPAS
- 7.2. To conserve biodiversity, cultural resources and ecosystem process
- 7.3. To improve information, education and communication
- 7.4. To facilitate Research and monitoring of biophysical resources and socio-economic conditions
- 7.5. To maintain and established MPAS.
- 7.6. To improved Financial sustainability and marketing skills