

Project Proposals on Management of Key Habitats

IMPROVING THE PROTECTION AND STABILITY OF CORAL REEFS AND ASSOCIATED COMMUNITIES

1. IDENTIFIERS

Project Number: HAB - 4

Project Title: Improving the Protection and Stability of Coral Reefs and Associated Communities

Requesting Country (ies): Kenya, Mozambique, Mauritius, Seychelles, South Africa and Tanzania.

Requesting Regional or National Organization: Ministry of Environmental Affairs of Mozambique, Ministry of Environment and Natural Resources and Kenya Wildlife Services (KWS) of Kenya, Ministry of Environment of Seychelles, Ministry of Fisheries of Mauritius, Department of Environmental Affairs and Tourism (DEAT), of South Africa, Ministry of Natural Resources and Tourism of Tanzania.

Executing Agencies: **Kenya:** Kenya Wildlife Services (KWS), Conservation Section, **Seychelles:** Ministry of Environment of Seychelles, **Mozambique:** Ministry of Environmental Affairs of Mozambique, GTA (Environment Working Group, Mozambique NGO), FNP (Forum Natureza em Perigo), Kenya Marine and Fisheries Research Institute, **Mauritius:** Ministry of Fisheries and Ministry of Environment of Mauritius, **South Africa:** Department of Environmental Affairs and Tourism (DEAT), KwaZulu-Natal Wildlife, Oceanographic Research Institute (ORI), South Africa, **Tanzania:** Marine Parks and Reserves of Tanzania.

Required National Partners: **Mauritius:** Ministry of Tourism and Transport, Ministry of Environment, Island Development Company, **Seychelles:** Marine Parks Authority, Marine Conservation Society of Seychelles (Seychelles), **Mozambique:** Departments of Environmental Management of Mozambique (MICOA), **South Africa:** Ministry of Environment and Natural Resources, Oceanographic Research Institute (ORI), KwaZulu-Natal Wildlife, South Africa, **Kenya:** National Environment Management Authority (NEMA), Kenya Marine and Fisheries Research Institute (KMFRI), Department of Fisheries and Coral Reef Degradation in Indian Ocean (CORDIO) Project, **Tanzania:** Ministry of Fisheries, Albion Fisheries Research Centre (AFRC), Department of Tourism in Tanzania

Priority Issues Addressed: Modification of Habitats and Ecotones,, unsustainable exploitation of fisheries and other living resources, climate change.

Regional Scope: The Eastern Africa

Project Location: Mozambique: Quirimbas Archipelago, Bazaruto Archipelago, Mozambique Island and surroundings, Nacala Bay and Inhaca Island in Maputo Bay , Ponta do Ouro ,
Seychelles: Priority Sensitive Area of Mahe, Praslin, La Digue & Other Inner Islands.
Kenya: Mida-Watamu Creek in Malindi, Diani Reefs Wasini Channel,
Mauritius – the whole coast of Mauritius and Rodrigues;
South-Africa: Northern KwaZulu-Natal;
Tanzania: Dar-es-Salaam and Zanzibar.

Project Duration: 5 years

**Working Group
of the African Process** Management of key habitats

2. SUMMARY:

There have been growing efforts to develop a management scheme for coral reef resources, which has been hindered by a number of concomitant factors. In the first instance, there currently exists little capacity in many of the sectors necessary for the development and implementation of an effective management program. Whilst there are a number of individuals who have experience in some aspects of management, government, and marine resources, these are presently too few to provide a solid base for management.

Coral reefs and associated communities, on the other side, are under great threats from human activities and “natural” causes. According different sources, coral reefs were badly affected by El Niño events in 1997/1998. Extensive crown-of-thorns (COTS) damage is also found in many areas of the region. The consequences of the El Niño bleaching are going to be even more serious as coral mortality on the northern reefs was as high as 99%; a similar progression in the collapse of reef structure on the seriously bleached reefs is anticipated (Lindén & Sporrang, 1999)¹.

Peoples in the coastlines of Eastern Africa and Western Indian Ocean Islands States are very dependent on coral reef resources and associated communities – reef fisheries, mangrove, sea grass beds. They not only depend directly from extraction of natural resources – for food, housing, heating, etc – but also indirectly from industries such as tourism, which rely mostly on the quality of the surrounding environment.

