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*Eastern African Marine Ecoregion
Annual Report
10/01/2005 - 09/30/2006*

for

World Wildlife Fund

October 17, 2006
Submitted by:
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Acronyms:

AMREF	African Medical Research Foundation
AU	African Union
BMU	Beach Management Unit
CBC	Canadian Broadcasting Corporation
CI	Conservation International
CMS COP-8	Conference of the Parties to the Convention on Migratory Species
CSPs	Coastal Strategy Plans
CORDIO	Coral Reef Degradation in the Indian Ocean
DANIDA	Danish Ministry of Foreign Affairs
EAME	The Eastern African Marine Ecoregion
EWT	Endangered Wildlife Trust (Mozambique)
FAO	Food and Agriculture Organization
FiD	The Fisheries Department
FoD	Forest Department
FPAs	Fisheries Policy Agreements
GCLME	Guinea Current Large Marine Ecosystem (Ghana)
ICM	Integrated Coastal Management
ICSF	International Collective in Support of Fish workers
IMS	Institute of Marine Sciences
IOSEA	Indian Ocean and South-East Asian Marine Turtle MOU
IOTC	Indian Ocean Tuna Commission
IUCN	The World Conservation Union
JMT	Joint Management Team
KESCOM	Kenya Sea Turtle Conservation Committee
KMFRI	Kenya Marine and Fisheries Research Institute
KMNR	Kiunga Marine National Reserve
KWS	Kenya Wildlife Service
LCC	The Lamu County Council
MACEMP	Marine and Coastal Environment Management Project
MBREMP	The Mnazi Bay Ruvuma Estuary Marine Park
MICOA	Ministry for the Coordination of Acção Ambiental (Mozambique)
MPA	Marine Protected Area
MSC	Marine Stewardship Council
NEMC	National Environment Management Council (Tanzania)
NOAA	National Oceanographic & Atmospheric Administration
NORAD	Norwegian Agency for Development Co-operation
NP	National Park
QNP	Quirimbas National Park
RAC	Regional Advisory Committee
RFMOs	Regional Fisheries Management Organizations
SCCaFCOM	Strengthening Community Capacity in Fisheries Co-management
Sea Sense	Formally known as Tanzania Turtle and Dugong Conservation program
SFF	Sustainable Fisheries Fund
SIDA	Swedish International Development Cooperation Agency

SocMon	Socioeconomic Monitoring for Coastal Management
SSA	Sub-Saharan African
SWIOFC	The Southwest Indian Ocean Fisheries Commission
TCMP	Tanzania Coastal Management Partnership
TED	Turtle Excluder Devices
TNC	The Nature Conservancy
UNEP	United Nations Environmental Program
UNIDO	United Nations Industrial Development Organization
VOA	Voice of America
WCK	Wildlife Clubs of Kenya
WCS	Wildlife Conservation Society
WIO	Western Indian Ocean
WIOMSA	Western Indian Ocean Marine Science Association
YoT	Year of the Turtle Events (Kenya)



The New WWF US Focal Area (red line) in the Coastal East Africa Program.

Eastern African Marine Ecoregion

Project Overview

Description of Site

The **Eastern African Marine Ecoregion** (EAME) is considered globally outstanding for marine biodiversity, supporting diverse coral reefs, extensive mangrove forests and sea grass beds, spectacular sand dunes, and a large number of ecologically critical lagoons and estuaries. Biodiversity in the ecoregion is high, with more than 11,000 species identified in an area of more than 770,000 square kilometers along the Eastern African Coast. Of these, up to 15 percent are narrowly endemic to EAME. WWF is targeting three of the four top priority areas (Kiunga Marine National Reserve, Bazaruto, and the Quirimbas Archipelago) for coral conservation, where there is currently a lack of support. WWF has identified these three areas as globally outstanding priorities for biodiversity conservation.

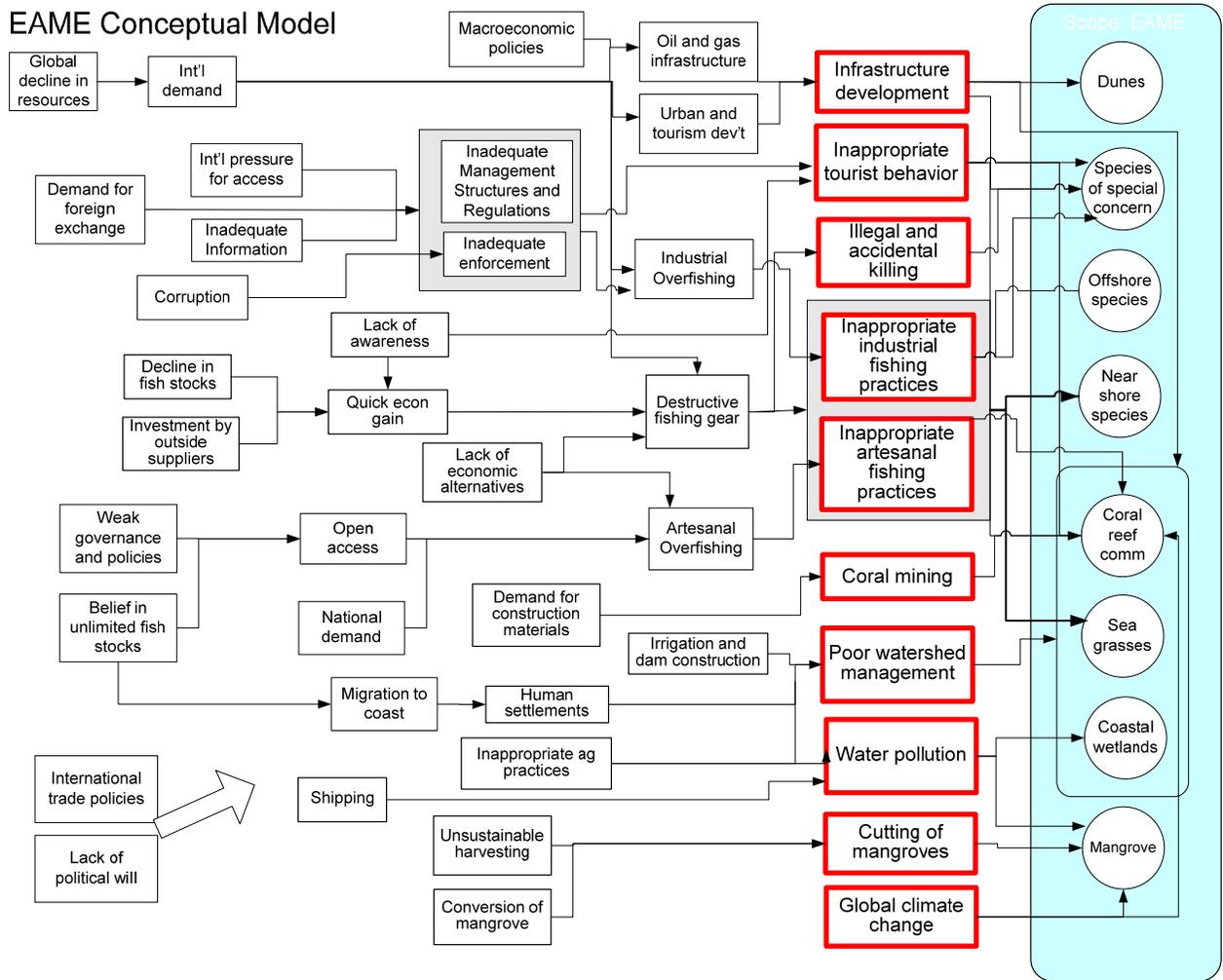
Kiunga Marine National Reserve (KMNR) in the Lamu Archipelago ecoregion priority area (Kenya) lies in the very north of the Lamu Archipelago on the Kenya-Somalia border, an area of globally outstanding ecological and cultural richness. KMNR and the inland Doodori National Reserve (877 square kilometers) were together designated a UNESCO Man and Biosphere Reserve in 1980. KMNR extends 1–2.5 kilometers into the open sea to include 55 islands and inner reefs. In 1979 Kiunga Marine National Reserve gained protection status. In addition to a healthy coral fringing reef, the rich habitats of Kiunga support key marine species such as turtles, dugong, whales, and dolphins, and provide one of the last principal global nesting sites for the roseate tern.

The Quirimbas Archipelago represents the centerpiece of the Mtwara-Quirimbas ecoregion priority area (Mozambique) and is a chain of 28 islands stretching along almost 400 kilometers of the coast. The southernmost 11 of these islands and a vast expanse of terrestrial woodland, coastal forest, and coral rag thicket are included in the **Quirimbas National Park** (QNP), newly established in June 2002. The total area of the park is 750,639 hectares—of which 152,237 hectares are in marine and island habitats—making this one of the largest marine protected areas in the western Indian Ocean. The park also supports important turtle, whale, and dolphin populations.

Threats

As part of the recent detailed analysis to develop WWF's EAME Action Plan and strategy we revisited our analysis of key direct threats to biodiversity in EAME. The new detailed conceptual model for the WWF Action Plan is below.

EAME Conceptual Model



Flowing from this, the detailed direct threats are as follows:

Threat	Criteria			Total	Rank	
	Areas	Intensity	Urgency			
Artisanal fishing	8	6	9	23	1	HIGH
Infrastructure development	9	4	10	23	1	HIGH
Global climate change	10	10	1	21	3	MED
Cutting of mangrove	6	8	6	20	4	MED
Illegal/incidental killing	5	7	8	20	4	MED
Industrial fishing	7	5	7	19	6	MED
Poor watershed management	2	9	5	16	7	MED
Coral mining	3	2	4	9	8	LOW
Inappropriate tourism practices	4	1	3	8	9	LOW
Water pollution	1	3	2	6	10	LOW

Areas: areas that this threat is relevant at. Areas are the 21 priority areas identified in EAME

Intensity: the value reflects a ranking of the threat intensity, 10 being the highest intensity of all threats.

