

## Large Scale Approach for Managing Marine Biodiversity in Eastern Africa

The Eastern African Marine Ecoregion (EAME) stretches from Kismayu to Sodwana Bay in South Africa. This globally outstanding Ecoregion supports a great diversity of plant and animal life, including some of the Indian Ocean's most diverse habitats. Approximately fifteen percent of the species in this Ecoregion are found nowhere else on earth.

The EAME's biodiversity faces many challenges. Poorly planned coastal and watershed development, destructive fishing practices, pollution, and climate change are destroying fragile coral reefs and mangrove ecosystems. Over-fishing by local and foreign fleets is depleting marine food webs. These threats gravely endanger valuable marine resources and ecological systems that have long sustained the livelihoods and well-being of much of the coastal population.

To take marine conservation to a level where it can actually reverse the global trends we are seeing today, it is critical that we shift our thinking to larger scales of conservation action. The ecological processes supporting biodiversity and the causes of degradation extend beyond the range of most site-specific projects.

To reach the most effective scales for action, full range of Eastern African agencies, in partnership with WWF, developed a strategic plan for large-scale conservation approaches in the Ecoregion. That process established the EAME vision, priority biodiversity conservation sites and a strategic framework for achieving the vision. Ecoregion conservation is undertaken in recognition of the need to implement conservation both in and beyond the traditional site level. This approach is holistic and strategic, and aims to catalyze action by a full range of stakeholders. With this solid partnership and an agreed strategy in hand, the nations of the Eastern African Marine Ecoregion are well prepared to take on the dynamic challenges they face in maintaining the rich biological heritage of this global treasure for decades to come.

### Establishing priorities for biodiversity conservation



### EAME Vision

“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 and maintain its biodiversity and ecological diversity”

## Rufiji-Mafia-Kilwa Declared Marine Ramsar Site

Tanzania has declared Rufiji Delta a Ramsar Site since January 2005. Known as the Rufiji-Mafia-Kilwa Marine Ramsar site this will be a fourth Wetland of International Importance in Tanzania for expanded protection under the international Ramsar Convention. The Rufiji-Mafia-Kilwa Marine Ramsar Site is a complex of coastal and marine habitats that as recently as four years ago was approved by the government for a giant prawn farm.

The newly protected site covers the delta of the Rufiji River; the Mafia Island about 25 kilometers offshore and surrounding smaller islands, sandbars, and coral reefs; the Songo-Songo Archipelago to the south and adjacent waters, including the Mafia Channel and waters between Mafia and Songo-Songo. Area of the Ramsar Site covers exactly the same area of the Rufiji-Mafia-Kilwa seascape, a priority site of global importance for EAME.

## Mozambique Accedes to Ramsar Convention

Mozambique has become the 141st Contracting Party to the Ramsar Convention after recently depositing its instruments of accession to the Convention on Wetlands.

The country's first wetland of international importance is the "marromeu complex" a magnificent wetland that is made up of the Marromeu Buffalo Reserve and four surrounding hunting concessions in Northern Sofala Province. This complex, whose total area is 1,300,000 hectares, has more than 68,000 ha of dry forest and woodland savanna, floodplain grassland, deepwater swamp, coastal dunes and mangrove forest. The complex also exhibits an impressive variety of wildlife species among which are the cape buffalo, waterbuck, sable antelope, lichestein's hartebeest, burchell's zebra and the African elephant.

WWF's Living Waters Programme, the WWF Mozambique Programme Office and the Mozambique Government's National Directorate of Environmental Management all contributed immensely to the accession process.



## Progress Being Made by EAME Countries in Achieving CBD MPAs Targets

(by Sue Wells, Neil Burgess and A. Ngusaru)

The countries of Kenya, Tanzania and Mozambique have made rapid progress in the last two decades in establishing systems of marine protected areas (MPAs). The size of more recently designated MPAs is markedly larger than that of early MPAs. The area of continental shelf that is now protected is 8.7% in Kenya, 7.7% in Tanzania and 4.0% for Mozambique.

The location of MPAs shows a good correlation with sites of high species diversity and coral reefs are well represented. There are also indications that the effectiveness of management is increasing in each country. However, there are major challenges to meeting the deadlines that have been set (2012 for a significantly larger, effectively managed, representative, global system of MPAs, comprising both multiple use areas and strictly protected areas). Many habitats and species are not yet fully represented in the MPA system, and improvements are needed before the MPA systems can be said to be effectively managed. Equally important is the need to establish better monitoring systems for measuring and assessing progress towards the targets.