With the exception of some of the Island States (Seychelles, Mauritius) destructive fishing practices (dynamiting, poisoning, beach seining and bottom trawling) were usually employed, which put immense pressure on the marine resources.. This project intends to address the use patterns of coral reefs and related communities, by evaluating the social, cultural and ecological values of coral reefs and associated communities in different places. By facilitating the creation of alternative livelihoods and demonstrating a series of conservation initiatives – such as buoy installations - this project will support the reduction of some pressure in a few hot-spots.

However, there is strong need to, at the same time, to revise, develop or support the legislation to ensure the protection of coral reefs and their associated habitats. In that respect, the project will enhance the integration of coral reefs into the mainstream of decision making as part of an overall national integrated coastal zone management plan. This will come along activities pertaining at building an effective management capacity for coral reefs and associated communities.

Finally, the project will support activities of coral reef monitoring and research to provide a sound platform of information and technical support for the relevant decision making bodies and organizations that are responsible for coral reef management and to evaluate the social, cultural and ecological values of coral reefs and associated communities in different places. At the same time the project will help generate, and increase, awareness about the role of coral reefs and their significance for the welfare of coastal communities and the national economy as a whole.

¹ Lindén, O. and N. Sporrang (ed.) (1999) Coral Reef degradation in the Indian Ocean: Status reports and project presentations 1999. Stockolm.108 pp.

3. COSTS AND FINANCING (MILLION US \$)²

International & bilateral sources:

	List required financing by potential source	: USD 3,050,000.00
	Subtotal international financing	: USD 3,050,000.00
Co-financing:	Governments in cash & kind	: USD 450,000.00
	Subtotal Co-financing	: 450,000.00
	Total Project Cost:	: USD 3,500,000.00

4. GOVERNMENT ENDORSEMENT(S)

Hon. John Kachamila, Minister of Environmental Affairs of Mozambique
Prof. Migot Adhola, Permanent Secretary, Ministry of Agriculture and Rural Development, Kenya
The Hon. Minister of Fisheries, Mauritius
Mr. Maurice Lousteau-Lalane, Principal Secretary, Ministry of Environment of Seychelles
Hon. Minister of Environment Affairs and Tourism (DEAT), South Africa
The Hon. Minister of Natural Resources and Tourism of Tanzania

5. GOVERNMENT FOCAL POINT(S)

Mr. Evaristo Baquete, Ministry of Environmental Affairs of Mozambique
Seychelles, Mr. John Nevill, Director of Conservation, Ministry of Environment.
Kenya, Director Kenya Wildlife Services
Mauritius: Albion Fisheries Research Center (AFRC)
South Africa: Director-general, Department of Environmental Affairs and Tourism (DEAT)
Tanzania: Marine Parks and Reserves Unit, Institute of Marine Sciences

6. AFRICAN PROCESS WORKING GROUP FOCAL POINT(S)

Dr. António M. Hogueane, Regional Coordinator
Dr. AK. Armah, Expert
Mrs. Helena Motta, Expert

² This budget is preliminary and has not undergone a full consultation process with the respective countries. Therefore, it does not indicate the actual financial commitment that would be provided by participating countries once the project proposal and its components are finalised.

1.1.1.1 PROJECT DESCRIPTION

1. Background & Justification:

Coral reefs are among the most biologically diverse ecosystems typical of the coast of East Africa from Somalia to Mozambique featuring fringing and patch reefs along the coastline. They provide habitats for a wide variety of marine species and protect coastal areas from erosion and storm damage. They occur at the margins of the fringing platforms, mostly on the outer seaward facing slopes and in adjoining lagoons, on shallow sub-tidal patches isolated from extensive platforms. The island States have a wide variety of reef formation, including atoll formations such as in Aldabra Seychelles, Comoros, Mauritius and Rodriguez.. The East Coast of Madagascar, Kenya, Tanzania all have extensive fringing reefs except where they are broken in the vicinity of rivers and bay mouths (delta areas of Zambezi and Limpopo in Mozambique). The barrier reefs along the southern coast of Madagascar extend for 200 km forming one of the largest true barrier reefs in the world. Coral reefs are under pressure from human activities threatened by land use practices and siltation, water turbidity, fishing practices involving dynamite, poisoning and over-harvesting to extract their rich biological and mineral wealth. The total number of species in different parts of the region are: Kenya-Tanzania coastline 112 species, Mozambique 149 species, Reunion 127 species, Mauritius 136 species and Tulear Madagascar 113 species (TDA-SAP, UNEP, 1998)³. The numbers confirm that coral reefs host great biodiversity.