Urgency: ranking amongst the 10 threats according to which one is the most urgent to deal with, 10 being the most urgent.

Threats include more specifically:

Artisanal fishing: over-harvesting of coral and pelagic fish species, marine turtles and marine mammals, invertebrates, ornamental fish and coral, and species used in traditional medicine;

Infrastructure development: development resulting in physical damage of reefs; pollution; increased demand for high-value species and building materials such as mangrove poles and coral blocks. Road and bridge building result in unregulated open access to resources. Gas and oil extraction development destroys habitat, opens up new areas to settlement, and brings a risk of pollution;

Global climate change: change in river run-off resulting in increased sedimentation of marine systems; and change in water temperature, resulting in habitat change and coral bleaching are among the most prominent effects of climate change;

Cutting of mangroves: clear cutting and conversion of mangrove forests for fuel, building materials, salt production, sand and mineral mining, and shrimp farming;

Illegal/incidental killing: marine turtles, sooty terns, dugong, cetaceans, etc;

Industrial fishing: long-distance access agreements, illegal long distance fishing fleets, destructive industrial fishing practices, bottom trawling, drift net and long-line fishing, over-harvest and over capacity, etc;

Poor watershed management: deforestation, agricultural runoff, pollution, sedimentation, pollution, water flow management;

Coral mining: live coral extraction for lime production, poor fossilized coral extraction, mangrove cutting for lime production;

Inappropriate tourism development: coastal development planning, water use, sewage, pollution, beach erosion, coral reef destruction, etc;

Water pollution: agricultural run-off, inappropriate or absent of water sewage treatment, pesticide, etc.

The table below shows WWF's ranking assessment of its capacity to tackle these threats, undertaken at a strategic planning workshop in Pemba, Mozambique in December 2005:

Threat	Criteria				Total	Capacity Rank	Threat Rank
	WWF Comparative Advantage	Window of Opportunity	WWF Network Support / TA	Local WWF Capacity			
Artesanal fishing (includes bycatch and poaching turtles)	5	4	1	5	15	#2	#1
Infrastructure development	2	3	4	2	11	#3	#1
Global climate change adaptation	1	2	3	1	7	#5	#3
Cutting of mangrove	3	1	2	3	9	#4	#4
Industrial fishing (includes bycatch)	4	5	5	4	18	#1	#6

WWF Comparative Advantage: Is WWF better suited to deal with this threat than other non-government entities working in this region? (high if WWF has strong convening power or influence, experience working on policy, global reach, access to economic and political powers)

Window of Opportunity: Is there an opportunity to effectively address this threat in the next 5 years?

WWF Capacity: Does WWF have skills and knowledge to address the threat?

Institutional Gap: Is there a gap? Is there a partnership opportunity?

The ranking provides WWF with an opportunity to make strategic decisions for future activities based on tangible assessments of ecological need/importance, and to strategically scale up capacity where threats are high and capacity is low. Unsustainable Artesanal fishing practices

have been ranked as the greatest threat to the ecosystem, thereby confirming our focused efforts on mitigating this threat. USAID investments are already sponsoring a gear exchange for Artesanal fishermen to trade in their harmful fishing nets for alternatives that will not decimate fish stocks. In Quirimbas NP, the threat of Artesanal fishermen is being mitigated through the establishment of fishing replenishment zones that prohibit fishing activities in certain breeding areas.

Strategic Goals and Objectives

The overall 50-year Vision for EAME is *a healthy marine and coastal environment that provides sustainable benefits for present and future generations of both local and international communities, who also understand and actively care for its biodiversity.*

WWF's activities in the ecoregion are guided by *The Eastern African Marine Ecoregion Strategic Framework: 2004-2024*, a comprehensive 20-year conservation framework that was completed in 2005 through a WWF-facilitated, collaborative process with multiple stakeholders. This plan was endorsed by key actors and includes five-year National Action Plans complimented by a Regional Action Plan, *The Eastern African Marine Ecoregion Conservation Plan: 2005-2009*. Within the 20-year framework, there are five strategy components:

1. Promoting planning and implementation within priority seascapes through a marine protected area network;
2. Conserving wide-ranging species and addressing transnational threats;
3. Enhancing the enabling policy and legal environment;
4. Supporting sustainable livelihoods;
5. Monitoring for adaptive management, catalyzing innovation, and strengthening capacity for long-term sustainability.

This suite of strategies will be harnessed to ensure the long-term stability and diversity of the representative species, habitats and ecological processes across the ecoregion. Of these, the priority focus of USAID-funded activities is the conservation of coral reefs and coral communities. Specifically, the defined target is to halt or reverse the decline in the quality of coral reef/community areas by 2010. The anticipated overall result/output is defined as: none of the 15 priority reefs in EAME have greater than 20 percent of their total area damaged, and four medium quality¹ and three high quality² coral sites have improved by at least one status level.

Collaborators/Partners

¹ The medium status level of coral reef communities has been defined as: widespread and advanced degradation of habitat structure and complexity; trophic structures minimally disrupted; some sensitive species missing altogether; mortality of characteristic and key taxa exceeding replacement, with net downward trend and reduction in extent and diversity of populations and structure.

² The high status level of coral reef communities has been defined as: minimally degraded habitat structure/complexity; trophic structures unaltered; some species may be depleted; mortality balanced by replenishment over time scales of 5–10 years, with no net tendency for reduction in extents of populations in habitats.

EAME program:

WWF is staffing and hosting the EAME Secretariat on behalf of a much wider group of stakeholders, including local, national and international NGOs, different government bodies from four of the five EAME countries (South Africa, Mozambique, Tanzania, and Kenya), academic institutions, etc. These institutions include Kenya Sea Turtle Conservation Committee (KESCOM), Sea Sense (formally known as Tanzania Turtle and Dugong Conservation program) and Endangered Wildlife Trust (EWT), Coral Reef Degradation in the Indian Ocean (CORDIO), East African Wildlife Society, FAO, KESCOM, KMFRI, KWS, IMS, MICOA, NEMC, TCMP, WORL, UNEP, MACEMP, ICM, WIOMSA, World Bank, and IUCN. The EAME Secretariat is working closely with the National EAME Committees of Mozambique, Tanzania, Kenya, the EAME Focal Institutions in these three countries, and with the Regional EAME Committee.

Kiunga:

The program is jointly managed by WWF as a facilitator, and the Kenya Wildlife Service (KWS) as the mandated management authority. Further, the program is implemented through collaboration with other key stakeholders including the Forest Department (FoD), the Fisheries Department (FiD), the Lamu County Council (LCC), local communities in and around the reserve, Wildlife Clubs of Kenya (WCK), Lamu District Health Management Team and the African Medical Research Foundation (AMREF).

Quirimbas:

During this past year, the major collaborating agencies were the Quirimbas National Park, the Ibo District Administration, the Marine Administration of Cabo Delgado Province, the Police Commando of Ibo District, the Training School of Gorongosa National Park, the Fisheries Department of Cabo Delgado, and the Marine Corps (Marinha de Guerra) of Mozambique.

Summary: Period 10/01/05–09/30/06**Highlights****EAME program:**

- The EAME Secretariat sponsored a study tour for EAME country representatives to Nigeria so that they may better understand the impacts and issues surrounding oil and gas. As a result of developing a constructive dialogue with governments, EAME Secretariat is poised to influence positive outcomes.
- EAME Secretariat personnel worked with their respective governments to build their capacity to negotiate Fisheries Policy Agreements (FPAs). EAME Secretariat's FPA models were used in the Brussels negotiations by the Government of Mozambique, and the government of Kenya sent a letter of appreciation.
- EAME Secretariat is providing technical advice on collaborative fisheries management in the RUMAKI seascape with funding from NORAD.
- In May 2006, a partnership was signed in Nairobi between World Bank, WWF, AU, FAO and Sub-Saharan African (SSA) countries for Sustainable Fisheries in Sub-Saharan Africa. EAME Secretariat provided technical backstopping for the AU in organizing the first regional advisory committee. The partnership has a fund of US\$ 240 million.

- A forum for EAME MPA managers was established to articulate issues regarding conservation and sustainable use and management of marine resources through MPAs.
- A program to enable access to sustainable fishing gear was organized in Kenya to eliminate the use of gear responsible for destroying the fisheries.
- A WWF EAME Action Plan (Attachment 1) was completed using Results Chain methodology, and an implementation matrix was developed. WWF now has a robust monitoring and evaluation (M & E) adaptive management tool.
- EAME Secretariat has now gained membership in all Regional Fisheries Management Organizations (RFMOs) in Western Indian Ocean (WIO) with its recent inclusion in The Southwest Indian Ocean Fisheries Commission (SWIOFC) and the Indian Ocean Tuna Commission (IOTC). This achievement will help all of the EAME countries become members of the IOTC with the intent to create one regional sustainable fisheries management plan, as opposed to one for each country.
- EAME Secretariat has been directly involved in reviewing the final draft of the first ever Fisheries Policy in Kenya.
- EAME Secretariat was directly involved in the design of a Marine and Coastal Environment Management Project (MACEMP) in Tanzania.
- EAME Secretariat initiated a fisheries certification process in Kenya, Tanzania and Mozambique to provide incentives for sustainable management of fisheries.
- Stakeholders endorsed EAME Secretariat's M&E framework, paving the way for further evaluation of program results.
- A learning program was launched for EAME MPAs.
- A forum for WIO fisheries directors was established to focus on Fisheries Partnership Agreements. This will promote collaborative efforts to deal with fisheries management in the context of a unified ecoregion.
- EAME Secretariat's side event at the eighth Conference of the Parties to the Convention on Migratory Species (CMS COP-8) resulted in a number of partners expressing interest in working with the EAME Secretariat on migratory species issues. Jim Knight, the (former) UK Secretary of State for Biodiversity, expressed interest in visiting EAME next summer.
- A GEF Grant for the Rumaki seascape made it possible to begin the first climate change project in EAME.

