

GLOBAL ENVIRONMENT FACILITY

PROPOSAL FOR PDF-B GRANT

Country: Regional: Comoros, France (Reunion and Mayotte), Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, Tanzania

GEF/Focal Area: International Waters

Operational Program: OP #9: Integrated Land and Water Multiple Focal Area

Project title: Toward an Ecosystem Approach for Sustaining the Agulhas and Somali Current Large Marine Ecosystems (LMEs)

Anticipated Full Project Cost: US\$ 20 Million (GEF: US\$ 9 M./Co-Finance US\$ 10-11 M.)

PDF Request: US \$ 698,000

Co-Finance: US \$ 260,000 by National Governments (In-kind)
US \$ 61,000 by US-NOAA (In-kind)
US \$ 39,500 by UNDP (In-kind)
US \$ 36,000 by WWF (In-kind)
US \$ 36,000 by IUCN (In-kind)
US \$ 25,500 by SADC (In-kind)

Total Co-Finance: US \$ 458,000

Total Budget: US \$ 1,156,000

Requesting Agency: United Nations Development Program (UNDP)

Executing Agency: United Nations Office of Project Services (UNOPS)

Block: PDF-B

Block A Grant: Yes

Duration: 18 months (October 2003 - March 2005)

I. Brief Project Objectives and Description

A Programmatic Approach

1. The PDF B grant – requested herein—would develop a full project to fill gaps in understanding of transboundary living resources of the two LMEs, and to build capacity of the participating countries to utilize this improved understanding for more effective management by use of an ecosystem approach.
2. This Project is one of three, perhaps four individual Projects, involving each of the GEF Implementing Agencies, in the same geographic area with worked that is linked so that a programmatic approach is developed to conserve the living resources of these two systems and their habitat. Such an approach and program is consistent with and supports WSSD, LME based targets of achieving an ecosystem approach by 2010 and a sustainable fisheries regime by 2015. Each of the projects within the programmatic approach will complement programs aimed at poverty reduction, sustainable livelihoods and food security targets, as well as addressing issues pertinent to SIDS. This new approach constitutes a test or pilot in the focal area, with this Concept being the third in a series of related Concepts representing the application of lessons learned in the BCLME to the A&S LMEs, where there exists significantly less understanding and management capacity. This Concept, as well as the overall Program also is consistent with the Barbados Plan of Action for SIDS, and could be highlighted as part of the planned Barbados Plus Ten international conference scheduled to be held in Mauritius in September, 2004.
3. Also, the specific Project proposal is consistent with Goals 1 and 7 of the Millenium Development Goals (MDG) adopted at the Millenium Development Summit in September, 2000. Goal 1 calls for halving the proportion of people whose income is less than US\$ 1 per day, and to halve the number of people who suffer from hunger, by the year 2015. As in other development regions, coastal cities along the East Coast of Africa are growing rapidly. Assuring the sustainable use of the fisheries and related coastal resources of the Agulhas and Somali Currents will assist governments in the region as they attempt to create food security for these rapidly expanding coastal populations. Goal 7 of the MDG relates to the need to assure environmental sustainability, most particularly the need to integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources. Absent the data and information gathering process and establishment of the needed science base it would be impossible to even define the conditions for assuring sustainable utilization of the LME resources.
4. Substantial government, private sector, and NGO support has been voiced for a region wide Large Marine Ecosystem based international approach for the fisheries resources of the Agulhas and Somali Currents. While the countries do not possess the sufficient financial and human resources to undertake the work necessary to undertake such a project on their own, they have made clear that this is an important priority for them to pursue. The priority the countries give to this issue was made clear in the PDF-A funded workshop under the Southwest Indian Ocean Fisheries Project (SWIOFP) sponsored by the World Bank-GEF and held in Maputo, Mozambique, in 1999. The list of attendees at that workshop, and the resulting Concept for the SWIOFP are attached as Annex 1 and 2, respectively, of this submission.

5. The UNDP has held extensive consultations with governmental, private sector, university, and NGO individuals and groups in Madagascar, Mozambique and South Africa, as well as preliminary consultations with Comoros, Mauritius and Seychelles and has found substantial support for the overall objectives of a programmatic and ecosystem approach to these two LMEs. As Comoros, Mauritius and Seychelles were not involved in the WBs original workshop, discussions were held with representatives of those countries and each has expressed a commitment to participate. The more exact nature of their participation was discussed and confirmed during this PDF A workshop. The Implementing Agencies have also found that similar objectives are incorporated into the priorities of the relevant government ministries, the research agendas of universities, and NGO work programs. The list of country officials, research organizations, and NGO representatives consulted by the UNDP is included as Annex 3 (UNDP Country Consultations) of this submission.

6. An early conclusion of discussions among IAs, the GEFSEC, and the countries has resulted in a decision to undertake a Programmatic Approach to the issues of the Agulhas and Somali LMEs. The envisaged multiple-project, Programmatic Approach constitutes a new way of addressing the management challenges confronting LMEs, in that the three Implementing Agencies of the GEF will each be involved and work together through the three or possibly four linked projects. The approach is warranted based on the need to ensure a more unified approach to environmental management operations in the Agulhas and Somali Current systems, reduce the transaction costs associated with ensuring regional cooperation, reduce the complexity of management interventions, progressively leverage higher levels of investment and policy commitments from the region, and draw on the different institutional capacities of the three GEF Implementing Agencies, based on their comparative advantages. Further, the need to build capacity within the science community in the region and on behalf of these two LMEs, the lack of management capacity, and overall lack of understanding of these systems makes the approach that has been successfully employed for the Benguela Current through the BCLME makes this approach necessary. The framework is expected to institutionalize an ecosystem-based management approach to utilizing and protecting the ocean resources of the Western Indian Ocean (WIO), based on solid science, and underpinned through effective environmental governance region-wide, and will be effected by early, consistent and ongoing communication between and among the IAs.

7. The proposed Programmatic Approach will also result in a more iterative approach to the development of SAPs and TDAs than has been the case with previous GEF International Waters initiatives. The three and possibly four Projects that will comprise the Programmatic Approach will, among other things, work toward the following long-term management outcomes:

- Determination of the current state of the blue-water fishery, the extent of fishing pressure in the blue-water zone, determination of the conditions of sustainability for this fishery, and creation of regionally based blue-water fisheries agreements;
- Using the BENEFIT Program in the BCLME as a model, develop a science-based capability with and for the countries of the region as a means of informing resource management and overall policy development for achieving sustainable use

management objectives for the resources of the Agulhas and Somali Large Marine Ecosystems;

- Creation of an effective Plan of Action consistent with the Global Programme of Action for the attenuation of land based sources of marine pollution;
- Determination of the advisability of, and the content for, a coastal zone based set of Pilot Demonstration Activities; and
- Through a joint Implementing Agency and Participating Country process, the continued development and updating of a regionally based Transboundary Diagnostic Analysis (TDA) and Strategic Action Program (SAP), which would delineate long-term, regionally based and agreed to policy and other measures to achieve long-term sustainable use of the resources of the two LMEs.

8. The project proposal that is the subject of this PDF-B request will result in an LME oceanographic/science data collection project (assessment of the physical, biological and chemical elements of near-shore and off-shore resources of both LMEs) that would feed information into the other projects to be undertaken as part of the Programmatic Approach. This approach is consistent with the existing World Bank PDF-B (SIOFP), which appears in this document as Annex 3. The exact nature and description of activities to be undertaken in this project were confirmed at the afore-mentioned workshop held in Maputo in September of 2002. The workshop resulted in initial agreement on the part of the participating countries to work collaboratively to improve ecosystem management in the LME's on similar lines to the approach developed with GEF assistance, for and by the countries that share the Benguela Current. More specifically, the Benguela Current countries (Angola, Namibia and South Africa) have joined to form a regional entity called BENEFIT. The mission of BENEFIT is to provide on-going transboundary scientific advice to the three countries to underpin applied management of the Benguela Current LME. One of the objectives of the proposed project will be to formulate a similar regional entity for the Agulhas and Somali Currents, but suited to the specific needs of the Western Indian Ocean region.

9. The Program and Project are consistent with the WSSD provision calling for the restoration of depleted fisheries by 2015, an agreement rooted in the recognition that the world's oceans and fisheries are in trouble and require urgent attention as three-quarters of the world's fisheries are presently fished to their sustainable levels or beyond.

10. In summary, these LMEs support important subsistence and artisanal fisheries, and the resources of the so-called "blue-water" fisheries are likely an important source of both protein and income for the participating countries, some of whom are among the poorest countries in the world. It is important, even crucial, that the management of these ecosystems, predicated on sound information on the parameters for sustainable use of their constituent resources, be a part of each country's national sustainable development strategies. Further, as many of the resources of these LMEs are transboundary in nature, the approach taken in future must be regionally as well as single country based. Examples of the transboundary nature of some of the issues related to these LMEs include, *inter alia*, straddling fishstocks, especially tuna and billfish, the issue of larval transport on currents through out the region and across boundaries, the transboundary movement of valuable species such as the Leatherback Turtle, and the sustainability of near-shore fisheries and environments that may require cross-border protection of spawning and

juvenile nursery grounds.