## Network of Marine Protected Areas in Eastern Africa



## Sustainable Management of Coastal and Marine Resources in Tanzania

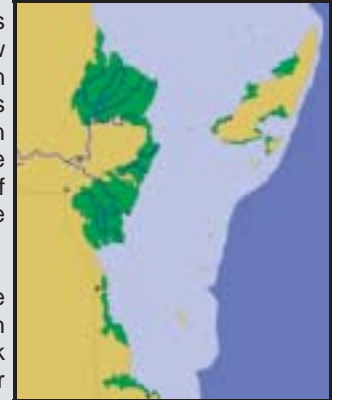
Tanzania is in the final stages of securing a World Bank support in what will be the largest investment by the Government of Tanzania (up to US\$ 55 million) for sustainable management of its coastal and marine resources. The Marine and Coastal Environment Management Project (MACEMP), which will be launched later this year, is a 6-year project with a focus on the sustainable management and utilization of the coastal and marine resources. MACEMP will support marine and near-shore policy reforms and implementation of activities that will impact positively the quality of life of populations in coastal area, and also on the integrity of the offshore resource base that is of national, and international, significance. The project emphasizes the establishment of an effective regulatory and institutional framework, participatory planning and the creation of an enabling environment for integrated coastal and marine resources management and private investment in coastal areas.

Project financing will be secured through a US\$30 million World Bank IDA Credit, a US\$10 million GEF Grant, and counterpart commitments of approximately US\$2 million. In addition, up to US \$13 million in bilateral co-financing or parallel financing will be sought. Associated with MACEMP, a Japan Social Development Fund (JSDF) of US\$1.8 million was approved by JSDF unit and will also be implemented through the World Bank.

The overall objective of this project is to improve management of coastal and marine resources, with a view to contributing to economic growth and poverty reduction. The specific objectives of the project are: Strengthening institutions charged with management of marine resources, with a focus on creating a common governance regime for the EEZ; Supporting the establishment of a network of MPAs; and supporting poverty reduction efforts in coastal areas through promoting community demand-driven development initiatives that empower local populations and generate cash income based on methods that are consistent with sustainable resource management. The project activities have been designed to assist the Government in implementing the National ICM Strategy, the National Fisheries Master Plan, Fisheries Act and the Marine Parks and Reserves Act. Through implementation of this project, Tanzania will be making a significant contribution to the implementation of the EAME Strategy and the Tanzania National Action Plan.

## Scaling up Conservation for Rufiji-Mafia-Kilwa Seascape

WWF in collaboration with partners in Tanzania are implementing a new generation of projects in the Eastern African Marine Ecoregion, which is in accordance with the 'Ecoregion based approach' for sustainable management and conservation of marine biodiversity at appropriate scale.



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 project area, at approx. 9,000 km<sup>2</sup>, 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 harbour 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 Africa Marine Ecoregion (EAME) Programme.

## Funding for Quirimbas National Park has been Secured for 2004-2008

The Government of Mozambique has recently approved the General Management Plan (GMP) for Quirimbas National Park. The Park covering about 7,500 Km<sup>2</sup> was established in 2002 through the support of WWF and local communities.

Funding for Quirimbas National Park has been secured by the Government of Mozambique for the next five years (2004-2008) from French Development Agency (ADF) and French GEF. The amount approved is Euro 3.5 million from ADF and Euro 0.7 million from GEF.

## Vodacom and WWF brings Telecommunications to Mafia Island



A new communication mast was opened on Mafia Island in a joint partnership between Vodacom, Vodafone and WWF. The new mast will not only link the island communities, but provide a vital communications link to prevent illegal fishing and support other conservation initiatives. The mast was opened by Hon. Arcado Ntagazwa, Minister for Environment in Tanzania,

Vodacom Tanzania's progressive decision to install its network on Mafia Island is already seeing the impact telecommunications can have. As this programme scales up to include the Mafia-

Rufiji-Kilwa seascape area – some 9,000 km<sup>2</sup> in size, the simple ability to communicate effectively will be critical to the success of the programme. WWF and the Marine Park are now in a stronger position to react quickly to incidences of illegal fishing. In addition accidental Turtle and Dugong catches in gill nets are now afforded rapid response thanks to Vodacom.

Most importantly telecommunications will also support the people of Mafia. Vodacom have reached out beyond the usual commercial considerations, and in doing so will help to change and improve the lives of the people of Mafia.



Tanzania Minister for Environment Hon. Arcado Ntagazwa speaks to the Mafia District Commissioner Hon. Libaba on a mobile phone using Vodacom service at the launching in Utende village.