For instance, Mozambique possesses the third longest coast line in the Indian Ocean, extending 2,700km, much of which adjoins areas of coral reefs. Considering the vast area in question, comparatively little work has been undertaken in the area. Recently however, Mozambique has been amongst those African countries that are now starting to take measures to improve their coastal management . However, it is faced by a familiar range of obstacles including limited financial resources; shortage of suitably skilled personnel; poor infrastructure – both political and physical, and most importantly (and indeed the factor that this project will help to abate) a lack of information on the existing natural resources and the coastal habitats within the country. At present there is very little information on the status and distribution of habitats, sustainable rates of exploitation and the location of key areas in terms of biodiversity.

The coral reef eco-system constitutes a very important resource not only in terms of its biodiversity but also as the basis for the country's fisheries and eco-tourism. In Mozambique, the reefs and coastal waters provide the livelihood for the 6.6 million people (42% of the population) who live in the country's coastal communities and the fisheries earn 40% of the county's foreign revenue. Coral reefs are responsible for 70% of fisheries catches (Schleyer *et al*, 1999)⁴ and provide a hugely important nursery ground for many species of other commercially important marine species. In addition the reefs present the main attraction for the growing coastal tourist industry in Mozambique.

According to the available statistics, all the countries in the Eastern African region rank amongst the least developed countries in the world. In Kenya, the slowdown in economic growth that started in 1996 continued in 1997. Inflation was still very high (at 7.4% by June 1998) and external debt is over 60% of GDP by 1997. In Tanzania, GDP real growth declined from 6.2% in 1990 to 4% in 1998. Overall, however, the economy became more stable now than it was prior to the reform programmes in 1986. Mozambique's economy was expanding fast; it grew from an average of 6.7% a year during 1987-95 to 10% a year during 1996-98, whilst inflation declined from about 50% in 1995 to less than 1% in 1998. Real GDP grew from 11.3% in 1997 to 12% in 1998 and then declined to 9.7% in 1999. It was projected to grow to 7% in 2000. The huge floods of 2000 and 2001 in the South and center of the country, however, represented a setback in this improvement (INE, 2001)⁵.

³ UNEP (1998). Transboundary Diagnostic Analysis and Strategic Action Programme for Western Indian Ocean. Draft. Nairobi. 114 pp.

⁴ Schleyer, M, D.Obura, H. Motta, MJ. Rodrigues, (1999). A preliminary assessment of coral bleaching in Mozambique. In Coral Reef Degradation in the Indian Ocean. O. Lindén and N.Sporrong (ed). Stockholm. Pp 37-42.

⁵ INE (2001). Instituto Nacional de Estatísticas. Dados Estatísticos. Folheto. 13 pp.

Poverty remains a major issue in eastern African countries. Many coastal poor people derive a direct living from the exploitation of marine and coastal natural. Some of the rich people also derive their wealth from the exploitation of marine resources, often illegally (WWF, 2002)⁶.

Demand for building materials such as mangrove poles and coral for lime and the demand for agricultural land have also contributed to habitat degradation and destruction. Over the last two decades, the stresses caused by anthropogenic activity have exacerbated the effects of climate change which have resulted in the death of significant areas of coral reef. More specific threats in the region include destructive fishing practices, over fishing, and large-scale tourism development projects often implemented with little considering for the social, cultural and environmental implication.

Several initiatives are taking place in these regions, apart from the national efforts. One such an initiative is built on Governments in the region, the Nairobi Convention. During the third COP in November in Maputo, representatives of Governments in the region called for more support in the activities related to coral reef management in the region..

WWF (World Wide Fund for Nature) is also supporting a consultation process, , the Eastern African Marine Ecoregion (EAME), to implement ecoregion conservation. An Eco-Region Action Programme was formulated with the participation of the stakeholders of the region. Due to this stakeholder approach the programme aims to be inclusive and hence contains many actions. Partners in the process that developed the action plan are encouraged to implement different aspects of the work. An overall coordination unit together with national focal points for the implementation of the EAME Action Plan provides the mechanism whereby different parts of the action plan implementation can be coordinated and brought together to achieve the overall goals of conservation with sustainable use and economic development. The process provided a basis for establishing priorities according to the existence of several community/taxa groups among which are coral reef/communities and associated fauna. Several priority areas for conservation were selected on the basis of reef community's location.