II. Global Significance

11. The east coast of Africa represents a wide range of oceanographic environments and the Western Indian Ocean is the site of some of the most dynamically varying large marine ecosystems (LMEs) in the world. Its waters are largely oligotrophic (with notable exceptions), and a number of ocean currents predominate in the region-- notably the South Equatorial Current, the East Madagascar Current, the Mozambique Current and the East African Coastal Current. To the north is the Somali LME that develops during the southwest monsoon to become one of the most intense coastal upwelling systems in the world, bringing rich nutrients to the surface of tropical surface waters. Similarly, the Agulhas LME to the south represents a region of dynamic nutrient cycling and associated fisheries potential. Significantly, the Agulhas and Mozambique Currents link these two major LMEs of the western Indian Ocean which influence the region's ecosystems, biodiversity and fishery resources.

12. The area is considered a distinct biogeographical province of the Indo-West Pacific with high levels of regional endemism. However, local and national endemism is generally low, except around such island states as Mauritius and Reunion, and in Southern Mozambique. The region also has a high diversity of so-called "charismatic" species such as cetaceans (at least twenty species), five species of marine turtles, numerous seabirds, and an important remnant population of the threatened dugong. The region is also home to the coelacanth, a unique marine fish, originally thought only to be found in this region, but recently found as well in Southeast Asia.

13. While the Somali and the Agulhas LMEs are assumed to be unique and of great regional and global importance, there is generally little information about the LMEs and the systems linking them. Also, specific information about the species composition, distribution, behavior and migration of non-commercial and commercial fish stocks is inadequate to the task of beginning to define elements of sustainability. At their present level of economic development, the countries are unable to understand the potential of the marine ecosystems concerned, monitor the human pressure on these systems, and take a longer term, more pro-active approach to planning for their future use than is currently the case. There is increasing evidence that threats exist, and that the magnitude of threats to these systems are increasing, are detrimental to achieving overall sustainability for the region, and, if left unaddressed, will have a deleterious effect on future development and attempts at poverty alleviation in the countries that are the subject of this proposal.

14. The combination of the lack of adequate scientific data and information to fill knowledge gaps and the lack of management institutions frustrates the adoption of an ecosystem based approach to these two LMEs. The Project will fill these needs.

Threats

11. At the global level, in marine and coastal environments, direct losses to biodiversity include over-exploitation of living marine resources, pollution, introduction of alien species, and habitat destruction. More indirect causes include: inappropriate policies and programs of

international financial institutions, economic and other disincentive systems, land and sea tenure and access arrangements, and the undervaluing of biodiversity. The WIO region has not escaped these problems and also must confront these issues, notwithstanding the paucity of information to inform the extent to which the problems exist and the more exact impacts that are being experienced. Indeed, the paucity of information is an additional reason why this region should be the target of a broadly based GEF intervention, and should be an immediate objective of any long term program aimed at achieving sustainable use of the region's natural resources.

12. The coral bleaching event that took place in 1998-99 has left many reefs, and their associated living resources, severely impaired. Evidence strongly suggests that this bleaching event was linked to global climate change, and that such events may become more frequent.

13. While there is at present no evidence to suggest that the offshore ecosystems are under stress, or that species are at risk of collapse, this may well be due to the absence of adequate environmental and ecosystem observations, including the lack of adequate reports on fishing, effort, landings and by-catch. Inshore fish resources are harvested mostly by coastal states and reported landings by regional countries in the area have stagnated somewhat since the 1990s. The potentially valuable oceanic fisheries are harvested predominantly by distant-water fishing fleets from Europe and eastern Asia and reported catches by distant-water fishing nations have increased through the early 1990s, with Spain and France together accounting for over 50% of these catches (FAO 1997). The proportion of unreported catches is largely unknown. As fish stocks elsewhere in the world are diminishing, more fleet operators are certain to turn their attention to the commercial fish stocks along the east African coast until these stocks have been exhausted and catches are no longer economically viable. This may be well below the threshold of a biological sustainable population of commercial fish species. Simultaneously, by-catches may already have put non-exploited fish species into commercial extinction, with possible damage to biodiversity and ecosystem of the West Indian Ocean.

14. The economic growth of east African coastal states may lead to the development of new, locally operated offshore fleets, competing with existing fleets or with fleets from other coastal nations in the region. National interests may thus prevent governments from implementing adequate regulating measures in order to protect their own interests. Examples from other regions of the world have shown that these developments, if unregulated, inevitably lead to a short period of overexploitation and unsustainable high yields, followed by a rapid decline of the fish stocks and damage to the ecosystem. These two LMEs are then strategically important for local community livelihoods, for biodiversity, and for their economic potential if they are indeed two of the few remaining LMEs not already over fished. Without a management strategy leading to development of institutions, these threatened LMEs will surely become depleted in the near future.

III. Background

15. Close to 1/3 of the world's population resides in countries edging on the Indian Ocean. Most of these nations place great reliance on the sea for food security, employment and socio-economic stability. Yet the Indian Ocean produces a mere 10% of the world's fish tonnage harvested. While lower productivity of the Indian Ocean contributes to such modest landings, the

generally poorly developed status of Indian Ocean fisheries belies its real potential. Recent data suggest an escalation in effort and landings, especially by distant fishing nations. In order to avoid a boom and bust scenario with consequent impact on biodiversity, sustainable fisheries development and global fisheries management, it is urgently necessary to develop and implement a cohesive management strategy for the region. As the West Indian Ocean is least understood, has several major large marine ecosystems and is edged by numerous nations, this region was selected for primary focus.

16. Fishing, and its associated economic activities, is often extremely important to coastal communities and local economies. In some of the southwestern Indian Ocean countries, fish often represent the primary source of animal protein available to the local populations. Also, in a region faced with chronic scarcities of foreign exchange, exports of fishery products or income from licensing of fisheries may represent vital sources of exchangeable earnings. Fish landings, processing and supporting operations associated with the fisheries industry would provide an important stimulus in the economic development of harbors and the coastal zone. The income generated by each country from fisheries in the region could be applied to the implementation of a regional strategy that links the protection of biodiversity to the sustainable exploitation of the marine resources. The recurrent costs of management institutions can then be supported by the users of the ecosystem.

17. The problem of poverty as reflected in poor access to water and malnutrition has been further aggravated by the drought situation that has hit the region as manifested in the current food crisis. Poverty in the region is particularly acute among various vulnerable groups such as households headed by old people and child-headed households that are now on the increase due to the impact of the HIV/AIDS pandemic.

18. Fisheries workers are a group highly vulnerable to HIV/AIDS, often complicated by the migrant nature of their work. Increased understanding of the nature of the fisheries in the region will enhance the opportunities for appropriate management and this will assist in ensuring that fish remains an important dietary source of animal protein in communities. This is especially important where HIV/AIDS infection rates can be as high as 40% and hence an important contributor to offsetting the compounding effects of malnourishment.

19. While offshore, fish stocks may be part of an ecosystem at a regional scale, they may also regularly traverse national boundaries. A fisheries management strategy can only be successful if it is developed at a regional scale and implemented with the support of all coastal and stakeholder nations to prevent national interests predominating. It should be based upon adequate knowledge about the region's ecosystem and updated with regional reports of fishing efforts, catches and by-catches.

20. In summary, the Agulhas/Somali LME Program will assist the countries to acquire adequate knowledge and establish the institutional framework necessary to develop and implement a strategy for the sustainable management and exploitation of the marine resources and

ensure long-term measures to protect the unique biodiversity of these two LMEs.

Overview of Main Problems/Issues

21. The UNDP-GEF supported PDF-A Workshop held in Maputo in September 2002 led to an identification of fundamental issues to be addressed during an Ecosystem Assessment Project. As the Workshop was closely coordinated with the World Bank, the World Bank SIOFP Project, the subject of an actively implemented PDF-B, was also discussed at length and future actions discussed and agreed upon. It should be noted that, in general, there is significantly more information available for the Agulhas LME than for the Somali LME. Workshop participants adopted the Modular Approach in assessing Knowledge Gaps. For purposes of this project proposal the relevant Modules examined were Productivity, Fish and Fisheries, and Pollution and Ecosystem Health Issues.

22. Following is the Workshop summary of Knowledge Gaps in the Somali-Agulhas LME systems for the *Productivity Module*. It should be noted that the two key focus areas for this module were identified as ecosystem fundamentals of fishery management and fisheries in near shore.

- I. *Temporal variability linked to spatial impacts (link to work in other LMEs)*
 - Climate variability; Enso and extreme weather events poorly understood;
 - Impacts on recruitment – little or no existing knowledge;
 - Indian Ocean Di-pole
 - Bi-polar distribution of marine resources between Ka-Zulu Natal and Horn of Africa – needs to be better understood;
- II. *Riverine input*
 - Variability of freshwater inflow (volume) – needs quantification and assessment of ecosystem importance;
 - Variability of the nutrient input through riverine systems – needs to be quantified;
 - Variability of salinity in coastal systems related to freshwater inflow – needs to be quantified, effects understood;
- III. *Inter/Intra systemic linkages*
 - Mangroves – extent remaining and conservation strategies developed;
 - Coral reefs – synthesis of information needed, gaps identified;
 - Sea grass – extent remaining and conservation strategies developed;
 - Offshore muddy banks (physically complex systems) – need to be compiled and assessed.
- IV. *Gyres/Eddies (spun-off large current systems)*
 - Transport – productivity and biodiversity need quantification;
 - Uplift of thermoclines – needs to be charted.
- V. *Monsoon and atmospheric conditions*
 - Sub-surface currents – need further study;
 - Up-wellings – overall importance to the system ; and
 - Nutrient flow – needs to be quantified.