Kiunga:

- Local fishermen established four Beach Management Units (BMU's) under the new fisheries regulations. BMUs are designed to get the communities actively involved in keeping the beaches clean.
- The Joint Management Team (JMT) led environmental education and awareness activities in villages to improve their ability to participate in co-management of the park. The JMT is comprised of the KWS, WWF, FiD, FoD, and communities.
- Thirty (30) more youth volunteered in the turtle conservation program. These activities are designed to raise awareness about turtle conservation.
- All villages organized Year of the Turtle (YoT) events with youth and school children to increase awareness of the importance of turtle conservation.

- The second ecological monitoring and coral surveys were conducted jointly with CORDIO and representatives of all fishing villages to study the health of the reefs.
- WWF and the Fisheries Department jointly harmonized data collection in Lamu district by introducing new standardized fish catch data forms.
- Fish data collectors in Lamu were trained to maintain a fish catch database.
- WWF and the Kenyan Fisheries Department (FiD) developed the pilot study on dry fish catch in three sites. These results will be analyzed in a database to show trends that will be used in the management and evaluation of the park.
- School environmental health clubs registered with Wildlife Clubs of Kenya (WCK).
- All school environmental health clubs participated in the annual marine environment day celebrations.
- There has been closer collaboration between FiD, WWF and KWS and training opportunities were shared in fish frame survey, coral diseases and ecological monitoring.
- Members of the JMT were taken on an exchange visit to two other co-managed conservation projects in Kwale and Bogoria.
- Twenty five (25) students were sponsored under the education support program.
- Ten (10) sea patrols were carried out jointly between community members, FiD and KWS.

Quirimbas:

- WWF received requests for MPAs from communities in Palma District, along the shores of Lake Niassa, and in the border lakes region along the Malawi border (Lakes Chuita, Chilua, and Amaramba). This illustrates an increasing interest in conservation for the benefit of community livelihoods, as well as habitats and species.
- Park staff continued to look for sites that have corals living under difficult conditions to include in sanctuary areas. An extensive reef system was just discovered at the north end of Quirimbas NP that meets these conditions, on the inshore side of the Zala Bank.
- As residents' compliance with fishing regulations continues to improve, we are shifting our focus to the invasion of poachers from outside Quirimbas NP borders. Mozambique's Department of Defense has become a strong ally in the protection of MPAs.
- Quirimbas NP research results were presented at a seminar at the National Institute of Fisheries Investigation, and for the first time this institute acknowledged these results and supported the creation of sanctuaries.

Objective 1: Promote measurable results across the ecoregion by facilitating multi-stakeholder actions from field to policy levels.

The main goal of the EAME Secretariat is to establish and maintain a functional *enabling environment* for the implementation of the jointly developed *EAME Conservation Plan: 2005-2009*, completed in 2004. The implementation of the EAME conservation plan will take place through the strategic regional and national action plans. The Secretariat will work to ensure the implementation of the ecoregion strategy so that key policy and practice barriers are being removed, best practices are being learned, incentives for conservation are present, key research is being conducted to inform management decisions, and coastal communities/fishermen have the

ability to act as stewards of their natural resources, assuring sustainability. Objective 1 involves key elements of the EAME *Strategic Action Plan*.

The EAME Strategic Action Plan has been finalized and is included as Attachment 1 to this document.

Activity 1.1: Maintain overall project management and constructive working partnerships between WWF, donor agencies, field staff, focal Institutions and communities

National and Regional EAME Committees meeting twice a year to provide guidance and make key decisions relevant to implementation of the EAME Action Plan (EAME AP):

The national committees continue to be an important mechanism to champion implementation of the EAME Secretariat strategy and the EAME AP in the three countries. The Kenya national committee is championing the conservation of the Tana River delta and the introduction of community managed Marine Protected Areas (MPAs) in Kenya. The Tanzania national committee made significant contributions during the development of the Marine and Coastal Environment Management Project (MACEMP) and is now championing the establishment of the Tanzania Marine Forum where all the existing coastal management projects and initiatives will have a platform to update each other on progress and future plans.



Dugongs like this one in Kiunga MNR are believed to be the most threatened mammals in all of Africa with a recorded population of only 150.

The Mozambique national committee has established a task force to raise funds for the implementation of the Mozambique national action plan. There is growing support for integrating the national committees with Integrated Crop Management (ICM) steering committees in the countries, and EAME Secretariat coordination at the national level aligning with the Nairobi convention focal institutions and work program. Similarly, in order to strengthen the partnership in the implementation of the EAME Action Plan, it is suggested that the EAME regional committee be convened as a Task Force of the Nairobi Convention. These ideas will be discussed in the next EAME regional committee meeting following a major consultancy to review the existing EAME structures. The report is currently in draft form and will be sent to USAID as soon as it is available.

Effective working relations continued between national focal institutions and EAME secretariat as evidenced by the semi-annual work plans and contracts:

The EAME Secretariat issued semi-annual contracts to EAME focal institutions. The majority of the individuals who received the semi-annual contracts are government employees capable of solidifying relations with governments and promoting support for EAME Secretariat activities.

The semi-annual contracts are also designed to increase collaboration with a wider array of stakeholders.

Complete the review of EAME structure and implementation of its recommendations:

The process of reviewing the structure of EAME program has been completed. The review successfully came up with a more efficient way of enabling other organizations to buy into the vision of the EAME Secretariat and strengthen their partnership with WWF in the implementation of the EAME strategy. WWF, The International Union for Conservation of Nature (IUCN), United Nations Environmental Program (UNEP) and the Western Indian Ocean Marine Science Association (WIOMSA) all provided funding for the review, making it a truly collaborative process. The report is currently in draft form and will be sent to USAID as soon as it is available.

EAME partner strategy defines coordination with relevant international conventions and programs e.g. further designation and support of EAME sites for Convention on Wetlands (Ramsar 1971).

Support to EAME states for implementation of IOSEA MoU on Marine Turtles: The EAME Secretariat continued to support the National Marine Turtle Committee in Tanzania and also to provide funding for the activities of the Kenya Committee (KESCOM). These committees are responsible for coordinating the implementation of the IOSEA MoU on marine turtles, to which the two countries are signatories. EAME Secretariat is making efforts to facilitate a process that will enable Mozambique to sign the MoU as well. EAME Secretariat is planning a large awareness campaign for Mozambique in the next fiscal year, culminating with Mozambique signing the MoU in November 2006.

Turtle Excluder Devices implementation: The EAME Secretariat is working with governments to ensure that Turtle Excluder Devices (TEDs) are mandatory in all trawlers. With the EAME Secretariat's help, Mozambique made the use of TEDs mandatory in 2003, but Tanzania is still discussing the issue. Although TEDs are in use in Kenya, there is only draft legislation in support of it. The technology issue needs to be revisited, since the trawler operators feel that the TEDs they are currently using are not appropriate for the local fishery.

Regional marine turtle conservation: The EAME Secretariat is taking the lead in fostering regional turtle conservation activities in the countries of Kenya, Tanzania and Mozambique. Efforts are underway to link South Africa to this initiative. As a result of EAME's efforts, the four institutions active in turtle conservation and management in the three countries are now in close collaboration with the EAME Secretariat promoting turtle conservation in the ecoregion. The collaborating institutions are: Kenya Sea Turtle Conservation Committee (KESCOM), Sea Sense (formally known as Tanzania Turtle and Dugong Conservation program) and Endangered Wildlife Trust (EWT) based in Mozambique.

The EAME Secretariat organized an exhibit at the eighth Conference of the Parties to the Convention on Migratory Species (CMS COP-8) in Nairobi and conducted a side event showcasing the work being done in Eastern Africa. This was a major success, resulting in a number of partners expressing interest in working with the EAME program on migratory species

issues. Jim Knight, the UK Secretary of State for Biodiversity, was extremely impressed and expressed interest in visiting EAME in the next year.

The EAME Secretariat participated in the climate change camp from 24-28 April 2006 in Washington DC. World Wildlife Fund organized the camp to increase knowledge about climate change science, communications and policy, while also working with ecoregions to begin developing and funding climate impacts and resilience projects. During the camp the EAME Secretariat and Eastern Africa Coastal Forest team developed a proposal to the MacArthur Foundation requesting funding to increase resilience to climate change.

As a way of kick starting our oil and gas work in EAME, with funding from WWF and the Swedish International Development Cooperation Agency (Sida), the EAME Secretariat organized an educational and information sharing trip to Nigeria in April 2006 for East African government officials. This trip gave government officials a chance to better understand the impacts and issues surrounding oil and gas development in their own countries. The event was a true eye opener for many officials in addition to raising the profile of WWF as a responsible partner organization.

The study tour event was followed by a Regional Oil and Gas workshop that took place in Nairobi in April/May 2006. This has positioned WWF well for dialog with governments as oil and gas issues become more prominent and visible within Kenya, Tanzania, Somalia and Mozambique. Each event in its own way gave government officials a chance to better understand the impacts and issues surrounding oil and gas development even as the Kenyan government was announcing an arrangement with the Chinese government for offshore drilling. In developing a constructive dialogue with governments, WWF is well poised to influence positive outcomes.

In February 2006, EAME Secretariat in collaboration with WWF-TPO took the initiative to review the status of dynamite fishing in Tanga coastal waters (Tanzania) by supporting fact finding field work. The report was later submitted and discussed with the Department of Fisheries in Tanzania. There was a very positive response, and the Department quickly accepted most recommendations. These included setting a national commission for an in-depth investigation and development of an action plan. WWF is closely following this process and is linking with other partners and governing bodies such as NEMC -National Environmental Management Councils, Tanzania Coastal Management program and MACEMP for further actions.