In Mozambique, the Ministry of Co-ordination of Environmental Affairs in Mozambique (MICOA) initiated a project for the development of a Centre for Sustainable Development of Coastal Zones (CSDCZ) for Mozambique. The programme covers the entire coastal zone and is multi-disciplinary in its approach. One aspect (the Coral Reef Management Programme) will address the ecosystems of which the coastal environment is comprised such as coral reefs. The increasing problem of regional coral bleaching associated with global warming and climate change, especially the effects of the ENSO event, lead to the establishment of the Coral Reef Degradation in the Indian Ocean (CORDIO) programme. As a result of preliminary survey work undertaken by this programme several areas were identified as priorities for conservation. In the two marine protected areas in Mozambique – Bazaruto Archipelago and Inhaca Island – coral communities were said to be the best protected. In the Sencar channel, the best biodiversity spot in South Quirimbas, the information collected led to a private initiative, with the involvement of local communities, to protect the area (Motta et al.2000)⁷.

2. Objective & Expected Results:

The overall objective of this proposal, and in accordance with the perceived shortcomings and problems currently existing in Sub-Saharan Africa, is to improve the protection and stability of coral reefs and associated communities.

Considering the importance of coral reefs and associated communities represent to local users and regional economies, the project will address several fronts to assure an improvement of management of these sensitive ecosystems. It will start by preventing further degradation, in specific areas, and, at the same time, will support capacity building and actions which will result in the improvement of its actual status.

⁶ WWF (2002). Draft Eco-Region Action Programme. Report prepared by WWF on behalf of the Stakeholders of the Eastern African Marine Eco-Region Conservation process 1999-2001. Tanzania.49pp.

⁷ Motta,H, MJ. Rodrigues and M.Schleyer (2000). Coral Reef degradation in the Indian Ocean: Status Report 2000. Draft. D.Souter, D.Obura.O.Lindén (Eds). Stockholm. 43-48 pp.

The first beneficiaries will be the local communities that rely heavily on the quality of coral reefs: fishermen and collectors. Other beneficiaries will include the private tourism operators and the regional economy. Ultimately, the countries as a whole will benefit.

The following are some of the outcomes of the project:

1. To create alternative livelihoods through pilot and demonstration projects;
2. To evaluate the social, cultural and ecological values of coral reefs and associated communities in different places
3. To integrate coral reefs into the mainstream of decision making as part of an overall national integrated coastal zone management plan.
4. To build an effective management capacity for coral reefs and associated communities.
5. To provide a sound platform of information and technical support for the relevant decision making bodies and organizations who are responsible for coral reef management.
6. To help generate, and increase, awareness about the role of coral reefs and their significance for the welfare of coastal communities and the national economy as a whole.

The following is a brief description of immediate objectives, activities to achieve those objectives and broad expected outcomes.

Immediate objective No.1: To create alternative livelihoods demonstrated in key sites through pilot and demonstrative projects

The activities proposed to address this issue consists of:

- a) Conduct studies to determine the dependence on natural resources among communities living in selected areas;
- b) To prepare an action programme for demonstration projects (pilot projects) in selected areas, which take into consideration the cultural, and historic specific aspects and use of the area and taking on board all stakeholders; these demonstration projects would include the establishment of “nursery areas” in coral reefs, alternative fishing gear, introduction of small scale aquaculture (clams, oysters, seaweeds, etc), what kind of demonstration projects, can you elaborate further? Is it to remedy and provide alternative to use of natural resources?