For the *Fish and Fisheries Module* the following knowledge gaps were identified¹:

- I. *Larval transport*
 - Particularly little knowledge exists for the Somali Current LME;
 - Recruitment is poorly understood;
 - Need to design spatial management tools.
- II. *Trophic relationships –Including biodiversity and alien species;*
- III. *Fishery interdependent surveys;*
 - Biodiversity – poorly quantified and studied;
 - Bottom topography – information lacking.
- IV. *Toxic tides and algal blooms*
- V. *Systems functioning and relationship to fisheries*
- VI. *Industrial fisheries in relation to artisanal and subsistence fishery - need for optimization of the resource (food security issue);*
- VII. *Impact of the fishery on biodiversity;*
- VIII. *Value of non-consumptive use and the inter-face with consumptive use; and*
- IX. *Commercial and subsistence landings or effort.*

For the *Pollution and Ecosystem Health Module* the following knowledge gaps were identified:

- I. *Anthropogenic threats*
 - Mangrove degradation – not quantified or understood;
 - Fire: nutrients and erosion – not quantified or understood;
 - Tourism induced threats – not quantified or understood;
 - Development of sandy beaches – not quantified or understood;
 - Urban areas: solid waste/effluent – not quantified;
 - POPS/bioaccumulation: hot spots, urban rivers – not comprehensively identified, quantified;
 - Petroleum spills, heavy metals and pesticides – needs to be quantified;
 - Coastal aquaculture – synthesis of existing extent and impacts, and prospects for future development needed;
 - Effects of fishing methods – little or no information available;
 - Ballast water alien species – extent and effects largely unknown;
- II. *Natural perturbation*
 - Erosion: wave action/tide flux and accretion – extent and effects not quantified;
 - Climatic patterns need to be more effectively described and understood;
 - Coral bleaching and mortality – causes not well understood, mitigation strategies need to be explored;
 - Thermal fluctuations – extent and effects poorly understood;
 - Enso induced fluctuations in the large current systems – extent and effects poorly understood;

¹ Work to begin creating effective communications between the World Bank SWIOFP Project and the Project that is the subject of this PDF-B were begun in Cape Town, South Africa at a SWIOFP Workshop held from September 2-6, 2003.

III. *Conjunction effects of I. and II.*

- Indicators of environmental health – need to be developed;
- Transboundary movements of water and pollutants – needs to be charted.

Previous Support

UNDP PDF-A Workshop

23. As previously mentioned, a UNDP sponsored GEF PDF-A Workshop was held in Maputo, Mozambique in September of 2002. A purpose of the Workshop was to gather information necessary to the production of one or two PDF-Bs for GEF consideration. Workshop participants discussed issues related to:

1. *An Ecosystem Assessment/Science Data Collection Component of the Programmatic Approach.* The topics of discussion in this working group included:
 - a) Identification of physical and chemical elements of the Agulhas and Somali Currents requiring further definition in order to assist the work of the SWIOFP and the Community-Based Demonstration Projects ;
 - b) Preliminary Discussion of ongoing scientific research and data collection initiatives taking place in the Agulhas and Somali Current LMEs;
 - c) Preliminary discussion of scientific assessment and data collection needs that should be undertaken as part of the Ecosystem Assessment/Science Data Collection Component ;
 - d) Discussion of necessary linkages between the Ecosystem Assessment/Science Data Collection Component and the SWIOFP and Community-Based Demonstration Component ; and
 - e) Discussion of the outline of a GEF PDF-B for preparation of a project for this component
 - f) Rapporteur review of discussions and presentation of material to be considered for the PDF-B.
2. *The Desirability of a Community-Based Demonstration Component of the Programmatic Approach.* The topics of discussion in this working group included:
 - a) Discussion and identification of the most pressing near-shore issues to coastal communities of countries abutting the Agulhas Current ;
 - b) Establishment of criteria for the selection of the community-based, site-specific, and results oriented demonstration projects in transboundary integrated marine and related land resources of the countries abating the Agulhas LME ;
 - c) Discussion of appropriate linkages to be created and maintained with the SWIOFP and the Ecosystem Assessment/Science Data Collection Component of the Programmatic Approach ; and
 - d) Discussion of the outline of a GEF PDF-B for this component.

24. Of particular note was the strong participation of Workshop participants from France representing Reunion and Mayotte, and their clearly expressed desire to be full partners in Program related activity. The full report of the PDF-A Workshop, along with the list of

participants and their affiliations, is included as Annex 4 of the PDF-B project submission.

25. At the close of the Workshop it became apparent that there was not a sufficient enough knowledge base of existing and planned demonstration and other activities in coastal communities to identify the gaps that could be filled by a GEF sponsored project. This project proposal contains as a specific Output the need to undertake a comprehensive assessment of planned and ongoing coastal zone based initiatives, undertake a gap analysis, and then determine the advisability and need of developing such a GEF project.

Previous World Bank and UNDP Activity

26. Substantial government, private sector, and NGO support has been voiced for a region wide Large Marine Ecosystem based international approach for the fisheries resources of the Agulhas and Somali Currents. While the countries do not possess the sufficient financial and human resources to undertake the work necessary to undertake such a project on their own, they have made clear that this is an important priority for them to pursue. The priority the countries give to this issue was made clear in the PDF-A funded workshop under the SIOFP project sponsored by the World Bank-GEF and held in Maputo, Mozambique, in 1999.

27. The *UNDP*, in advance of its PDF-A Workshop activity, held extensive consultations with governmental, private sector, university, and NGO individuals and groups in Madagascar, Mozambique and South Africa, as well as preliminary consultations with Comoros, Mauritius and Seychelles and has found substantial support for the overall objectives of a programmatic and ecosystem approach to these two LMEs. As Comoros, Mauritius and Seychelles were not involved in the WBs original workshop, discussions have been held with representatives of those countries and each has expressed an interest in participation. The Implementing Agencies have also found that similar objectives are incorporated into the priorities of the relevant government ministries, the research agendas of universities, and NGO work programs.

UNEP and Other Organizational Support

28. The *UNEP* is currently implementing an OP #10 Project proposal to fund a land-based sources of pollution project consistent with the Global Programme of Action (GPA-LBA). The PDF-B for this Project resulted in, among other things, creation of an initial TDA and SAP.

29. The Program in general, and this Project in particular, will involve stakeholders such as, *inter alia*, the Marine Sector Coordinating Unit of the Southern African Development Community (SADC), Intergovernmental Oceanographic Commission of UNESCO (IOC), the World Meteorological Organization (WMO), The CORDIO Program (Coral Reef Degradation in the Indian Ocean), the Secretariat for Eastern African Coastal Area Management (SEACAM), the IOC sponsored Regional Cooperation in Scientific Information Exchange-WIO (RECOSCIX), the International Union for the Conservation of Nature (IUCN), and the World Wide Fund for Nature (WWF). Following is a description of a partial list of the activities of these organizations that relate to the objectives of the Program and specific Project that are the subject of this proposal.

30. The *Marine Sector Coordinating Unit of the SADC* has been involved with the UNDP in early consultations to develop the UNDP elements of this proposed Program, and continues to be actively involved in Project planning and will be a partner during PDF-B execution. The objective of the Marine Sector Coordinating Unit of the SADC is to promote the development of sustainable marine fisheries in the SADC coastal region. SADC has eight participating member states in this program: Angola, Democratic republic of Congo, Mauritius, Mozambique, Namibia, Seychelles, South Africa, and Tanzania. A letter of support for this project from SADC forms Annex 1.

31. The *IOC* is actively involved in the Indian Ocean through the IOC Global Sea Level Observing System in the Western Indian Ocean, the joint WMO/IOC Ship of Opportunity Program (SOOP), the Regional Co-operation in Scientific Information Exchange in the Western Indian Ocean, with assistance from the Belgian Government, and the Oceanographic Data and Information Network in East Africa, or ODINEA.

32. The *WMO*, aside from the joint program with the IOC listed above, has been jointly involved with the UNDP under various UNDP/WMO projects and trust fund arrangements. Of specific relevance to this proposed program is the Strengthening of the Institute for Meteorological Training and Research (IMTR) with ten participating countries. The WMO is also a sponsor of the FINNIDA/SATCC/WMO Meteorological Project aimed at strengthening the National Meteorological Services in the SADC region and the previously mentioned WMO/IOC ship of opportunity program, a GEF funded activity.

33. The *CORDIO Program* was established in 1999 in response to the bleaching and mass mortality of coral that took place during the 1998 El Nino. In the region CORDIO is coordinated from Secretariats in Mauritius and Kenya, and is active in seven countries: Mozambique, Tanzania, Kenya, Seychelles, Mauritius, Madagascar and Comoros.

34. *SEACAM* was established in 1997 at the request of the Eastern African coastal countries with the aim of assisting the region to implement and coordinate coastal management activities following the Arusha Resolution and the Seychelles Statement on ICZM. The Secretariat is hosted by the Ministry for the Coordination of Environmental Affairs (MICOA) in Maputo, Mozambique. Members of SEACAM include Comoros, Eritrea, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles, South Africa, and Tanzania. The SEACAM assists member countries in capacity building, environmental assessments, dissemination of information, public sector management, and the sustainable financing of coastal management programs.

35. The *IUCN* has been active in the countries of the proposed Program with a special emphasis and interest in the development of community-based, sustainable fisheries programs. Representatives of the IUCN were directly involved in preparation of elements of this proposed Programmatic Approach, and were active participants in the UNDP PDF-A Workshop.