EAME Secretariat worked closely with WWF-US, FAO, World Bank and fisheries stakeholders from all Sub-Saharan Africa (SSA) countries to prepare a proposal to secure US\$60 million for the sustainable fisheries investment fund in Sub-Saharan Africa. During that process, two consultative regional workshops were held in Dakar, Senegal, in August 2005, and Dar es Salaam, Tanzania, in June 2006. The countries endorsed the Regional Advisory Committee (RAC) as an advisory body to oversee the fund. The African Union is the chair of the RAC, with WWF and the regional fisheries organizations in sub-Saharan Africa as permanent members.

A partnership for Sustainable Fisheries for SSA countries was signed in May 2006 in Nairobi by the WB, WWF, African Union (AU), FAO and the Sub-Saharan African countries. The

partnership will ensure sustainable management of fisheries resources. EAME Secretariat provided support to the AU in organizing the first Regional Advisory Committee (RAC) meeting on 16-17 May 2006, where the partnership agreement was signed. The milestone signing ceremony was well covered by local media and internationally (CBC, VOA etc). EAME Secretariat expects that the funding facility will help the SSA countries achieve sustainable management of their fisheries resources, while at the same time ensuring that local communities are benefiting from funds accrued through fisheries partnership agreements with distant water fleets.

EAME Secretariat is supporting the establishment of a revolving fund for fishing gear exchange program at Kiunga MPA project. This is in principal a form of micro-credit where fishermen are given a loan advance to purchase sustainable and legal gear. In return, the fishermen surrender their unsustainable, destructive and illegal fishing gear. It is hoped that the program will contribute to the sustainable utilization of marine resources, reduction of conflicts between the community and the government, and ultimately the alleviation of poverty for the local communities.

Positive progress made on EU Fishing Access Agreements and Coordinated engagement by EAME States in IOTC & SWIOTC

EAME Secretariat has been issued an observer status in SWIOFC and membership in the Scientific Committee following participation in the first meeting in Tanzania. SWIOFC is a new RMFO that was launched by FAO in May 2006 for the management of fisheries resources other than tuna, which is already covered under IOTC. This makes EAME Secretariat represented in all RFMOs in the region including the IOTC. These are important platforms for addressing issues like by-catch, fisheries stock assessment data, and MPAs as tools for sustainable management of fisheries resources.

WWF and Sida produced state of the art reference materials that are critical for EAME states in negotiating Fisheries Policy Agreements (FPAs). The report included a comprehensive review of available statistics on the status of existing FPAs. The report also details annual catch statistics, how much the countries received, how much profit the distant fishing fleets accrued annually - based on markets in Asia and Europe, and how much the EU is actually willing to pay/ton. Other materials include the politics of FPAs in the EU, the issue of subsidies and public perception of FPAs and how this affects Western Indian Ocean countries.

National Seminars on FPAs were conducted in Kenya, Tanzania and Mozambique during the period of April-May 2006. The Kenya fisheries director wrote a letter of appreciation for WWF support in FPA matters and requested continued collaboration in further capacity building of fisheries staff in negotiation skills.

FPA Model Agreements were produced for Kenya, Tanzania and Mozambique as a way of providing assistance to the EAME nations in negotiating access arrangements with the EU. This included an assessment of the key issues for each country, a risk analysis, and components of a model agreement for each coastal state. A model agreement was produced for each country and presented to the fisheries department officials for each of the three coastal states.

EAME Secretariat has taken the lead in supporting the stakeholder's consultative process and the review by various experts of the draft Kenya National Fisheries Policy. This is a key guiding document that stipulates the direction a country should take to improve the lives of the people and the national income through the fisheries resources. EAME Secretariat has been asked to continue working with Kenya Fisheries Department on getting the policy endorsed by the Kenyan Parliament.

During a workshop in Ghana, EAME Secretariat instructed West African states on the implications of FPA, as well as reducing the footprint of distant water fishing nations. The aim is to support fair and sustainable FPAs that respect the needs of local people. The workshop helped the countries share ideas, as they jointly formulated minimum terms and conditions for FPA in the GCLME region. This workshop was the beginning of a long-term collaboration between WWF and UNIDO in general, and the GCLME project (supported by UNIDO) in particular. Issues deliberated during the workshop included the state of (over) exploitation of the main fish stocks as well as the general recognition of the urgent need for regional management of fisheries in the GCLME region.

Significant progress was made in pioneering the use of fisheries certification as a sustainable fisheries management tool in EAME. The process started in Feb 2005 during consultations between MSC-UK and key stakeholders in Tanzania, where the initiative was warmly welcomed by both the government and the private sector. In April 2006, EAME Secretariat secured US\$ 39,000 from WWF Sustainable Fisheries Fund (SFF) to conduct the first of its kind Fisheries Certification Pre-assessment for proposed candidate fisheries in Tanzania, Kenya and Mozambique. An internal regional eco-labelling workshop for WWF staff in EAME took place 14-15 August 2006. National workshops will follow in Tanzania, Kenya and Mozambique to increase awareness and learn lessons from Europe and other African countries.

EAME Secretariat is involved in building capacity among the EAME countries in areas related to sustainable fisheries management including FPA. To achieve this, EAME Secretariat coordinated and facilitated a regional workshop to promote sustainable and equitable fisheries access agreements in the WIO states held in Tanzania in June 2005. The workshop brought together all the fisheries directors from the WIO states, representatives from relevant national, regional and international players in WIO fisheries, including representatives from European Union, World Bank, and other development partners. Workshop recommendations included the establishment of a forum of Directors of Fisheries in WIO, capacity building, stakeholder involvement in relevant initiatives towards fisheries management, generation and facilitation of a regional management plan as a framework for fishing access arrangements in the region, and linking FPAs to development targets.

At least one EAME state formulates a national plan of action to eliminate IUU (illegal, unrecorded, unregulated) fishing issues, as well as linking coastal and marine resource management to poverty reduction in their Coastal Strategy Plans (CSPs) and as related to the Cotonou Agreement for ACP countries.

In October 2005, a technical report was produced offering detailed information and recommendations regarding lifting the ban on finfish export in Tanzania. Funds are being sought to publish the report since it contains important fisheries statistics and trends that can serve as

useful references. This detailed and comprehensive report discussing the subject of finfish export in Tanzania was discussed with NORAD and the Tanzania Fisheries Department respectively in November 2005. NORAD showed interest in continuing to work with the Tanzania Fisheries Department to ensure that finfish export does not plunge the country into unsustainable use of its fisheries resources.

A study linking fisheries and poverty alleviation was completed in December 2005. The study examined obstacles and opportunities facing development of sustainable fisheries sector that would support poverty alleviation and improve the livelihoods of coastal communities in Tanzania. The study reviewed existing threats to marine fisheries and fisheries-based livelihoods; obstacles to implementing a sustainable and equitable system that promotes poverty alleviation; and opportunities and positive models for mainstreaming sustainable, equitable fisheries into development strategies. Critical issues related to fisheries management and poverty alleviation were identified. The outputs will also promote integration of sustainable fisheries into development strategies (Cotonou Agreement, Vision 2025 and National Strategy for Economic Growth and Reduction of Poverty).

Effective reporting and overall project management that ensures performance and delivery of results.

Comprehensive Monitoring and Evaluation Plan developed: A regional workshop was held in September 2005 to develop a plan for monitoring the state of the environment in Eastern African Marine Ecoregion, and in particular to select the most appropriate indicators of the current state and pressures on the ecoregion's biodiversity and ecological services. EAME Secretariat is actively fundraising for the establishment of a staff position for implementing the regional monitoring plan, at least for the WWF part of the Action Plan. EAME Secretariat is also collaborating with CORDIO to implement SocMon, which is a NOAA-funded socio-economic monitoring of the impact of marine conservation projects in the region. In Nairobi in May 2006, WIO participating countries agreed to a clearinghouse mechanism on socio-economic and ecologic data sharing and central storage protocols, an important step towards implementation of a wider regional monitoring program.

Following the successful production of the English version of the EAME Dugong Book on the status of dugongs in the WIO region, a small consultancy was issued this fiscal year to translate that book into Portuguese in order to reach the Mozambique audience. It is expected that the final Portuguese version will be ready for publication in February 2006. The funds for printing the Portuguese version are still being sought.

EAME Secretariat has received a small Sida grant from WWF-Sweden to produce a number of communications materials including magazine articles, fact sheets, web page and a film (among other things). There will also be a press trip that will be organized before the end of 2006. This work will be completed within a year, but it is likely that the contract will be renewed for another year. This is an opportunity for EAME Secretariat to promote itself in the region and in Europe.

One newsletter was produced during the reporting period. The remaining communications funds were used to print the WIO FPA Book. It is hoped that the EAME newsletter issues will be

produced with more consistency in the next fiscal year following the hiring of an EAME communications officer who will begin work in August 2006.

EAME Secretariat participated in a UNEP-organized regional workshop (9-11 May 2006) on the establishment of a central marine environmental data archive and exchange system in Eastern Africa. The initiative will build on the already existing GRID system maintained by UNEP. Discussions are ongoing for the designation of lead national institutions and development of other data sharing protocols. This is an important step for EAME Secretariat towards increasing the availability of information for both management and monitoring progress and impacts of conservation efforts.

Activity 1.2: Facilitate effective management of existing MPAs and help expand/establish marine protected area network(s) in EAME.