Expected outputs:

- a) Communities in selected area see the quality of environment to improve;
- b) A number of pilot projects being implemented resulting in less pressure on selected sites over coral reef resources (e.g., sanctuaries implemented by local communities with visitors coming and paying a fee, etc);

Immediate objective No.2: To provide a sound platform of information and technical support for the relevant decision making bodies and organisations who are responsible for coral reef management , including an evaluation of the social, cultural and ecological values of coral reefs and associated communities in different places

The activities proposed to address this issue consists of:

- a) The project will support training of M.Sc. students in their dissertation, in an University in the region.
- b) Monitoring Programme: this programme will aimed at:
 1. Monitor coral bleaching, COTS and other natural/human disturbances;
 2. Monitor the biophysical impacts of coral mortality;

3. Propose and develop effective measures for sustainable management of the coral reefs as well the possible restoration and/or remediation of damaged reefs;
4. Consider appropriate procedures for intervention if reef recovery proves unlikely or slow, e.g. the artificial propagation and transplantation of corals.

c) Studies/Surveys: The studies will include inventories of reefs, inventories of community structure and taxonomy and proposal of long term plan for biodiversity conservation. Two regional studies are to take place each year. The following areas were selected as priorities for the regional studies:

Study area 1: Mozambique Island (Sensitive Area)

The Island is a Historic World Heritage Site as proclaimed by UNESCO in 1990. The small island has an density around 12,000 inhabitants per Km² as a result of forced displacement during the civil war. According to recent surveys, the surrounding available natural resources show signs of overuse (MICOA/IIP, 1999). Most of the islanders make their living from inshore fisheries and inter-tidal invertebrate collection. Several proposals regarding the improvement of local people living conditions are in place, including the use of incentives for people moving out of the island, more suitable fishing methods and fishing grounds

Study areas 2 and 3: Inhaca Island to Ponta Techobanine and Ponta do Ouro (Sensitive areas)

The 100-Km of coastal stretch between Inhaca Island and Ponta do Ouro, is mainly characterised by sandy beaches. According to Robertson et al., 1996, only 13% of this area is rocky shore. The reefs of Ponta Tecobanine, Ponta Malongane and Ponta do Ouro provide the greatest potential for the development of safe diving resorts. The most extensive reefs were encountered in Ponta Techobanine. As it is the major reef complex on this stretch of coast, its conservation will be important, both in its own right and as a source of reproductive recruits for the smaller southern reefs, in view of the southward flow of the Mozambique and Agulhas currents.

Study area 4: Bazaruto Archipelago (Sensitive area)

The Bazaruto Archipelago is now under consideration to be proposed, by the Government of Mozambique, as a Nature World Heritage Site under UNESCO. Out of the 2,700-Km of coastline in Mozambique, only the Inhaca and Portuguese Island Reserves and Bazaruto National Park involve coral reef protection. Within their relatively small area, they contain seagrass meadows, coral reefs, extensive tidal flats, mangroves, sandy beaches, etc. Local communities make their living from fishing activities and tourism is a growing industry in the area. Very rich hard and soft coral formations occur on beach rock sandstone on the seaward sides of the islands, supporting diverse and important populations of reef fish and other organisms. The effects of protection, a clear picture of the coral structure and communities and a complete description of one of the best reefs of Mozambique have yet to done.

Study area 5: Seychelles, specifically in the sensitive areas of Cosmoledo, Aldabra, Mahe, Praslin, La Digue and other inner Islands.

Study area 6: Kenya, specifically in Mida-Watamu, Creek in Malindi, Diane Reefs and Wasini Channel.

Study Area 7: The whole coast of Mauritius and Rodrigues

- d) Assess the impacts of human activities such as artisanal fishing and tourism in the relatively more degraded coral reefs in the southern coast.e) Assess the fishing gears and relate to the state of the habitat;
- e) Determine the causes of conflicts between the foreign and local fishermen, and possible resolutions;
- f) Assess and monitor tourism activities that impact the Coral reef;
- g) Determine measures to investigate against coral reef degradation.

Expected outputs:

- a) A monitoring programme in place and running;
- b) At least 6 MSc trained in countries benefiting from this project, by the end of the five year period of this project.
- c) Published studies on most sensitive areas of coral reefs and associated communities;
- d) Biomass and biodiversity indices determined;

- e) Fishing methods versus the state of the reef verified;
- f) Optimal conflict resolution options listed.
- g) Alternative economic opportunities e.g community initiatives.
- h) Intensity of tourism activities that impact on the coral reefs examined.
- i) Mitigating measures proposed.

Immediate objective No.3: Coral reefs management integrated into the mainstream of decision making as part of an overall national integrated coastal zone management plan, including building an effective management capacity for coral reefs and associated communities.