36. The *WWF* has taken a regional approach to its work based on its concept of an ecoregion, which is defined as a “large unit of land or water containing a geographically distinct assemblage

of species, natural communities and environmental conditions”. The WWF will be a key partner in this Project in particular and in the Agulhas and Somali Current LME Program in general. Of relevance to the Jakarta Mandate in East Africa is the East African Marine Ecoregion that comprises the WIO coastal zones of Southern Somalia, Kenya, Tanzania, Mozambique, and South Africa. As part of its commitment to the region and the issues confronting these two LMEs, the WWF has prepared a discussion paper titled *Eastern African Marine Ecoregion Conservation Strategy*, which outlines a vision and goal for the work it plans to undertake as well as a list of *Key Offshore Fisheries Species Targets, Habitats of Special Concern, Species of Special Concern, and Key Near Shore Fisheries Species Targets*.

37. Existing GEF projects/programs with complementary objectives to this PDF-B proposal and/or with the overall Agulhas and Somali LME Program include:

- ***Conservation of Coastal Forest Biodiversity in East Africa.*** This project focuses on the dryland evergreen forests of Kenya, Tanzania (including Zanzibar that is recognized as a major center of biodiversity in eastern Africa. These coastal forests can extend up to 20 km inland, and are under considerable threat from growing demand for limited forest resources. A UNDP Block A grant has started the process of GEF support for improved and sustainable conservation in the East African Coastal Forests. Specifically the PDF-A is reviewing the biodiversity of the forests, examining threats, reviewing ongoing and planned conservation programs, sponsoring workshops, and consulting with local communities, in order to develop a full project for GEF and other funding.
- ***The Conservation and Sustainable Use of Biodiversity on the South African Wild Coast.*** The long term objective of this GEF-UNDP supported project is to ensure conservation and sustainable use of nationally and globally significant biodiversity in the Wild Coast. This objective will be met through the development and dissemination of best practices for sustainable use and land use planning, protection of terrestrial and marine biodiversity hot spots, removal of invasive aliens, and capacity and institution building at local and provincial levels for long term sustained beneficial impacts. A PDF B grant has been allocated for preparation of this initiative.
- ***Coastal and Marine Biodiversity management Project (MICOA).*** This GEF-World Bank supported project in Mozambique tests and refines an approach to achieve sustainable economic development of coastal zone resources through a strategic development planning process that integrates their ecological, social and physical values, and balances the varying interests involved in their management. The approach is multi-pronged and includes: (a) strategic spatial planning that fully integrates conservation with regional development; (b) establishment and strengthened protection of key marine conservation areas and initiation of conservation oriented community activities in and around them; (c) capacity building of key government and non-government stakeholders responsible for biodiversity protection; (d) public awareness raising; and (e) establishing best practice for environmentally and biodiversity friendly development.

- ***Madagascar Environment Program.*** EMC has conducted a synthesis of existing information of coastal and marine resources for Madagascar. This includes an analysis of information on the biodiversity of these coastal areas as well as socio-economic parameters. This is being used to develop a national marine and coastal resources policy through a participatory process. EMC has also supported regional and local pilot planning processes and pilot community-based management of fisheries and mangrove resources. Nearly 30 coastal communities now have community management structures with exclusive rights over their traditional fishing waters and have instituted a basic reef fisheries management system based on a variable number of no-take zones where reef biodiversity is free to mature and reproduce. An application to the GEF for funding the third phase of the Programme will be submitted to the GEF Council at its November 2003 sitting. EP III will include a component aimed at demonstrating the utility of marine protected areas for fisheries recruitment (increase in spawning biomass and spillover effects).
- ***Comoros Marine Biodiversity Conservation.*** The UNDP GEF project in the Comoros Island is focused on the creation of marine protected areas and individual species rehabilitation. The first ever protected area in the Comoros Islands was recently created on Moheli with project assistance.
- ***Mauritius Marine Protected Areas.*** A funding application for a medium sized project has been submitted by UNDP to the GEF. The project would develop co-management systems and an enabling policy framework for expansion of the marine protected area network.
- ***Seychelles National Environment Management Plan.*** A joint request through WB and UNDP for GEF funding for implementation of sections of the EMP related to terrestrial and marine biodiversity is currently under development. The concept was approved by the GEF in June 2003.
- ***Tanzania: Marine protected areas at Mnazi Bay.*** This GEF/ UNDP Project provides funding for the development of a multi-purpose Marine Protected Area around the globally significant marine biodiversity values of the Mnazi Bay and Ruvuma River estuary areas in southern Tanzania. This is Tanzania's second Marine Park. In keeping with Marine Park philosophy in Tanzania, the sustainable use of marine resources by communities, as well as biodiversity conservation, is emphasized. There is a focus on protected area zoning with sustainable harvesting.
- ***UNEP Implemented Project titled Addressing land-based activities in the Western Indian Ocean (including TDA and SAP updates) (WIO-LaB).*** This project proposal has a primary concentration on some of the major environmental problems and issues of the region: degradation of the marine and coastal environment due to land-based activities.

- ***World Bank Implemented Project titled The Coral Reef Targeted Research and Capacity Building Project.*** A main objective of this Project is filling critical science gaps related to coral reef sustainability. The Coral Reef Targeted Research and Capacity Building Project will support scientific research to be conducted by an international network of scientists. According to the World Bank, this Project will offer excellent opportunities for collaboration with the suite of Projects contemplated for the Agulhas and Somali LMEs.
- ***Planned World Bank GEF Submission Titled Marine and Coastal Environmental Management Project.*** This proposed project evolved from a national workshop to discuss the way forward in implementing a national coastal management strategy. Its intent is to address key problems in coastal and marine areas including the overexploitation of the off-shore fishery, need for an effective management regime for sustainable development of the EEZ, the reversal of losses sustained in revenue due to weak monitoring and enforcement, loss of biodiversity, significant poverty and lack of livelihoods for coastal populations, and greater involvement of the private sector and financial intermediaries in managing marine and coastal resources. The WB has indicated it is interest in collaborating with the planned Programmatic Approach for the Agulhas and Somali Large Marine Ecosystems.
- ***UNEP Implemented Project titled Addressing land-based activities in the Western Indian Ocean (including TDA and SAP updates) (WIO-LaB).*** This project proposal has a primary concentration on some of the major environmental problems and issues of the region: degradation of the marine and coastal environment due to land-based activities.
- ***World Bank Implemented Project titled The Coral Reef Targeted Research and Capacity Building Project.*** A main objective of this Project is filling critical science gaps related to coral reef sustainability. The Coral Reef Targeted Research and Capacity Building Project will support scientific research to be conducted by an international network of scientists. According to the World Bank, this Project will offer excellent opportunities for collaboration with the suite of Projects contemplated for the Agulhas and Somali LMEs.
- ***Planned World Bank GEF Submission Titled Marine and Coastal Environmental Management Project.*** This proposed project evolved from a national workshop to discuss the way forward in implementing a national coastal management strategy. Its intent is to address key problems in coastal and marine areas including the overexploitation of the off-shore fishery, need for an effective management regime for sustainable development of the EEZ, the reversal of losses sustained in revenue due to weak monitoring and enforcement, loss of biodiversity, significant poverty and lack of livelihoods for coastal populations, and greater involvement of the private sector and financial intermediaries in managing marine and coastal resources. The WB has indicated it is interest in

collaborating with the planned Programmatic Approach for the Agulhas and Somali Large Marine Ecosystems.

- ***Other Related and Complementary UNEP Projects.*** Work undertaken during Preparation and Full Project implementation will also take full account of other related Projects in the region such as the appropriate and relevant work in the region that will be the subject of GIWA, and the UNEP implemented PDF-B on Coastal Tourism (Reduction of Environmental Impacts from Coastal Tourism through Introduction of Policy Changes and Strengthening Public-Private Partnerships).
- ***Other Related and Complementary UNEP Projects.*** Work undertaken during Preparation and Full Project implementation will also take full account of other related Projects in the region such as the appropriate and relevant work in the region that will be the subject of GIWA, and the UNEP implemented PDF-B on Coastal Tourism (Reduction of Environmental Impacts from Coastal Tourism through Introduction of Policy Changes and Strengthening Public-Private Partnerships).

Demonstrated Country Commitment

38. In addition to the considerable and demonstrated level of country commitment described above, the participating countries have, at the domestic legislative and regulatory level, further demonstrated their commitment to the objectives of the project. In *South Africa* the National Environmental Management Act (1998), the Development Facilitation Act (1995), and the national Water Act (1998) are all indicative of governmental interest and support for the Program that is the subject of this proposal. In *Seychelles* similar support is indicated by the national land Use Plan (1992) and the IMCAM institutional review process undertaken in 1999. In *Mozambique* the National Environmental Management Program was approved in 1994 and the National Coastal Zone Management Policy and National Coastal Zone Management Program is in the final stages of the approval process. In *Mauritius* the Plan d'Action Regional (1998) includes initiatives on coral reefs, ecotoxicology and Integrated Marine and Coastal Area Management (IMCAM). An integrated coastal zone management plan is in the process of being framed with multi-stakeholder involvement. *Madagascar* has initiated an array of very impressive initiatives to transfer responsibility for the establishment of sustainable fishing practices to the community level. *Comoros* has developed policy initiatives as part of the Regional Environment Program of the Indian Ocean Commission (PRE-COI) and included initiatives on soil erosion, coral reefs and ecotoxicology. *Tanzania* has under development its National Environment Policy through the National Environment Management Council and a Mangrove Management Plan. And *Kenya's* Environmental Management and Coordination Act has provided an umbrella under which various national environmental initiatives can be more effectively coordinated.