Primeiras and Segundas NP declared and Tana River Delta designated as a Ramsar site. In October 2005, EAME Secretariat supported a Kenya-based NGO, the East African Wild Life Society, to build stewardship and a foundation for a community managed marine conservation area at Kuruwitu-Vipingo area in Kilifi District Kenya. Both financial and technical inputs were spearheaded by WWF and with input from other agencies and NGOs such as CORDIO, CDA, KWS, KEMFRI, EAWLS, Kilifi local community representatives and the private sector. A strategic plan of action has been developed.

Process to establish co-management units for sustainable fisheries management in RUMAKI initiated, and awareness of joint resource management of MPAs increased.

In October 2005, EAME Secretariat submitted a US\$1 million proposal to NORAD for Strengthening Community Capacity in Fisheries Co-management (SCCaFCOM) in RUMAKI seascape. NORAD has approved funding for this project and during FY06 USD140,000 were received for implementation. The goal of the project is to contribute to improving the socioeconomic well-being of coastal communities through sustainable, participatory and equitable utilization, management and protection of marine and coastal resources. Through the SCCaFCOM project coastal men and women fishers will be empowered and motivated to be involved in joint management and decision making at the local level.

This is another area of significant interest in EAME where progress is being made on involvement of local communities in marine resource management. A regional workshop supported by EAME, WIOMSA, ICSF and Masifundise foundation was held in Dar es Salaam for WIO States in March 2006. The RUMAKI model was presented as an example of involvement of communities in sustainable livelihoods development and other co-management arrangements, and served as a reference point throughout the workshop. Through this forum, knowledge gaps on coastal fishery dependent communities were better documented. Other knowledge gaps include: better understanding of key issues of relevance to small-scale fishers and fishing communities, clearer perceptions of potential options and approaches for fisheries, aquaculture and coastal area development; greater awareness about regional fisheries management related initiatives and better understanding of information and training needs of fishing communities and support organizations.

WWF in collaboration with partners in Tanzania are implementing a new generation of projects in the Eastern African Marine Ecoregion. The ‘Seascape’ concept mirrors the terrestrial ‘Landscape’ approach and recognizes the need to look beyond protected areas to the wider geographic, social and economic context. It takes as its starting point the fundamental links between environment and poverty and between biodiversity conservation and sustainable livelihood development. Planning for the Lamu Archipelago seascape program includes mapping of habitats, opportunities, and prioritization of threats through EAME visioning and conservation action work.

EAME Secretariat is developing a new project on "community development and sustainable management of marine resources in Mnazi Bay, Tanzania". A US\$1million proposal will be submitted to DANIDA through WWF-DK in September 2006. The project will mainly focus on community development issues related to sustainable marine resource management in the 11 villages of MBREMP. A similar project is already being funded by DANIDA in Quirimbas NP. It is hoped that the two projects will pave the way to a full trans-boundary management of this important Tanzania-Mozambique border area.

Management effectiveness tools, guidelines are available to key stakeholders: material gathered and distributed.

EAME Secretariat participated in the first MPAs Congress in Australia and presented an MPA management Tool Kit that was developed in collaboration with other partners including IUCN and WIOMSA. The Tool Kit was well received, and NOAA decided to use it for an MPA training that was planned for Vietnam, an indicator that the usefulness of the product certainly extends beyond the EAME boundaries. EAME Secretariat also participated in the global marine learning workshop and exchange visit to Philipp Island in Australia from 18-22 October 2005. In this workshop, it was agreed that group members would work on three MPA-focused issues over the course of the next two years: social resilience of communities living in marine environments, economic valuation of marine resources at a broad scale, sustainable financing of management efforts, and biophysical aspects of MPA network design.

EAME Secretariat is participating in the marine learning partnership that involves 30 members from WWF, WCS, TNC and CI. The purpose is to implement the project entitled “Effective Design and Management of Tropical Marine Protected Area Networks through Cross-Institutional Learning”, a Global Conservation Program (GCP) initiative funded primarily through USAID. This learning network was established to increase knowledge among major conservation organizations that have marine programs and are working towards scaling up conservation of marine resources from the site to the system or network level. The activities of the group include the exchange of practical experiences and collective knowledge, and collaboratively building new knowledge by addressing our most pressing questions. Through this work, it is hoped that the group shall jointly design and implement, with partners, a socially and ecologically resilient global system of MPA networks.

Way forward on sustainable financing mechanism for protected areas in Mozambique initiated with a white paper and a seminar involving financing experts and donor agencies.

The government of Mozambique made significant contributions in the designation of a new Marine Protected Areas between 2002-2004. EAME Secretariat played a strategic role in

providing the necessary information and guiding the process for securing the commitment of the government that resulted in 4% of the continental shelf of Mozambique being protected today. However, in order to achieve financial sustainability for Mozambique's national system of protected areas, there was a need to focus effort on the process for developing a sustainable financing mechanism for MPAs in Mozambique. It is important to note that lessons learned in this process may be replicated in other countries in EAME.

Several projects have identified the potential for revenue generation in Mozambique from tourism, as well as other sources of sustainable financing, but it is critical to accelerate implementation, document lessons and ensure coordination among approaches. The Ministry for Coordination of Environmental Affairs (MICOA) Centre for Sustainable Development of Coastal Zones, with support from DANIDA, recently completed an analysis of financing mechanisms for marine conservation. As Chair of the Mozambique National Committee for the Eastern African Marine Ecoregion (EAME), the Centre is heading up an effort to identify financing gaps for marine conservation in Mozambique.

Site-level business plans prepared for Quirimbas National Park and the proposed Primeiras and Segundas National Park helped make the case for creation of these parks and led to donor financing by AFD and the French Global Environment Fund-FFEM (for Quirimbas) and Conservation International's Global Conservation Fund and the United Nations Foundation (for Primeiras and Segundas). These business plans, prepared with support from WWF, will continue to be updated to identify additional sources of long-term sustainable financing beyond tourism-related revenue. These plans, along with a business plan currently under preparation for the privately-managed Niassa Reserve, also provide good models for future business planning for the national system of protected areas.

WWF is facilitating a round table discussion on Sustainable Financing of Protected Areas in Mozambique, which will serve as a catalyst to support the development of a national sustainable financing strategy for Mozambique's protected areas system. Lessons learned (in and outside the region) on policy reform, effective financial management and planning and a variety of financial mechanisms (conservation trust funds, debt relief, environmental services and tourism-based mechanisms) would be critical inputs to support the development of this plan. The project will also promote greater coordination among stakeholders and increase the capacity of local actors to engage in policy reform, sustainable finance planning and implementation at the national level.

Activity 1.3: Facilitate process of establishing a rigorous adaptive management framework from ecoregion to site scales.

EAME Ecoregion wide learning agenda developed using results chain analysis:

Results Chain Workshops were designed to carry out a strategic planning process – based on analysis of results chains – to strengthen the EAME program in a manner that is consistent with the WWF Standards of Project and Program Management. The first results chain workshop was in Bagamoyo, Tanzania in September 2005 and was followed by a second workshop in Pemba, Mozambique in December 2005. The results chains for the EAME Action Plan were completed in Pemba. The outputs are summarized in a WWF EAME action plan document that will form an

important part of the EAME Program Implementation Agreement (PIA). See attached draft of the WWF EAME Action Plan.

The EAME MPA Learning program was developed through a stakeholder workshop held in Pemba, Mozambique in December 2005 (please see attachment 2 for the learning agenda). The workshop developed the types of learning to be facilitated through a cross-site learning network, the commitment required for cross-site learning, and a 4-year work plan. EAME Secretariat is actively fundraising for additional resources to implement the work plan. A cross-site learning workshop was carried out on Mafia island during the last week of August 2006 (please see attachment 3 for provisional agenda). Key learning categories include community involvement in MPA management, MPA financial sustainability, participatory monitoring and research, effective options for management of destructive fishing gear, sustainable livelihoods as a means to alleviate poverty and achieve compliance, communication and dissemination of information, benefit sharing, and linking with the private sector.

A specific component of learning agenda focusing on conservation practitioners learning program on CBNRM in MPAs developed:

A Forum for MPA managers was established in EAME. This forum is responsible for articulating issues regarding conservation and sustainable use and management of marine resources through MPAs. A plan is underway to join efforts with WIOMSA to identify training needs of managers and MPA practitioners to articulate priority issues within the EAME MPA learning program. An inventory is underway to determine the facilities available at each of the MPAs to help planning. A MoU between WWF-EAME and WIOMSA is expected to be developed to strengthen this particular initiative.

Through the USAID learning grant to the EAME Secretariat, a learning visit was made possible for MPA managers from 5 EAME MPAs to Quirimbas NP. A second MPA Learning visit to Mafia Island MPA (Tanzania) is planned for September 2006.

Objective 2: Promote effective management of Kiunga Marine National Reserve (KMNR) through collaborative management structures.

The goal of the WWF Kiunga Conservation and Development Project is to: “safeguard the biodiversity and integrity of physical and ecological processes of the Kiunga Marine National Reserve (KMNR) for the health, welfare, enjoyment and inspiration of present and future generations.” Conservation efforts in Kiunga will also benefit coastal Somali communities across the border, where South to North currents transports fish and other sea life into these impoverished areas. To achieve these results, better management structures are needed. The objectives of the project are to:

- Strengthen KMNR collaborative management structures and institutional mechanisms with full participation of local communities and other stakeholders;
- Establish capacity of the local community to undertake and participate in conservation management programs;

- Enhance capacity of the local community to undertake conservation-compatible income generating activities (IGA) and rural enterprises as other means of livelihood;
- Establish and implement resource management programs; and
- Enhance information management.

The five functional components/departments working towards the achievement of these objectives are finance and administration, sustainable fisheries management, species protection, education and awareness, conservation and social development (including the eco-friendly handicraft initiative).