## Dugongs in the Western Indian Ocean under serious risk of extinction

A UNEP/WWF Dugong status report covering Kenya, Tanzania, Mozambique, Madagascar, Seychelles, Comoros, Mayotte and Reunion was launched in July 2004 during the Nairobi Convention COP4 in Madagascar.

The report revealed that a small and fragmented populations of the dugong, a critically endangered marine mammal, still exist in the Western Indian Ocean region. The report calls for urgent action to save them from imminent extinction.

The study was commissioned by the United Nations Environment Programme (UNEP) following a decision at the 2001 Conference of the Parties of the Nairobi Convention which called for regional and international organizations to facilitate the development of a regional initiative to protect the dugong. Rapid assessments of dugong status, distribution and threats were undertaken by researchers in each country, and emergency conservation strategies and actions identified. The findings indicate that dugong populations have suffered severe declines for decades since the 1960s and 1970s.

The plight of the dugong off the eastern Africa coast has been mostly unknown and ignored and the status in the WIO region has reached crisis point. The major threats are entanglement in gillnets, hunting, destruction of dugong feeding grounds (seagrasses) from trawling, pollution and unplanned coastal development and, to a lesser extent, boat collisions and ecotourism. Dugongs are migratory animals and therefore a regional strategy for their conservation is essential if the dugong is to receive effective protection.

Dugongs are now believed to exist as very small and isolated populations in the extreme north and south of Kenya, the Rufiji Delta and north of Tanga in Tanzania, Bazaruto Archipelago in Mozambique, around the north and west coasts of Madagascar, Aldabra Atoll in the Seychelles and Moheli and Mayotte Islands in the Comoros archipelago.

Priority conservation actions recommended include: improving the level of protection for dugongs inside and outside marine protected areas and establishing dugong sanctuaries at known key sites; adopting the dugong as a regional flagship species & initiating a regional awareness campaign; strengthening capacity of relevant government authorities to enforce regulations; research and monitoring, in particular quantitative population surveys and tagging; and developing a pro-active regional dugong network for conservation practitioners and researchers.

The study serves as an important first step in identifying the major issues and gaps as well as raising the profile of this species. Funds are now urgently needed to move forward and implement conservation measures. If countries in the region collaborate, it will be possible to reverse the steep downward population trend and ensure that the dugong is not lost for ever.



Amani Mushi

## Gear Exchange for Sustainable Fisheries in Kiunga—Kenya

Fishermen in Kiunga Marine National Reserve (KMNR) in Kenya got new sustainable fishing gears through an exchange programme organized by WWF. Approximately USD 27,000, being a grant from Vodafone Group Foundation (VGF), was used to support approximately 300 fishermen to acquire legal and sustainable fishing gears which include legal fishing nets, masks, snorkels, fins, hooks, fishing lines and repair kits. The program aims at ensuring that prohibited fishing gears are excluded from KMNR by initiating a revolving fund where WWF acquires legal and non-destructive fishing gears and exchange them with illegal ones. (For more information contact Sam Weru, [werus@eikmail.com](mailto:werus@eikmail.com))

## First Ever Pearls Cultured In The Western Indian Ocean At Mafia Island

In December 2004, what are thought to be the first ever cultured pearls produced in the Western Indian Ocean, were harvested in Mafia Island in Tanzania. About 150 pearls were yielded by a trial culture of black-lip pearl oysters (*Pinctada margaritifera*), supported by the WWF Rufiji-Mafia-Kilwa Seascape Programme, part of the Eastern African Marine Ecoregion (EAME) initiative.



This pioneering livelihood activity is being conducted in association with pearl culture expert Dr Paul Southgate from James Cook University in Australia. The long-term aim is to establish small-scale artisanal pearl production that will generate revenue for local fishing communities within Mafia Island Marine Park, reducing dependence on fishing and strengthening perceptions that the marine park can benefit local residents, as well as protecting the outstanding regional marine biodiversity.

Pearl culture is a US\$ 1 billion/ year industry worldwide. Whilst cultured pearl production in Asia and Australia is conducted primarily by large, often international, companies using large farms, *P. margaritifera* is also used for relatively small-scale pearl production at village level, especially in various Pacific islands such as the Cook Islands, Fiji, Solomon Islands, Kiribati and Marshall Islands.

The pearls produced in Mafia are 'half-pearls', known in the trade as 'mabe', and are suitable for setting in pendants or ear-rings. Half-pearls can be grown in just 6-8 months whereas the higher value whole necklace pearls take 18-24 months. The next step in Mafia is to set the pearls and conduct a marketing trial with the steadily increasing number of international tourists visiting Mafia each year.

(For more information on pearl farming contact [Jrubens@wwftz.org](mailto:Jrubens@wwftz.org))

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