39. The process leading to development of the SIOFP is a good indication of the country drivenness of the current PDF-B being implemented by the World Bank. The importance of a regional approach to the development of a win-win scenario was first recognized by the government of Mozambique. This led to the organization of a regional conference, supported by

a GEF Block A grant through the World Bank. The conference was held in December 2000 in Maputo, Mozambique with representatives from the governments of Kenya, Tanzania, Mozambique, South Africa and Madagascar as well as representatives from the FAO, ICEIDA, IUCN, NORAD, SADC, UNEP and the World Bank. During this conference, government representatives from Kenya, Tanzania, Mozambique and Madagascar expressed their intention to participate in the project. The delegation from South Africa indicated that, while not specifically authorized to confirm participation, they would undertake the promotion of this project with the appropriate Director General, and South Africa participated fully in the UNDP sponsored PDF-A Workshop to give further definition to the fisheries component and discuss ways to integrate the efforts aimed at coordinating the multiple project approach being taken as part of the Agulhas and Somali LME Program.

V. Objectives and Activities of Full Project Proposal

40. Based on the consultations carried out to date (see Annexes 3 and 4), the following Full Project Components, related Activities, and projected Outcomes have been identified. Based on the consultations carried out to date (see Annexes 3 and 4), it became possible to identify the overall, Full Project Objective, six Full Project Components, related Activities, and projected Outcomes. These would include:

Full Project Objective:

41. The Objective of the Project is to fill gaps in understanding of transboundary living resources of the two LMEs, and to build capacity of the participating countries to utilize this improved understanding for more effective management by use of an ecosystem approach. Accomplishment of this Full Project Objective will be realized through, among other things, the use of joint cruises with such entities and organizations as the World Bank implemented Southwest Ocean Fisheries Project, the African Coelacanth Ecosystem Programme, the Oceanographic Department of the University of Cape Town, and the creation of synergies with the BCLME Programme. The Project Objective will also be met through the creation of effective working relationships with the UNEP implemented OP#10 Project related to the Global Program of Action, and also with a possible coastal communities related Project to develop a set of coastal-based demonstration Projects which would address unmet needs in the coastal areas of these two LMEs. Possible targeted demonstration activities could involve efforts aimed at the protection of endangered species (e.g. the dugong), near-shore hotspots and the identification of key habitat areas, sustainable, community based fisheries, and coral reef protection and enhancement.

Project Components:

Component 1:

Creation of intra and inter-project coordination, communication and support through establishment of a Program Coordination Unit (PCU).

Component 1 Activities:

Activity 1.1

Recruit and hire Project personnel, giving priority to regionally based human resources.

Activity 1.2

Create a Project Steering Committee.

Activity 1.3

Designate a Lead Agency in each participating country.

Activity 1.4:

Provide a fora for assuring communication between the science community and end users of information collected through the proposed oceanographic surveys

Component 1 Outcomes:

- A functioning and effective PCU.
- A functioning and effective Project Steering Committee.
- Lead Agencies functioning and effective in each participating country.

Component 2

Fill knowledge gaps needed to inform the process of a regional ecosystem based approach to the long-term, sustainable management of the resources of the A&S LMEs.

Component 2 Activities:

Using the preliminary information gathered during Project Preparation (PDF-A and PDF-B implementation), taking a Modular Approach to the A&S LMEs, and through the use of research vessels, remote sensing, the deployment of moorings and drifters, and other means as necessary:

Activity 2.1

Fill knowledge gaps in the two LMEs in relation to Productivity;

Activity 2.2

Working cooperatively with the World Bank Southwest Indian Ocean Fisheries Program (SWIOFP)², fill knowledge gaps that exist in the two LMEs in relation to Fish and Fisheries;

Activity 2.3

Working cooperatively with the UNEP, fill knowledge gaps in the area of Pollution and overall Ecosystem Health.

Activity 2.4

Fill knowledge gaps with regard to living resources in near-shore areas.

Activity 2.5

Assure, and document, full public involvement of affected stakeholders in the Activities under this Component.

Component 2 Outcomes:

- Knowledge and information gaps for the productivity module filled. For illustrative purposes³, these could include, among others, issues related to phytoplankton, zooplankton dynamics, nutrient cycling, upwelling, climate variability, impacts on recruitment, and the Indian Ocean Di-pole.

² This collaboration was effectively begun at the World Bank sponsored PDF-B Workshop for the SWIOFP, held in Cape Town, RSA from August 26-28, 2003.

³ Initial data and information needs/gaps, in relation to a Modular Approach to address the needs of LMEs, were identified at the UNDP sponsored PDF-A Workshop held in Maputo, Mozambique in September, 2002

- Knowledge and information gaps for the fish and fisheries module filled. For illustrative purposes these could include, among others, larval transport, trophic relationships, including biodiversity and alien species, fishery surveys, toxic tides and algal blooms, systems functioning and their relationship to fisheries, industrial fisheries in relation to artisanal and subsistence fisheries, the impact of fisheries on biodiversity, and commercial and subsistence landing effort.
- Knowledge and information gaps concerning anthropogenic threats, natural system perturbations, and the conjunction of these effects are filled. For illustrative purposes, these could include, among other things, pollution from land-based sources, maritime pollution loadings, pollutant levels (especially persistents) in marine plants and animals, status and trends of habitat loss and degradation, ecotoxicological studies, and invasive species.
- Knowledge and information gaps with regard to near-shore living resources filled.

Component 2 Methodology/Approaches:

42. The identification of the above referenced knowledge and information gaps has been undertaken by regional participants who have taken part in WB and UNDP PDF-A, and WB PDF-B activities to date, most recently the WB sponsored workshop which took place in Cape Town, SA from September 2-5, 2003 (at which representatives of the UNDP were active as presenters and participants). Regional representatives have concluded that filling these tentatively identified information and knowledge gaps will serve as the necessary “glue” for any successful Programmatic Approach for the Agulhas and Somali Large Marine Ecosystems.

43. The PDF-B request that will follow approval of this Concept Note will be used to more specifically identify the precise GEF and co-financial inputs necessary to fill identified information and knowledge gaps. It is possible, however, to define in a preliminary way methodologies and approaches that will be taken to fill these gaps, and to provide an initial list of likely and substantial sources of co-finance.

44. Jointly and separately funded cruises will be a necessary activity for all elements (projects) within the Programme. Joint cruises would include cruises that would involve wet or dry leasing of vessels by the WB implemented SWIOFP project and the UNDP implemented project that is the subject of this request. There will also be joint cruises which are sponsored by one or more GEF Projects within the Programme and other, non-GEF projects currently under implementation in the region. These will include joint activities with the African Coelacanth Ecosystem Programme (ACEP), which is currently undertaking bottom mapping in the LMEs that are the subject of the Programme. The digitized maps being developed by the ACEP will provide a base layer for the framework being developed by the SWIOFP and, through use of complementary resources from the GEF Programme, can eventually serve in the creation of a framework for the assessment/science related Project of what is known, what is not known, where work needs to be done, and how integration of disparate data could be drawn together and modeled for decision making and used as an aid in the formulation of policy and development of management tools at national and regional levels.

45. Another area of cooperation for the undertaking of joint cruises is that provided by the

Norwegian Government and its deployment to the region of the *RS Dr. Fridtjof Nansen*. The *Nansen* Programme has thus far been concentrated on work related to the Benguela Large Marine Ecosystem. Discussions that have been undertaken with the Norwegian Government by the GEF have resulted in a commitment to deploy the *Nansen* to the waters of the Agulhas and Somali LMEs for up to two years. This commitment will significantly enhance each of the Projects of the Program and will become a quite significant source of co-finance.

46. In addition to the joint cruises described above, the South African Government has also indicated, in a preliminary way, that it may be possible to create Program synergies with the ongoing work of South African research vessels in addition to the vessel that has been used by the ACEP. This possible South African/Programme synergy could include elements related to, and necessary for the joint cruises. These include the provision fishing gear (trawl nets and traps), equipment (VMS, genetics labs, GIS, and remote sensing), and servicing (docking and victualing). And while other countries participating in the Program do not have vessels available for joint cruises, they are likely to be in a position to contribute through the provision of equipment, infrastructure, and services. Such countries include, but may not be limited to, Mozambique, Seychelles, Tanzania, Mauritius, and Kenya.

47. A priority for the project described in this Concept Note will be the compilation of existing, and definition of additional information with regard to, among others, temperature, oxygen, salinity, variability, thermoclines, current systems and their dynamics, a better understanding of what regional experts describe as the “deep”, land and sea dynamics and their interactions, episodic events such as cyclones, floods, and coral bleaching. The Program generally and the project specifically will accomplish the compilation of existing and necessary additional information through the creation synergies with existing programs such as, among others, the Global Ocean Observing System in the Indian Ocean (IOGOOS), national fisheries development and management agencies in the region, the Indian Ocean Tuna Commission (IOTC), the FAO, ACEP, the Western Indian Ocean Marine Science Association, RS Algoa cruises, distant water fishing fleets with historic interests in the two LMEs, the GEF supported Benguela Current Large Marine Ecosystem Programme, the Variability and Predictability Project of the World Climate Research Programme (CLIVAR), the International Whaling Commission (IWC), and the Indo South Atlantic Humpback Consortium (ISACH). Some of these synergies are already in the process of being created, while the others will be actively pursued during Preparation activities.