Sustainable fish traps, such as this one shown in Kiunga MNR, replace damaging nets that destroy the seascape and collect bycatch through the sustainable gear exchange.
© WWF/Philipp Goeltenboth

The Kiunga project falls under the East African Marine Eco-region (EAME). Major Kiunga project contributions to EAME include: effective management of the KMNR; sustainable fisheries in Lamu Archipelago; improved information for adaptive management; promotion and support of sustainable fishing gear; improving livelihoods of communities by introducing sustainable alternative income generating activities; and species protection. Under species protection, the project is running a very successful component towards stabilization of the marine turtle population (a species of special concern in the eco-region and globally).

Activity 2.1: Management frameworks, operations, personnel and infrastructure strengthened for sustainable and adaptive reserve and resource management.

The sustainable gear exchange initiative is now operational in all KMNR villages. A revolving fund for gear exchange has been established to enable those who did not participate in the initial exercise to acquire sustainable and legal gear. The success of the exchange initiative has improved fishermen's attitudes towards sustainable management. The fund will enable a continuous exchange for sustainable gear, even after the WWF/USAID intervention ends. This is in principal a form of micro-credit that is managed by fishermen themselves.

Maps of KMNR with its ecological resources are being geo – referenced to provide proper information on ecologically sensitive sites. This will enable Joint Management Team and fisher groups in zoning areas for specific activities.

Each village in Kiunga MNR now has a no fishing zone set aside specifically to regenerate fish stocks. There are also Imbos (fishing zones) set aside for only a particular kind of sustainable and legal fishing gear. The regulations and rules in these imbos are enacted and agreed by the community members (fishermen) any transgression is reported to the relevant authorities if community elders cannot arbitrate it.

Kiunga's Joint Management Team (KWS, FiD, FoD, LCC, Community, and WWF) was reconvened and the roles and responsibilities of all stakeholders defined. This directly contributes to integrated management and sustainable utilization of KMNR natural resources. The membership was expanded to ensure equitable representation of all stakeholders. Concrete plans were made ensure its recognition by the government institutions and frameworks and all other stakeholders. Priority issues for action were identified.

There have been significant efforts to improve the management of Kiunga MNR. Local fishermen established four Beach Management Units (BMU's) for sustainable fisheries management under the new fisheries regulations. Ten (10) sea patrols were carried out jointly by community members, FiD and KWS. To learn from the experiences of other areas, members of the Joint Management Team participated in an exchange visit to two other co-managed conservation projects in Kwale and Bogoria.

There has been closer collaboration between FiD, WWF and KWS who have shared training opportunities in the fish frame survey, in coral diseases, and in ecological monitoring.

All staff and research houses were refurbished including Mongo Sharif and Kiunga Mwini turtle camps. The project purchased 6 handheld radios and one base set to improve field communication and operations. All vehicles and boats have been regularly serviced.

Activity 2.2: Facilitate sustainable management through data collection and analysis of the fisheries resources and habitats in the KMNR and adjacent waters.

Joint fisheries surveillance patrols were conducted approximately every month, including KWS rangers, local community members, and WWF Kiunga project staff.

Numerous studies were completed over the reporting period, increasing knowledge of the KMNR fisheries. WWF together with Coral Reef Degradation in the Indian Ocean (CORDIO) and representatives of all fishing villages conducted the second ecological monitoring and coral surveys. Feedback meetings on data collected from fish landing sites indicate a gradual improvement in fish catch. The CORDIO report can be obtained from WWF or CORDIO.

WWF trained fish data collectors in Lamu to maintain a fish catch database that will be used to evaluate the impacts of natural resource use in the reserve. This training will also help empower communities in the co-management of the reserve. WWF and the Lamu District Fisheries Department (FiD) developed the pilot study on dry fish catch in three sites. These results will be analyzed in a database to show trends that will be used in the management and evaluation of the park.

WWF and Fisheries Department jointly harmonized data collection in Lamu district by introducing a new standardized fish catch data forms.

Coral transplants in most sites have responded positively and new coral transplants will be made in KMNR's annual coral survey.

Activity 2.3: Capacity of the local community to undertake and participate in conservation management programs in the reserve strengthened.

All village health committees are operational and have monthly work plans on improving environmental health and awareness among community members. Village health committees (clubs) have been trained to come up with bi-annual environmental and health reports.

Publications and materials on fisheries data and sustainable utilization of KMNR's resources continue to be translated, and posters and pictorials were created to increase communities' knowledge of sustainable natural resource use. However, a lack of a digital camera to capture important shots of project events and under water photos during ecological monitoring limited the effectiveness of publications.

The project is focusing heavily on strengthening the involvement of members of the community in conservation efforts – in joint management of the reserve as well as sustainable use of marine resources, and in creating viable sources of alternative income that will reduce the community members' need to take to the sea for food and income, thus reducing pressure on the reserve's natural resources. To achieve this, all women's groups involved in the eco-friendly handicraft initiative have been registered. Women are using the colorful flip-flop materials that wash ashore on the beaches to make crafts for sale to tourists and buyers abroad. This helps create effective and independent management systems for women-run small businesses that take pressure off of the Reserve's natural resources. The project was hindered by a delay in product delivery due to logistical constraints, and high transport costs that affected eco-friendly handicraft production and sales.

The Joint Management Team (the JMT is comprised of the KWS, WWF, FiD, FoD, and communities) led environmental education and awareness sessions in the villages to improve people's understanding of how they can become active in co-managing the park. People are now better aware of the environmental impact of their activities. This improved efforts at joint management of the park. Particular attention has been focused on involving youth, as their involvement in the management of the park is critical for its sustainability.

All five villages in the KMNR catchment with turtle landing beaches organized Year of Turtle (YoT) awareness events (Kiunga, Mkokoni, Kiwayu, Nda, Rubu). The turtle conservation program has seen thirty (30) more youths volunteer in the program - taking the lead in raising awareness about turtle conservation. The increase in youth volunteers was due to efforts of the turtle team to increase awareness of the benefits of conserving turtles, as well as efforts to extend opportunities for youths to volunteer in youth turtle conservation groups in all villages. The festival also increased awareness of sustainable natural resource use and environmental issues among school children.

3 primary schools involved in the environmental education project and awareness competition at the annual Marine Environment Day won awards for best presentation of environmental communication. These successes are increasing the youth's interest in, and understanding of, sustainable natural resource management. It must be noted that there was inadequate funding to

implement conservation and social development activities, education and awareness and support for eco-friendly work.

The eco-friendly handicraft initiative successfully facilitated the registration of all women's groups involved in the eco-friendly handicraft initiative. Women are using the colorful flip-flop materials that wash ashore on the beaches to make crafts for sale to tourists and buyers abroad. This helps create effective and independent management systems for women-run small businesses that take pressure off of the Reserve's natural resources.

Objective 3: Promote effective management of Quirimbas National Park through collaborative management structures.

The Quirimbas NP overall goal is *to conserve the diversity, abundance, and ecological integrity of all physical and biological resources in the park area, so that they may be enjoyed and used productively by present and future generations*, which is supported through six goals:

1. to protect, conserve, and where necessary restore the ecosystem processes and the species and genetic diversity of all terrestrial and marine resources (living and non-living) in the Park area and its area of influence;
2. to promote the economic and social well-being of the park's ancestral inhabitants by the promotion of sustainable resource use strategies, by the development of ecologically sensitive livelihoods options, and by prioritizing their interests in the economic opportunities deriving from the establishment of the Park;
3. to insure that all stakeholders—including but not limited to residents, tourist operators and investors, and Park management structures—share both the benefits of and the management responsibility for the Park;
4. to protect, conserve, and rehabilitate historical monuments, ruins, and other cultural resources in the park area (including local culture and tradition);
5. to stimulate and facilitate the growth of eco-tourism in the Park area, the province, and the north of Mozambique; and
6. to insure the sustainability of the park itself by the adoption of appropriate fund-raising mechanisms, cost-effective operational systems, and the development of partnerships with other stakeholders and relevant research institutions.



A community leader drops a buoy marking the boundary of Quirimbas' fishing no-take zone. © WWF/Peter Bechtel

These goals reflect the QNP's long-term concern both with the conservation of the Park area as well as the 'conservation' of its human inhabitants; the Park is intended to be of direct benefit to local users, who will also participate in the management of the Park's resources. To this end, harmonization of potentially conflicting uses is a main strategy of the Park, while zoning is a

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main tool. Three types of zones are created, allowing for a range of human uses and impacts from total protection to community development and (sustainable) use. These zones interact with each other in a synergetic way, benefiting all concerned. For example, research in neighboring countries shows that the creation of marine sanctuary areas (no-fishing zones) actually results in increases in fish capture over a wide area (known as “spillover”), thus benefiting tourists (who can visit the sanctuary), local fishermen (who catch more fish in the surrounding areas), and the environment of the Park.

The objective of fisheries co-management is one of the two key objectives (the second objective is animal-human conflict reduction in the terrestrial part of the park) in the WWF Quirimbas National Park (QNP) Project, which was started in July 2002.

Activity 3.1: Address resource exhaustion, to protect vulnerable habitats, and to create a source for both fish and larval dispersal, three new fish sanctuaries will be created.

Quirimbas now has four co-management committees overseeing the fishing sanctuaries as well as the surrounding areas. They are responsible for developing and implementing sustainable use of the marine resources.

GIS maps of Quirimbas NP were completed as planned, and a databank system is being developed with the assistance of the Catholic University in Pemba.