The activities proposed to address this issue consists of:

- a) A study to revise the legislation in the region and countries looking at aspects that relate to coral reef management and related communities;
- b) Enforcement
- c) Training of experts, government officers and local CBO and NGOs;
- d) Propose management plans

Expected outputs:

- a) Countries in the region have more specific legislation compared to the situation before the project started;
- b) Legislation being enforced;
- c) Government officers at relevant departments trained on the subject;
- c) d) Management plans for corals reefs and associated communities approved and being implemented

Immediate objective No.4 To help generate, and increase, awareness about the role of coral reefs and their significance for the welfare of coastal communities and the national economy as a whole.

The activities proposed to address this issue consists of:

- a) To study and develop a strong awareness campaign in countries were people's livelihoods and major industries are based in the quality of coral reefs and associated communities;
- b) To implement awareness through the appropriate mechanisms available and better adapted to specific/local conditions (TV, newspapers, radio, leaflets, meetings, use of traditional authorities, etc)
- c) To develop the appropriate campaign taking into consideration the precise targets (private owners, local communities, tourists)

Expected outputs:

- a) A higher percentage of people more aware of sensitivity and value of coral reefs and associated communities;

3. Project Components/Activities :

The main activities of this project are already described in the previous chapter and re summaries in the table below. This project will last for five years. The first year of the project will consist of establishing the facilities for the implementation of the project. This would include the setting of project co-ordination and implementation structures at local and regional level; logistic arrangements and selection of the pilot project sites. In the second year, research and studies for helping to shape the future activities of the project will be conducted.

Main activities and time frame.

Activities	2003	2004	2005	2006	2007
Establishment of the project management structures					
Selection of the implementation sites					
Conduction of studies					
Establishment of Monitoring					
Workshops/meetings					
Surveys/studies					
Implementation of management strategies					
Prep/implementation of Awareness Campaign					
Demonstration projects					
Seminars and meetings					

This project is transboundary in its nature as coral reefs and associated communities are linked throughout the region. The currents transport larvae from areas in the Indo-Pacific. The most important current – the South Equatorial Current reaches the African continent after passing through areas such as the Chagos Archipelago, Seychelles and Comoros. The conservation of those areas that are believed to be the first deposits of these larvae are very important from the point of view of management and conservation.

4. Linkages to Other National or Regional Activities / Transboundary Aspects-

Initiatives outside the programme of intervention that are linked to the present project include:

- WWF-EAME: In partnership with countries, institutions, NGOs and other stakeholders, implementation of an action plan to reverse the degradation of biodiversity in Eastern African. The process is called Eastern African marine Eco-regions and in its vision, the peoples of the region want 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 and maintain its biodiversity and ecological integrity”.
- CORDIO/GCRMN: CORDIO has been active since 1999 in the entire region – eastern African and Western Indian islands states – promoting the monitoring of coral reef use and quality, both in its biological and socio-economic aspects
- ICRI/ICRAN: These two regional/global organizations provide funding for coral reef monitoring
- WWF-Coral Reef Initiative: In partnership with ICRI/ICRAN, WWF will develop this initiative to achieve a significant increase in the area of coral reef under formal conservation protection, improved management of existing coral reef protected areas, and greatly enhanced funding for coral reef conservation.;
- Several GEF supported projects in the countries proposing this project, namely: UNDP supported Mauritius Marine PA. Seychelles Environment Programme, WB supported Coastal and Marine Biodiversity in Mozambique, among others;
- WWF supported programmes in Mozambique and Kenya MPAs which include coral reefs, namely Mafia Island, Quirimbas Archipelago and Bazaruto Archipelago;

5. Demonstrative Value & Replicability :

Most of the activities in this project are pilot and demonstrative. They are intended to be shown as best practices and also to be implemented in a manner that is easily replicable – such as projects that use locally available expertise, materials and simple methods.

Other activities are supposed to be “starters” such as the development of legislation and management plans. As soon as they are done, it is the responsibility of Governments to enforce legislation and implement plans.

There will be already enough awareness from the civil society to make also Governments accountable for the activities that they are supposed to implement.

6. Risks and Sustainability -

The present proposal is designed on the basis that financial and necessary logistics will be available. In the absence of these, the implementation of the project might be difficult.

Extreme weather/climate events such as storms, drought and floods could hamper the smooth implementation of the project, since access to the sites can be difficult, people might be displaced from their traditional places, infrastructure may be destroyed. Very little can be done to mitigate these risks.