48. Finally, there is a clear linkage between the activities that are contemplated in the proposed Program and this Project and the need for countries in the region to make informed management decisions consistent with provision of an ecosystem approach for these two LMEs. There is at present no regional approach for addressing the growing presence of distant fishing fleets in the waters of the EEZs of the participating countries. For example, the countries are desirous of creating such an approach, but without data and information on such issues as those identified in Component 2 of the proposed Project, there is no scientific or policy basis for proceeding with the necessary discussions to formulate a regional approach. It is not possible to create a coherent and defensible regional approach to the fisheries of these two LMEs without the presence of, among other things, baseline information and filling of knowledge gaps in relation

to such issues as larval transport, fishery interdependent surveys, systems functioning and relationship to fisheries, the impact of fisheries practices on biodiversity, and basic information on landings.

49. The countries are interested in creating institutional mechanisms that would make possible the sharing of coastal zone based approaches to near-shore fisheries management, coral reef protection and the protection and enhancement of populations of endangered species. But such sharing of approaches and practices at the regional level cannot take place without the compilation of existing information on the various approaches being taken by participating countries, an identification of the array of activities that are being undertaken in the coastal zones of the participating countries, and an identification of the gaps that are likely to exist after such identification and assessment has taken place.

50. In summary, unless and until the knowledge and information gaps described in this proposal are addressed, there is little or no possibility that the participating countries can develop coherent and defensible national and regional policies and take necessary management decisions that would make possible the creation of an ecosystem approach to the issues of these two LMEs. It has been clear to the participants in Preparation activities undertaken by the World Bank and by UNDP, and described in several sections of this proposal, that the Components and Activities contemplated in this proposal are essential to any effective attempt to create a coherent, ecosystem-based set of management tools for these two LMEs.

Component 3

Facilitate long-term program and ecosystem monitoring, evaluation and the reporting based upon, among other things, initial GEF International Waters based indicators.

Component 3 Activities:

Activity 3.1

Identification, establishment and operation of an institutional and participatory mechanism responsible for assembling and reporting on agreed indicators for monitoring and evaluation of the status of the Agulhas and Somali LMEs. The mechanism would be comprised of the GEF Implementing Agencies, the participating countries, the WIOTC, the SADC, IUCN, the WWF, and other relevant stakeholders that will be identified during further Project Preparation.

Activity 3.2

Development of IW based indicators to measure Project progress and overall success. Also, in cooperation with other IAs, development of a suite of Process, Stress Reduction, and Environmental Status indicators for the A&S LMEs using the improved knowledge base and enhanced regional institutional arrangements that will be developed over the life of the overall Program.

Component 3 Outcome:

- A funded institutional and procedural approach for effective LME level monitoring, evaluation and reporting in place and functioning, including the IW indicators.

Component 4

Measures to ensure the continuing availability/provision of the human and financial resources necessary for Program and Project long-term sustainability.

Component 4 Activities:

Activity 4.1

Work with potential donors and the participating countries to secure requisite level of ongoing funding to ensure Project sustainability.

Activity 4.2

In collaboration with the World Bank and the UNEP, work with the participating countries and regional organizations to identify means to address identified human capacity building requirements to sustain LME assessment processes at levels necessary to inform effective and sustainable LME management.

Activity 4.3

In collaboration with the World Bank and the UNEP, work with participating countries and regional organizations to identify financial sources and revenue generating mechanisms to achieve long-term Program and Project sustainability as agreed to be the countries through an iterative process of developing and refining the SAP. This could take the form of individual donor recruitment and the convening of donors in a Program related Donor Conference.

Activity 4.4

In collaboration with the World Bank and the UNEP, work with donors and others to assist the countries of the region to ensure the long term institutional sustainability of the overall Program, including the LME assessments piloted under this Project, as agreed to by the countries through an iterative process of developing and refining the SAP.

Component 4 Outcomes:

- Donor and participating country funding and provision of other resources to sustain Project ongoing activities secured.
- Agreed upon country and regional approaches to address identified capacity building needs for LME assessments.
- Increased resources mobilized through a variety of financial and economic mechanisms to sustain the Program.
- Agreed upon country and regional institutional mechanisms to ensure long-term Program sustainability.

Component 5

Assure a comprehensive program of public involvement to enable all affected stakeholders access to, and capacity to be directly involved in, all activities related to this Project.

Component 5 Activities:

Activity 5.1

Develop a Distance Learning and Information Sharing Tool (DLIST), fashioned on the model developed for the GEF supported BCLME Programme, with support from IW:LEARN.

Component 5 Outcomes:

- Creation of networking opportunities for, between and among key coastal stakeholders

within the region, thus facilitating broad public participation within Project Activities.

- Development of an internet-mediated learning environment that assists in the formulation of a strategic development plan for the region.
- Creation of an on-going and self sustaining learning and information-sharing tool.
- Documented description of the activities undertaken in this Component.

Component 6:

Create effective linkages with other Projects that are part of the A&S LME Program and with other GEF sponsored LME Projects globally.

Component 6 Activities:

Activity 6.1

In cooperation with the World Bank and the UNEP, explore with the participating countries options for, and final selection of, an ongoing, regionally-based entity that would continue the work begun as part of this Project, and would serve as the long-term repository of a regionally-based information and management dissemination system accessible to all stakeholders.

Activity 6.2

In cooperation with the World Bank and the UNEP, and the participating countries, undertake close and regularized communication to create synergies among the various Projects under the Program and related GEF supported biodiversity projects, and create the communication and coordination mechanisms necessary to bring about a collaboratively developed final TDA and SAP, building on the initial TDA and SAP that has been developed by the UNEP.

Activity 6.3

In cooperation with the World Bank and UNEP, explore with the participating countries options for, and final selection of, an ongoing, regionally based entity that would continue the work begun as part of this Project, and would serve as the long term repository of a regionally based information and management dissemination system accessible to all stakeholders.

Activity 6.4

Develop a project web site, consistent with IW Learn guidelines, and assure participation in IWLEARN related meetings

Component 6 Outcomes

- Functioning and effective coordination between and among the GEF Implementing Agencies, the participating countries, appropriate regional organizations such as, *inter alia*, the SADC and the West Indian Ocean Tuna Commission, funded activities to ensure effective communication and collaboration with other GEF LME Projects globally, and the creation of a Program/Project web site.
- A participating country agreed upon mechanism to ensure the long-term continuation of the work begun under the Program and Project.
- Country and regional capacity building needs defined and measures identified to address the defined capacity building needs.
- A well defined, adequately funded and functioning set of coordination and communication mechanisms among the GEF IAs, the participating countries, and affected interests that would eventually lead to a finalized TDA and SAP, building on the existing work of the UNEP.

VI. Description of Proposed PDF-B Activities by Component/Outputs

51. There will be seven Activities associated with implementation of the proposed PDF-B. Each of the Activities is listed below, followed by a description of the Outputs associated with each:

1. *Initial Consultations*

52. By the time of approval of this PDF-B submission it will have been at least 12 months since the Maputo PDF-A Workshop. It will be important to undertake an initial PDF-B supported Mission to each of the countries and offices of the participating organizations and institutions to ascertain progress that has been made since the Workshop in collecting and synthesizing information and briefing each on the requirements and expectations of work to be undertaken during the PDF-B.

Output:

- *A status report describing the information base in each of the participating countries and within each relevant regional organization.*

2. *Ongoing Communications and Coordination Mechanisms and Provision of Effective and Documented Public Involvement in PDF-B Activities.*

53. The Project will undertake a complex level of ongoing communication and coordination. This complexity will exist at five levels. The first level will be to effectively organize the work of Preparation between and among the Participating Countries. The second level will be to organize and coordinate the work of the PDF-B among the Participating Countries and the various Regional and NGO's involved in Project Activities. These include, *inter alia*, the WWF, SADC, IUCN, the US NOAA, the Africa Process, the Abidjan Convention, and various other regionally and locally based NGO's that will be involved during Preparation. A third level will be to begin coordination of activities with other GEF sponsored LME Projects, and in Africa. These include the Canary Current LME, the Guinea Current, the Benguela Current, and, although not technically an LME project, the joint UNDP-WB implemented Red Sea project. A fourth level of coordination will involve connecting the ongoing work in the Agulhas and Somali Current LME to global GEF LME Projects such as those of the Humboldt Current and the Yellow Sea.

54. This level of coordination will require the establishment of a broad-based Steering Committee, ancillary sub-committees created as necessary, and a dedicated website.

55. *The provision of effective public participation in Preparation activities, and for Full Project, is seen as essential to success. Thus an important activity within Preparation will be the development of an implementation plan for a Distance Learning and Information Sharing Tool (DLIST) that will be implemented as part of the Full project. This activity, which will be executed in direct collaboration with Eco-Africa, will be in addition to the substantial other opportunities for public involvement in the activities of the Preparation phase of the project.*

A stakeholder assessment and public participation plan will be developed as part of the preparatory process.

During preparation there will also be development of a Programme Concept in cooperation with the WB and the UNEP, the participating countries, and affected stakeholders. Preparation of such a Concept is seen to be instrumental in the creation of effective and cooperative synergies between and among the IAs, countries, and affected public and private sector interests in and possibly outside of the region.