Fishing sanctuaries have been extended to oyster beds after a bed of Cape Sand Oysters, a highly threatened local delicacy, was discovered at the south end of the Matemo Sanctuary. Consequently, plans to establish a rotational harvesting scheme were put on hold, and a hunt for remaining beds has been prioritized. Since that time, another oyster bed lying in water 5m to 15m meters deep was found approximately 1 km north of Ibo Island. This bed is very extensive with an oyster density measured at up to 100 individuals per square meter. Given the filter feeding habits of oysters this bed must make a huge contribution to maintaining water quality in the area north of Ibo. The oyster bed north of Ibo Island will be zoned into both sustainable use and total protection zones by December, 2006. A management plan for this bed will be established and implemented by the Ibo community working with their ranger team. A pilot experience of spat collection for inshore “oyster kraals” will be implemented to restore oysters as a source of women’s income.

Plans to establish rotational harvesting schemes were put on hold as stocks of oysters remaining in shallow water were found to have declined considerably over the past year due to human pressure. Instead we are prioritizing a hunt for remaining beds. Park staff continue to look for sites that have corals living under difficult conditions to include these in sanctuary areas. Difficult conditions include areas with cloudy or turgid water, lots of algal growth, little aeration, higher temperatures due to shallow depth and little water movement, much algal growth, etc. Protection of these areas is important to buffer El Nino effects and global warming. As water warms up and less “tough” corals die, these already-adapted corals will be the ones to repopulate more fragile reef areas. An extensive reef system was just discovered at the north end of Quirimbas NP that meets these conditions, on the inshore side of the Zala Bank.

Fish capture around the sanctuary was monitored and research was conducted to measure the effects of sanctuaries in Quirimbas NP. The results demonstrate that the Quilalea Sanctuary provided an increasing number of fish for the local community and that the oyster beds within the sanctuary at Matemo had a larger number of oysters than the previous year.

WWF is receiving requests for MPAs from communities in Palma District, along the shores of Lake Niassa, and in the border lakes region along the Malawi border (Lakes Chuita, Chilua, and Amaramba). So the field is opening for more and more conservation for the benefit of community livelihoods as well as habitats and species.

Activity 3.2: Improve overall compliance with park and national fisheries regulations.

The Park's ability to address large scale, industrial infractions has improved from collaboration with the Mozambican Navy and the commencement of marine patrols by a large, armed boat that can now patrol up to the 12 mile limit. There have been further discussions with the American Embassy about providing 5 more boats to the park.

As residents' compliance with fishing regulations continues to improve, the focus now shifts to the invasion of poachers from outside Quirimbas NP borders. Pressures include industrial tuna boats, illegal buyers of live prawns, and small scale operators illegally cutting mangrove from within the Park for sale in Pemba Town. To counteract this, Quirimbas NP has enlisted the support of the Ministry of Defense, which has taken a strong position on the environment and MPAs in general. To further strengthen this collaboration, a number of decisions have been made:

1. to re-open the naval base within Quirimbas NP on Ibo Island;
2. to develop and fundraise for a joint WWF-Quirimbas NP-Navy strategy on coastal security;
3. to operate jointly Quirimbas NP's fleet of patrol boats;
4. to increase the number of arms issues to rangers by Naval personnel;
5. to increase the number of fisheries co-management committees;
6. to document the cost to Mozambique (economic loss) caused by illegal fishing every year and to divulge these figures to decision makers at the national level.

To improve knowledge of the law and more efficient patrolling and community relations in the park, park rangers were trained for a week on Ibo Island (the annual ranger upgrading course). Here, the rangers were reorganized into 7 management units, to have a base, a storeroom, a squad leader, and a somewhat decentralized operational plan. This plan will be phased into action, starting with the newly-constructed entrance gate into the Quirimbas NP in Napuda.

To increase knowledge and awareness of MPAs, Quirimbas NP research results on the effects of sanctuaries were presented at a seminar at the National Institute of Fisheries Research. The results demonstrate that sanctuaries are proving to be engines for both conservation and improved fisheries. The Quilalea Sanctuary provided an increasing number of fish for the local

community and that the oyster beds within the sanctuary at Matemo had a larger number of oysters than the previous year.

Efforts to encourage practices that do not lead to over fishing were made through the financing of the Line Fishing Group. However, financial disagreements have shifted investments towards the development of oyster sanctuaries.

In cooperation with the government Institute for the Development of Small-Scale Fisheries, the Project has embarked on a program of creating Community Fishing Councils (CCP) throughout the district. These Councils have been shown to be very effective in regulating fishing activities in other provinces, but have always suffered from a lack of real enforcement backup when needed. Inside the Quirimbas National Park, however, this backup is provided by the Park Rangers, and so we have adjudged the conditions to be perfect for this type of activity. The Councils' main tasks are to control migrant fishermen, regulate the use of illegal and/or dangerous fishing gear (explosives, poisons, small-mesh nets, etc.), serve as a liaison for fishing messages, and negotiate with other communities, buyers, and other stakeholders.

Activity 3.3: Prove and make visible the fisheries and habitat conservation results of the park, monitor, evaluate, and divulge the results of Quirimbas NP ecological management activities.

Research into marine sanctuary results as well as local community anecdotal information continues to show that marine sanctuary areas, as implemented within Quirimbas NP, do increase fish populations and promote environmental conservation and habitat restoration. Local fishermen have been participating in monitoring activities to increase their understanding of the benefits of sustainable marine resource management. Quirimbas NP research results were presented at a seminar at the National Institute of Fisheries Investigation, and for the first time this institute acknowledged these results and supported the creation of sanctuaries. This acknowledgement is beginning to have much more wide-ranging implications, as the Ministry of Fisheries position against an MPA in the Primeiras and Segundas softened considerably in August. Our allies, the Fishermen's Association of Nampula, had a series of interviews, including with the President and the Minister of Fisheries, where it was clear that the proposed MPA now has their support.

Documentation of Quirimbas NP successes continues to be an important way to overcome political obstacles. Seminars held this past year to divulge results played no small part in the reduction of tensions between Quirimbas NP and the Ministry of Fisheries.

Rangers were trained in the MOMS system during a course held in August, but there are still difficulties filling in the event book sheets. More follow up is needed for this system to work than previously thought.

Progress Table

Benchmark Number	Benchmark/Output	Status*
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1 EAME Program		
1.1	Maintain overall project management and constructive working partnerships between WWF, donor agencies, field staff, focal Institutions and communities.	on track
1.2	Facilitate effective management of existing MPAs and help expand/establish marine protected area network(s) in EAME.	on track
1.3	Facilitate process of establishing a rigorous adaptive management framework from ecoregion to site scales.	initiated
2 Kiunga MNR		
2.1	Strengthen management frameworks, operations, personnel and infrastructure for sustainable and adaptive reserve and resource management.	on track
2.2	Facilitate sustainable management of the fisheries resources and habitats.	on track
2.3	Improve livelihoods and conservation roles of local resource users living in and around KMNR.	on track
3 Quirimbas NP		
3.1	Address resource exhaustion, to protect vulnerable habitats, and to create a source for both fish and larval dispersal, three new fish sanctuaries created.	completed
3.2	Improve overall compliance with park and national fisheries regulations.	initiated & on track
3.3	Improve overall compliance with park and national fisheries regulations, the capacity of park staff and park communities will be built in a variety of areas.	mixed performance

* Status may include activities that are completed, on-track, delayed, mixed performance, or cancelled.

Next Steps

EAME program:

EAME Secretariat is now focusing on the development of the Lamu and Tana seascape programs in Kenya.

WWF will be conducting a rapid assessment of the socio-economic and environmental status of Primeiras and Segundas National Park, which will help demonstrate the clear benefits of MPAs to both local communities and governments.

MSC certification will be introduced as a tool for sustainable fisheries management, improved fish marketing, and quality assurance in EAME.

A sensitivity map for oil and gas development in EAME is in production.

The recently developed Monitoring and Evaluation framework will be implemented.

We will begin promoting regional collaboration in fisheries management in EAME countries.

We will start designing an MPA network in one country and follow through the sustainable financing options for MPAs.

Results and recommendations of the recently completed EAME audit/review will be implemented, with a view particularly to strengthen partnerships and implementation of EAME Secretariat strategy and implementing a learning and exchange program.

MPA management effectiveness will be promoted through dissemination of IUCN developed MPA management tool kit, and promoting joint resource management inside and outside MPAs with stronger involvement of the communities.

Engagement and exchange will be promoted between EAME countries and regional fisheries management organizations (IOTC and SWIOFC in this case), and a process facilitated for enhancing regional cooperation on sustainable fisheries management focusing on negotiation for access agreements and MCS.

Kiunga:

The JMT will lead a participatory review of the KMNR management plan, which will provide community input towards conservation of resources in the reserve.

It is crucial that we ensure effective contribution of beach management units towards sustainable management of the KMNR fishery. The benefits of these fisheries will also be felt by coastal communities across the border in Somalia.

We will work to sustain youth participation in turtle conservation and eco-friendly projects.

Quirimbas:

The creation of the Ibo Oyster Bed management scheme is scheduled to be completed in the next year. This includes mapping the boundaries of the map and marking the zones with buoys and by GPS by 12/2006. The management plan is scheduled to be agreed upon, written down, and signed by community leaders by 4/2007. The co-management structures needed to implement this will be developed and a co-management committee will be put in place on Ibo Island. Finally, a women's group will be organised to begin pilot experiences with oyster kraals on Ibo Island by 4/2007.

Quirimbas NP will improve their response to large scale, industrial infractions through collaboration and joint action with the Mozambican Navy. There will be further training of the ranger team to improve their knowledge of the law and patrolling and community relations in the park. The physical presence of the Navy within Quirimbas NP will reduce large scale infractions. It is hoped that an increased awareness of the economic losses due to illegal fishing will encourage decision makers to shift more financing to the Navy.

The number of operational community fisheries committees and community ranger groups will be increased.