Communication and travelling facilities. Travelling within Africa still is a major problem. In most of the countries travelling within country, particularly to access the sites targeted in the project (often are remote) requires major venture. A project of this magnitude that involves several institutions in different countries requires an effective co-ordination mechanism. Hence, effort needs to be made to improve the communication (preferable internet) of the implementation institutions.

Sustainability of the project will be assured by the involvement of local community, local expertise and local institutions in the implementation of the project. The identification of the problems and the designing of the projects to address these problems were driven locally. Local decision-makers, governments and local experts were involved as much as possible. This assured ownership and is a step forward towards sustainability. The implementation of the project should be steered and carried by locals as much as possible.

The sustainability of the project is not a foreseen problem as the project intends to support training, the studies and monitoring activities only for a certain period. After this period, these activities do not need to be continued. People will be trained to join Government and NGOs, with already good qualifications.

Finally, factors ensuring sustainability include the establishment of legal measures to support the management of coral reefs and associated communities, the institutional capacity building, and the involvement of all concerned stakeholders from the inception phase.

However, the level of risk associated with the proposed project is considered “acceptable” in the context of the clear need to support this Key Habitat sector in the Sub-Saharan Africa and the stated commitment to this process.

1. A number of measures have nevertheless been incorporated into project design to mitigate this risk where possible:

- The objectives of the project are clear and accepted by the Region as realistic in the project time frame
- The approach to identification of the linkages with other initiatives has been highly participatory and inclusive and the design reflects this;
- The conduct of pilot projects during implementation before attempting to implement their results in appropriate ways region-wide will allow a flexible approach to project management;
- Maximization of National and Regional expertise, and
- an emphasis on both internal and external monitoring should reduce the risk of failure.

2. For the purposes of risk management, minimum acceptable levels of project performance are set out below. The project will fail if:

- activities at the national and regional levels are not co-ordinated with all participants, including other assistance partners; and
- there is no broad agreement on the respective roles and responsibilities of governmental and non-governmental service providers by the end of the project.

7. Stakeholder Participation:

The main stakeholders are:

- **Government, Research Institutions and Universities:** Governments will encourage and facilitate the process of consultation while research institutions will support the process with the methodology, base line data and resource people
- **Local NGO's** will play a pivotal role as they will serve as the link between Government and local communities, or between Private and local communities;
- **Local communities.**
- **International organizations** such as: ICRAN, ICRI, CORDIO, IUCN, WWF-eco-region;
- **The Private Sector** which depends on quality of Environment, specially Eco-Tourism

8. Project Management & Implementation Arrangements -

This project should not duplicate institutions, both regional and national, where they already exist. In the first place, at regional level, several institutions have the support of Governments and have a great deal of experience in these areas. Examples are the Nairobi Convention provisions for coral reef management, which include the support to National Coral Reef Task Forces and linkages to the Global Coral Reef Monitoring Network with its regional nodes.

Several other regional organizations have been supporting country's research and monitoring activities, namely CORDIO, WIOMSA and SEACAM. The regional coordination of Eastern African Marine Eco-region may also play a role.

Finally, institutions at national level should be support to implement the project, thus contributing to its overall capacity.

There should be, however, the support for the creation of a steering committee, which will oversee the activities of this Project. This Steering Committee will be made of Government's representatives, regional bodies involved and local NGOs and communities, including the private sector

The community must be involved from the planning stage of the activities and in the implementation of the project at the local level, particularly in the implementation of the management strategies at the local level. During the research and studies, the community might provide valuable information, particularly regarding the traditional knowledge, which could complement modern sciences. The involvement of local community is an assurance of the ownership and of the sustainability of the results of the project.

9. Project Financing & Duration -

The project should last for five years and the total cost of the project should be around USD 3,500,000.00. Local institutions, specially Government, are expected to contribute in kind. The major components of the project are as follows:

- **Project management** – this might take about 10% of the budget. It refers to the cost of the management of the project both at the regional and national levels. Includes overheads, rental of offices and all costs referring to the day-to-day of the management of the project.
- **Research, Monitoring and studies** – estimated at about 20% of the total budget. Refers to basic and applied studies required to developing management plans as well as all the monitoring programme needed not only to monitor projects results but also coral reefs and associated communities.
- **Establishing Monitoring Programmes, legislation and management capacity** – About 20% of the budget. Refers to the activities required to identifying, building and implementation of management programmes.
- **Implementation of pilot/demonstrative projects** – about 40% of the budget. Refers to implementation of the participatory approach management of selected sites (i.e. river basin and/or wetland). It includes setting management structures and supporting the implementation of management of the habitats with the fully involvement of the local community.