Outputs:

- *A comprehensive report describing the level and extent of communications and coordination that has occurred during Preparation;*
- *A detailed description in the Project Brief and Document of the communication and coordination mechanisms to be undertaken during implementation, at all four levels described above; and*
- *A plan to continue and expand upon the content of the designated Project Web site designed during Preparation.*
- *A comprehensive report describing the level and extent of communication and coordination that has occurred during preparation.*
- *An Implementation Plan for the Distance Learning and Information Sharing Tool (DLIST) that will be implemented as part of the Full project*
- *Costed Public Participation Plan, reflecting GEF requirements.*
- *A Programme Concept in cooperation with the WB and the UNEP, the participating countries, and affected stakeholders.*

3. Synthesis and Assessment of Existing Information in the Two LMEs

56. The PDF-A Workshop signalled the beginning country activities aimed at collecting and synthesizing existing information at the country level. An initial summary of the work needing to be undertaken in this Project is summarized in Section III of this PDF-B Proposal. This Activity will involve undertaking a synthesis of existing information from such sources as the UNEP and the Abidjan Convention, the various regional organizations already listed in this submission, and from other sources such as from countries of the former Soviet Union, who fished the waters of these LMEs quite extensively. It will also include an assessment of project related activities currently being undertaken at the national level and the status of such activities.

57. This Activity will end with a regionally based workshop to discuss results and define next steps to facilitate the identification of and analysis of key targeted assessment needs and approaches to address these identified needs, which are the subject of the next Activity. The Workshop would also include a preliminary discussion of capacity building needs that should be a specific Activity addressed during Full Project implementation.

Outputs:

- *A comprehensive report describing the state of existing information from all sources, a synthesis of existing information, gaps identified and approaches to be fill identified*

gaps; and

- *A published report of the proposed Workshop.*

4. Selection of the specific components of and development of a budget for a comprehensive Program to undertake an assessment of the two LMEs

58. On the basis of the synthesis and assessment of existing information, key issues and capacity building needs, specific components will be identified and a budget developed through use of, among other things, an open, participatory process. This participatory approach will include a second regional workshop which will include major stakeholders from national government, regional organizations, NGOs, and sectoral representatives. Workshop conclusions will be instrumental to Project Brief preparation.

Outputs:

- *An agreed upon, comprehensive report defining the specific components necessary for a comprehensive assessment of the two LMEs;*
- *A set of recommendations to address identified capacity building needs within the participating countries and at the regional level; and*
- *A description of the extent and level of stakeholder participation during Preparation.*

5. Assessment, Synthesis, and Gap Analysis of Existing and Planned Activities in the Coastal Zone

59. The PDF-A Workshop included a specific activity the objective of which was to determine a set of Pilot Demonstration Activities and sites that could be the subject of coastal zone based set of demonstration activities dealing with community-centered fisheries regimes⁴, protection of endangered species, and coral reef protection, enhancement and restoration. Representatives of many of the major organizations with an interest in such activities were represented at the Workshop. The consensus was that not enough is known about the extent and effect of the array of coastal zone initiatives currently underway or planned, and that an Activity of an early Preparation should be an inventory of these initiatives, an assessment of their overall effectiveness, and a gap analysis to determine the advisability of a GEF project proposal to undertake a set of demonstration activities in the coastal zone. Discussion of the results of the assessment, synthesis and gap analysis would be the subject of a stakeholder Workshop conducted during the same timeframe as the Workshop described above.

Outputs:

- *A final report detailing the number and extent of coastal zone based interventions across the two LMEs;*
- *An assessment of the adequacy of the array of ongoing and planned interventions in the coastal zone;*
- *A gap analysis; and*

⁴ This will include an assessment of FAO supported coastal fisheries initiatives in the region, including a summary of the evaluations conducted on these projects.

- *Recommendations concerning the advisability and specific nature of any future consideration of a GEF intervention as part of the Programmatic Approach to these two LMEs.*

6. Donor Recruitment

60. Donor recruitment activity will require an assessment of existing donors who are active in the region, the exact nature of their funding activities and priorities, and development of a plan to approach donors singly and collectively, through a Donor Conference, toward the end of the project preparation period.

Outputs:

- *An appropriate level of committed co-finance as part of the Project Brief submission; and*
- *A detailed plan to continue securing co-finance during project Implementation.*

7. Development and Submission of a Project Brief and Project Document

61. The proposal includes the resources necessary to develop for submission to the GEF a project Brief and follow-on Project Document. The proposal will include a fully costed monitoring and evaluation plan.

Outputs:

- *A fully costed Project Brief ;*
- *A costed Monitoring and Evaluation Plan, meeting all UNDP-GEF requirements*
- *An incremental cost analysis*
- *A Project Document that has taken into account comment received from the GEF Secretariat and the GEF Council.*

VII. Eligibility

62. This proposal is consistent with the GEF Operational Strategy. It is also consistent with Operational Program #9, the the Integrated land and Water Multiple Focal Area OP, with special emphasis on the SIDS component of OP# 9. The Project will make possible regional actions to address current, and anticipate future, threats to these multiple country ecosystems through the strengthening of individual country capacity and the creation of currently non-existent or nascent regional capacities. More specifically the Project qualifies for GEF support in that:

- The GEF contribution will be incremental. It will add to programs and initiatives already underway in the region and funded by governments, other donors, or the NGO community.
- The GEF contribution will enable the pursuit of global benefits of cooperative and integrated management of two international ecosystems and the protection of biodiversity in those systems.
- The Project will be country-driven, a process already underway by virtue of the

previously approved PDF-B for the SIOFP and the UNDP sponsored PDF-A Workshop which were driven by country participants.

- The Program of which this Project is a part will address a full range of environmental issues associated with these two LMEs across entire systems, from offshore waters to the height-of-land delineating the land edge of the ecosystem boundaries of the two LMEs.
- The Project as part of the Program will contain resources to ensure cooperative activity and the sharing of lessons learned with the other five Africa GEF supported LME projects and other GEF supported LME projects globally.
- The Project will also coordinate and leverage a range of additional donor assistance and co-finance.

63. This Preparation proposal is consistent with the intent as expressed in the GEF approved, World Bank Concept Note for the Southwest Indian Ocean Fisheries Project (SWIOFP). It is an essential part of the ability of the countries, regional institutions, NGOs, sectoral interests, the GEF, and other donors to take a truly integrated approach to issues across the full reach of these two systems.

VIII. National Level Support

64. National level support has already been well-documented in this proposal, in the activities leading to the WB implemented PDF-B on the SIOFP, the activities funded by the UNDP sponsored Regional Workshop under a PDF-A grant, and in the work undertaken by UNEP in the GEF funded PDF-B for the WIO which led to a draft TDA and SAP. Documentation of these activities have either already been submitted to the GEF or are attached as Annexes to this Proposal. Each of the participating countries, through the signature of their GEF Focal Points, have reviewed and approved their country participation in this Preparation activity.

IX. Special Features

65. The Programmatic Approach being taken for the Agulhas and Somali Current LMEs represents a unique approach to effective use of Implementing Agency comparative advantage and comparative management applied to the TDA/SAP process. The Programme has been developed consistent with the need to address each major facet of these ecosystems – from the height of land to the so-called blue water fishery. The UNEP will be responsible for final appraisal and implementation of a land-based sources of pollution project, consistent with its comparative advantage within the Global Program of Action. The World Bank has already begun implementation of the blue water fishery component, the SIOFP, which will over time require capitalization to enable countries to assess and then develop their respective blue water fisheries, a comparative advantage of the World Bank within the GEF structure. The UNDP will develop the Ecosystem Assessment Component of the Programmatic Approach, and thus build on the experience it has gained in previous work in the Benguela Current, the Yellow Sea, and the Humboldt Current, where similar initiatives are underway.

66. An additional Special Feature is the funded activity within this Preparation activity which

will begin to link the efforts, and share lessons learned, as a result of the GEF intervention across all of the LMEs surrounding the African continent, and the coordination of work being undertaken in these LMEs with LME work globally.

X. Implementation Arrangements

67. The UNDP will be the Implementing Agency for this Project Preparation activity. The UNDP, through a Senior International Consultant and Regionally-based Project Coordinator, will establish a Steering Committee comprised of the co-implementing agencies with responsibility for various projects that will be part of the Programmatic Approach (the World Bank and UNEP), participating regional organizations (SADC, WWF, and the IUCN), and a representative from each of the Participating Countries. The Steering Committee may at any time increase its membership.

68. The Preparation Activity will be implemented under auspices of the UNDP from its Country Office in Mauritius.

XI. Executing Arrangements

69. PDF-B activities will be executed by the UNOPS. There will be a small Project Coordination Unit (PCU) located in Mauritius. The PCU will have a full-time Project Coordinator, hired within Mauritius, and will be supported by secretarial and administrative personnel who will be retained on an as-needed, contractual basis. A Senior International Consultant will also be retained, for a period of six months of the eighteen month PDF-B timeframe. The Senior International Consultant will travel to the region on an as needed basis, and for the remainder of the six month assignment will be home-based.

70. The PDF-B will also extensively use regionally-based consultants. Regionally-based consultants will be recruited as necessary to assist in undertaking initial, regional consultations, develop requisite communication and coordination mechanisms including the organization of necessary Workshops, undertake necessary synthesis and assessment of existing information in the two LMEs, identify and develop a budget for the scientific assessment component of the Project, and undertake a gap analysis of existing and planned activities in the coastal zone, and assist in Full Project development.

71. The Project Coordinator and the Senior International Consultant will ensure the requisite level of communication and coordination with the other Projects that are part of the Agulhas and Somali Current Large Marine Ecosystem Programme.