Success Stories

EAME program:

Strategic Partnership for Sustainable Fisheries Management in Sub-Saharan African Countries:

The World Bank approved a US\$60 million sustainable fisheries investment fund in Sub-Saharan Africa. EAME program worked closely with WWF-US, FAO, WB and fisheries stakeholders from all Sub-Saharan Africa (SSA) countries to prepare the proposal and contributed in guiding the process to secure World Bank/GEF funds to support sustainable fisheries for SSA countries. Two consultative regional workshops were held in Dakar, Senegal in August 2005 and Dar es Salaam, Tanzania June 2006 as a part of that process. The countries endorsed the Regional Advisory Committee (RAC) as an advisory body to oversee the fund. The African Union is the chair of the RAC, with WWF and the regional fisheries organizations in sub-Saharan Africa as permanent members.

EAME Secretariat provided support to the African Union (AU) in organizing the first Regional Advisory Committee Meeting on 16-17 May 2006 where the partnership agreement was signed. The milestone signing ceremony was well covered by local media and internationally (CBC, VOA etc). It is the expectation of EAME Secretariat that the funding facility will help the SSA countries achieve sustainable management of their fisheries resources while at the same time ensuring that local communities are benefiting from funds accrued through the fisheries partnership.

Promotion of Fair and Equitable Fisheries Access Agreements in WIO:

The governments in WIO region have launched a forum to discuss fair and sustainable access to fisheries resources in the region. The call was made following a two day meeting of Directors of Fisheries from all WIO states. This workshop, sponsored by EAME Secretariat, took place in Dar es Salaam in June 2005. The initial objective was to provide a platform for key fisheries stakeholders in the region to share experience on regional fisheries issues, particularly the issue of fair and sustainable fisheries access agreements. The workshop provided an opportunity for WIO stakeholders to learn from each other and also from the experience of other regions including Western Pacific and the Atlantic Ocean. WIO states need increased capacity for negotiating fair and equitable access agreements. EAME Secretariat will regularly convene the forum of directors of fisheries since the forum is perceived as an important platform for discussing regional issues related to sustainable management of fisheries and other marine trans-boundary resources. WWF is committed to working with WIO states in ensuring sustainable industrial and artisanal fisheries. Specific attention will be given to reduction of by-catch level and habitats alteration caused by fisheries-related activities. More details can be obtained from a published workshop proceeding available from the EAME Secretariat.

Scaling up Conservation in Tanzania:

With support from the EAME Secretariat, and in accordance with the 'Ecoregion-based approach' for sustainable management and conservation of marine biodiversity at appropriate scales, WWF in collaboration with partners in Tanzania are implementing a new generation of projects in the Eastern African Marine Ecoregion. The 'Seascape' concept mirrors the terrestrial 'Landscape' approach and recognizes the need to look beyond protected areas to the wider geographic, social and economic context. It takes as its starting point the fundamental links between environment and poverty and between biodiversity conservation and sustainable livelihood development. The Rumaki Seascape (Rufiji, Mafia, and Kilwa) project area is the

first full-scale seascape program anywhere in the world. USAID supported the creation of this seascape and is now supporting the planning for another in the Lamu archipelago, which will include Kiunga MNR, through its current support of the EAME Secretariat. The Rumaki seascape project area is approximately 9,000 km², includes the largest contiguous block of mangrove forest (Rufiji) on the Eastern African seaboard, extensive coral reef areas and important prawn, finfish & invertebrate fisheries. These habitats harbor the highest levels of coral & fish biodiversity in the region, important sea turtle nesting sites and the only remaining dugong refuge in Tanzania. The area is one of the 8 high priority ‘Seascapes’ under the Eastern African Marine Ecoregion.

Kiunga:

The sustainable gear exchange initiative: is now operational in all KMNR villages and experiencing a high level of community interest and ecological protection. A revolving fund for gear exchange has been established to enable those who did not participate in the initial exercise to acquire sustainable and legal gear. The fund, financed by USAID through the EAME Secretariat and managed by WWF Kiunga MNR, will enable a continuous exchange for sustainable gear, even after the WWF/USAID intervention ends. This is in principal a form of micro-credit that is managed by fishermen themselves. To date, there has been a reduction in habitat destruction, a drastic reduction in juvenile species and by-catch, less pollution, and a growing selection of target species. The sustainable gear exchange in Kiunga will be used as a model on Mafia Island and potentially Quirimbas National Park.

Eco-friendly handicraft initiative:

The project successfully facilitated the registration of all women’s groups involved in the eco-friendly handicraft initiative. Women are using the colorful flip-flop materials that wash ashore on the beaches to make crafts for sale to tourists and buyers abroad. This helps create effective and independent management systems for women-run small businesses that take pressure off of the Reserve’s natural resources.

Positive Results for Turtle Conservation Program:

The turtle conservation and monitoring program has noted a 40% increase in reported turtle nests of which more than half were reported by the community. Of all marine turtle nests reported in Kenya, 50% are from WWF KMNR Project. This year, 170 marine turtle nests were recorded of which 26 were return (tagged) individuals. Further, the community continued to improve their marine turtle conservation efforts as observed through their reporting of more than 60% of nests in FY 06. These positive results represent the community’s positive attitude towards turtle conservation and working with WWF. Participation in such activities is increasing, thereby improving the management of the park.

The Joint Management Team plan sets an example for other MPAs.

The Joint Management Team (JMT) initialized the process of reviewing the KMNR management plan with full participation of community members. The JMT is comprised of the KWS, WWF, FiD, FoD, and communities. It is hoped that these activities will set a precedent for any MPA in Kenya and will hopefully serve as a model for other MPAs throughout the region.

Quirimbas:

WWF Mozambique's research into marine sanctuary results and local community anecdotal information continue to show that marine sanctuary areas, as implemented within the Quirimbas NP, do increase fish populations and promote environmental conservation and habitat restoration. Quirimbas NP research results were presented at a seminar at the National Institute of Fisheries Research to a wide range of staff and fisheries officers. The Institute acknowledged that sanctuaries are proving to be engines for both conservation and improved fisheries. As a result, more involvement from the fisheries sector was promised.

The Community Fishing Council (CCP) on Matemo Island was facing a problem in which fishing boats from neighboring coastal villages were entering into Matemo's waters and invading their sanctuary. With the help of the Project, the CCP, while still in its initial phase, organized a visit to 4 neighboring villages in February. There, they discussed the issue and called on the leaders of those villages to control their own population. Faced with a united front, the leaders of all the villages consented, and no foreign boats have been seen entering Matemo's waters since. This is a perfect example of how support for Fishing Councils can yield great results at the local level.

A large bank of Cape Sand Oysters (*Pinctada capensis*) was discovered in deeper water just north of Ibo Island. The bank covers several square kilometers and can be used both as a managed fishery (a rotating harvesting system) as well as a larval source for an eventual oyster production project. This was very fortunate as the shallow water oyster bank in the Matemo Sanctuary suffered from higher temperatures and an algal bloom and there appears (based on a superficial visual transect) to have been some mortality due to one or both of these factors.

We have also identified a new method of cultivating oysters and mussels, used in Tanzania, which we will be piloting in Matemo. This should allow for a significant income gain for local producers, who are expected to be mostly women. We have identified two producer groups for oyster and prawn collection, and are making links between local producers and the hotels in the area. This linkage to a responsible market is a key step in creating sustainable development, and will be tied into a national campaign to create a "Green Stamp" demonstrating positive ecological practices by tourist establishments.

Challenges and Lessons Learned

EAME program:

EAME as an ecoregion is under-funded. The cross-cutting work to create an enabling environment, including policy work, is grossly under-funded. Thus, sufficiently funding the EAME Secretariat's policy programs and program to support an enabling environment program remains a challenge. Likewise, no funds have been identified so far to implement the newly developed M&E program. Collection of baseline data alone for all EAME countries could be a major effort requiring full-time consultants to be engaged for a considerable period of time.

Funding the EAME National Action Plans in Kenya and Mozambique is also a challenge. In Tanzania, funding has now been secured through the World Bank-supported MACEMP project.

We will need to pursue national government endorsement of the EAME agenda and Conservation Plan as well as their greater incorporation into national government strategies. This government involvement is even more important given the fact that WWF (with IUCN to some degree) is the only large NGO implementing marine conservation throughout the region.

Kiunga:

The community's high expectations of WWF beyond its mandate stress relations when these expectations are not met. WWF will have to find ways to develop the partnership in such a way that expectations are more realistic.

Predation remains a challenge, as a high number of turtle nests suffered natural mortality (predation), and an increase in capacity is needed for fishermen to effectively facilitate monitoring and protection of turtle nests in predation-prone areas.

A funding shortfall in the conservation education and awareness program has constrained its activity scope.

There is inadequate capacity of government partners to effectively carry out their mandate.

Boundary marking in Kiunga MNR faced opposition from sections of the local community, mostly due to fear of losing their livelihoods and user rights. Fortunately, the Joint Management Team was effective in resolving the impasse on boundary marking and building trust between community and KWS. This illustrated how joint management institutions are useful to building trust with the community.

Youth participation in turtle conservation and eco-friendly projects must be sustained, as youth participation and acceptance of turtle conservation is crucial for its long-term sustainability.

Quirimbas:

A key lesson we learned was the need for partnerships with a variety of institutions and with a variety of levels of government. We have been able to overcome difficulties with one department or Ministry through the assistance of another, using Defense to liaise and keep

channels open to Fisheries, for example. It does appear that this strategy means that we will be able to repair damaged working relationships and build better partnerships in the future. In short, government, and any other institution for that matter, is not a monolithic entity, and it is important to find allies and be faithful to them even under the most difficult of circumstances.

There are gender implications for future collection of oyster spats for aquaculture. Currently, only men dive for the oysters although oyster collection is a woman's activity. Moving some spats into kraals inshore will allow women to resume a traditional activity. It will also promote a restocking of the more shallow areas.

Subgrantees

EAME Secretariat had no GCP-funded sub-grantees in FY06.