- **Awareness Campaign** – about 10% of the total budget. Refers to the intensive awareness campaign to promote the value of coral reefs and associated communities amongst different target groups (decision makers, communities, private, etc).

Table 1. Component & Activity Financing

	External Source of Funds ⁸			National Government		Total
	Source 1	Source 2	Source 3	Cash	In-kind	
Component 1	1,500,000					1,500,000
Component 2	900,000				100,000	1,000,000
Component 3	200,000				300,000	500,000
Component 4	450,000				50,000	500,000
Total	3,050,000				450,000	3,500,000

Note: This budget is preliminary and has not undergone a full consultation process with the respective countries. Therefore, it does not indicate the actual financial commitment that would be provided by participating countries once the project proposal and its components are finalised.

10. Monitoring, Evaluation & Dissemination -

Internal/external monitoring and evaluation will play a significant role during implementation to ensure that the experience gained through pilot projects, consultancies and meetings informs project management and decision-making. In addition, important external factors, such as developments in the fisheries, should also be monitored to ensure the project outputs and purpose remain relevant and achievable.

General indicators of project achievement will include:

- 1) The quality or trends in changing quality of coral reefs and related communities in the selected areas benefiting from the project;
- 2) Social inquiries to the local communities benefiting from the use and management of coral reefs in selected areas benefiting from the project;
- 3) Legislation approved and reports of enforcement;
- 4) Reports from monitoring activities as well as number of people trained at various levels under the support of this project;
- 5) Reports and inquiries over the awareness campaign;

The project will have the following process of Monitoring and Evaluations:

A: Quarterly Progress Reports by the Project Executing bodies/Coordinator, which can be a regional body or a national institution;

B. Twice a year, there is a Steering Committee meeting to evaluate progress. Government representatives, NGO and local communities' representatives, and private sector will compose the SC

C: By the second year of implementation, evaluation missions nominated by the donor or donors will visit project sites implementation; the evaluation is repeated every two years of project implementation;

D. The indicators are formulated according to the expected out-puts;

ANNEX

Logframe Matrix

2 Summary	Objectively verifiable indicators	Means of Verification (Monitoring Focus)	Critical Assumptions and Risks
<p>Overall goal of the intervention</p> <p>To improve the protection and stability of coral reefs and associated communities.</p>	<p>Selected reefs increased its quality over a certain period of time</p>	<p>Coral cover and fish reef species and sizes increased in selected areas</p>	<p>Financial capacity is in place. Governments agreement in place. Stakeholders involvement</p>
<p>Objectives of the relevant National Programs and the country, regional strategy.</p> <p>Management Programmes for coral reef and associated adopted by countries</p> <p>Governments have the necessary monitoring & assessment plan in place</p>	<p>Yearly monitoring results show stability or improvement of coral reefs and associated communities quality.</p>	<p>Monitoring data on temperature, coral cover, fish communities, fishing yields, etc.</p>	<p>No extreme El Nino events affect quality of coral communities</p>
<p>Outcomes that lead to the achievement of the outlined regional and national objectives.</p> <p>Changes due to intervention (project impact)</p> <p>Local communities of selected areas have their livelihoods/income improved;</p> <p>Quality of selected coral communities improved or increasing.</p>	<p>Projects/demonstration implemented</p> <p>Results of monitoring and studies show positive results.</p>	<p>Socio-economic data</p> <p>Biodiversity index</p>	<p>Funds available.</p>
<p>Results to be delivered by project which will enable necessary changes (project outputs)</p> <p>Studies which were conducted in communities showed an interest /non interest in the process.</p> <p>High influence of other factors rather than human that contribute to the degradation/loss of coral reefs and associated</p> <p>1. Stakeholders on board</p>	<p>Integrated research conducted</p> <p>Monitoring results are in place. Research and studies conducted</p> <p>Committees established</p>	<p>Technical reports produced</p> <p>Reports</p> <p>3</p>	<p>Resources and funds available to carry research and studies</p> <p>Resources and funds available to carry research and studies</p> <p>Resources and funds available to establish and run the committees</p>