XII. Project Financing

- The PDF-B Request is for US\$ 698,000, out of a total Project cost of US\$ 1,146,000. The grant requested includes an allocation of 8% for Executing Agency (UNOPS) support costs. The GEF contribution was calculated consistent with the needs to complete a full project submission (Project Brief and Project Document) and undertake the requisite consultations

for co-financing arrangements at the national, regional and international levels.

- The direct value of the national/regional inputs is US\$ 250,000 which includes salaries of the National Project Directors and National Experts assigned to Task Forces and Scientific/Technical Advisory Committees of the project both at national and regional levels, the provision of national offices and facilities, organisation of meetings, etc.
- The US\$ 199,500 in-kind contribution from collaborating Agencies cover staff salaries, travel costs to meetings, report preparation, reviews, etc.

Budget:

Activity/Resource	Timeframe (Workmonths)	GEF	Govts.	UNDP	WWF	IUCN	SADC	NOAA	Total
<i>Activity 1</i> <i>Initial Consultations</i>									
International Consultants	<i>Oct. '03 – Jan 04</i> (1.5 W.M.)	15,000						7,500	22,500
National/Regional/NGO Consultants-Resources ⁵	(17 W.M.)	20,000	10,000		5,000	5,000	2,000		42,000
Travel/Related Expenses		10,000	1,000		1,000	1,000	500		13,500
Activity Sub-total	(18.5 W.M)	45,000	11,000		6,000	6,000	2,500	7,500	78,000
<i>Activity 2</i> <i>Communication &</i> <i>Coordination Mechanisms</i> <i>and Effective Public</i> <i>Participation (including D</i> <i>LIST and PPP and</i> <i>preparation of program</i> <i>note)</i>	<i>Ongoing</i> (2.0 W.M.)	15,000						15,000	30,000
International Consultants	(33 W.M.)	30,000	40,000		5,000	5,000	2,500		82,500
National/Regional/NGO Consultants-Resources	<i>Ongoing</i>	9,000	10,000		5,000	5,000	500		29,500
		15,000	5,000						20,000
Travel/Related Expenses including for IA coordination	<i>Ongoing</i>	14,000	5,000	2,000					21,000
Translation									

⁵ 5 Regional and National Consultancies averaged at US\$ 2,500 per month.

Web Site Establishment and Maintenance	<i>Ongoing</i>	40,000	10,000		1,000	1,000	1,000		53,000
Steering Committee Meetings (2)		30,000	10,000						40,000
Intra and Inter Project Communications (tel./fax/etc.)		10,000							10,000
Publications									
Activity Sub-total	(35 W.M.)	163,000	80,000	2,000	11,000	11,000	4,000	15,000	286,000
<i>Activity 3</i>									
<i>Synthesis and Assessment of Existing Information in the two LMEs</i>									
International Consultants	<i>Oct '03-July '04</i> (1.5 W.M.)	15,000						15,000	30,000
National/Regional/NGO Consultants-Resources	(77 W.M.)	87,000	90,000		5,000	5,000	5,000		192,000
Travel/Related Expenses		48,500	9,000		1,000	1,000	1,000		60,500
Regional Workshop	<i>April '04</i>	40,000	10,000	5,000	2,000	2,000	2,000	1,000	62,000
Activity Sub-total	(78.5 W.M.)	190,500	109,000	5,000	8,000	8,000	8,000	16,000	344,500
<i>Activity 4</i>									
<i>Selection of Specific Components of and Budget for a Comprehensive Program for LME Assessment</i>									
International Consultants	<i>Jan '04 – Oct '04</i> (2 W.M.)	15,000						15,000	30,000

National/Regional/NGO Consultants-Resources ⁶	(17 W.M.)	20,000	20,000		1,000	1,000	1,000		43,000
Travel/Related Expenses		20,000	5,000		1,000	1,000	1,000		28,000
Regional Workshop	<i>August '04</i>	40,000	10,000	5,000	2,000	2,000	2,000	7,500	68,500
Activity Sub-total	(19 W.M.)	95,000	35,000	5,000	4,000	4,000	4,000	22,500	169,500
<i>Activity 5</i>									
<i>Synthesis, Assessment, and Gap Analysis of Existing and Planned Activities in the Coastal Zone</i>									
International Consultants	<i>Nov '03-July '04</i> (.5 W.M.)	7,500						7,500	15,000
National/Regional/NGO Consultants-Resources	(11.5 W.M.)	10,000	10,000		3,000	3,000	3,000		29,000
Travel/Related Expenses		15,000			1,000	1,000	1,000		18,000
Regional Workshop	<i>April '04</i>	5,000		2,500	1,000	1,000	1,000		10,500
Activity Sub-total	(12 W.M.)	37,500	10,000	2,500	5,000	5,000	5,000	7,500	72,500
<i>Activity 6</i>									
<i>Donor Recruitment</i>									
International Consultant	<i>Ongoing</i> (.5 P.M.)	7,500							7,500
National/Regional/NGO Participation	(4.5 W.M.)	3,000	5,000		1,000	1,000	1,000		11,000
Travel/Related Expenses		8,000	5,000		1,000	1,000	1,000		16,000
Donor Meeting	<i>Feb. '05</i>	20,000	10,000						30,000
Activity Sub-total	(5 W.M.)	38,500	20,000		2,000	2,000	2,000		64,500

6 Includes US\$15,000 for preparation of and consultations for development of the Implementation Plan for the DLIST Activity, which will be managed by Eco-Africa.

<i>Activity 7</i> <i>Full Project Development</i> <i>Including M& E Plan</i> <i>International Consultants</i>	<i>Sep. '04/Ma. '05</i> <i>(1.5 W.M.)</i>	15,000						7,500	22,500
National/Regional/NGO Consultants-Resources	(2 W.M.)	7,000							7,000
National/Regional/NGO Consultation/Participation	(3.5 W.M.)	12,500 34,500	5,000 5,000		1,000 1,000	1,000 1,000	1,000 1,000	7,500	20,500 50,000
Activity Sub-total									
<i>Project Support</i> PMU Office/Equipment	<i>Duration</i>	7,000		25,000					32,000
Administrative and Secretarial Support	<i>Duration</i>	35,000							35,000
Activity Sub-total		42,000		25,000					67,000
Activity Total		646,000	260,000	39,500	36,000	36,000	25,500	61,000	1,104,000
<i>EA (UNOPS) Support</i> <i>Costs (8% of GEF)</i>		<i>52,000</i>							<i>52,000</i>
TOTALS	(123.5 W.M.)	698,000	260,000	39,500	36,000	36,000	25,500	61,000	1,156,000

Workplan: (Over 18 Months)

Outputs	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>	<i>17</i>	<i>18</i>
Prepare Status Report – Information Base																		
Steering, ancillary committees, and lead agencies established																		
Report – communications and coordination/Preparation																		
Develop Full Project Communication and Coordination Mechanisms																		
Project Web Site Development and Use																		
Workshop – Synthesis and Assessment																		
Comprehensive Workshop Report																		
Workshop – Agreed upon components for LME Assessment																		
Report – Capacity Building needs																		
Report – Stakeholder Involvement during preparation and participation plan																		
Final Report – Current extent of coastal zone initiatives																		
Assessment of adequacy of																		

coastal zone initiatives																		
Consideration of further coastal zone initiatives																		
Committed co-finance																		
Additional donor recruitment plan																		
Fully-costed Project Brief and PB Executive Summary																		
Submission of the PB and ES																		
Monitoring and evaluation development for Full Project																		
Circulation of PB and ES to the Council																		
Consultation on Project Document																		
Preparation of Project Document																		
GEF Council meeting																		
Completion of Project Document																		

LIST OF ANNEXES

- Annex 1 Letter of Endorsement from SADC
- Annex 2 UNDP PDF-A titled An Ecosystem Approach to the Sustainable Use of the Resources of the Agulhas and Somali Current Large Marine Ecosystems (A&S LME Program)
- Annex 3 World Bank PDF-B titled SOUTHWEST INDIAN OCEAN FISHERIES Project
- Annex 4 UNDP PDF-A Workshop Report and List of Attendees



Republic of Namibia

14-2/0016



SOUTHERN AFRICAN
DEVELOPMENT COMMUNITY

MINISTRY OF FISHERIES
AND MARINE RESOURCE

SADC SECTOR COORDINATING UNIT FOR MARINE FISHERIES AND RESOURCE

Tel: + 264 (0)61 2053056
Fax: + 264 (0)61 235269
Enquires: Unda Tjihuko
Email: sadc@mfmr.gov.na

Private Bag 13355
Windhoek, Namibia

Tuesday, 22 January 2002

Mr Nikhil Sekhrea
Regional Coordinator International Waters and Biodiversity
Global Environmental Facility
c/o United Nations Development Fund
Windhoek
Namibia

Dear Mr Sekhrea

RE: THE SOMALI AND AGULHAS CURRENT LARGE MARINE ECOSYSTEM INITIATIVE

Further to your meeting in December 2001 with the Southern African Development Community (SADC) Sector Coordinating Unit (SCU) for Marine Fisheries and Resources (MFR) I would like to raise the above issue with you.

As you were informed, in November 1999 the MFR sector of SADC (supported by the Food and Agriculture Organization of the UN) held a workshop involving the countries of Mauritius, Mozambique, Seychelles, South Africa and Tanzania to analyse and discuss the future requirements for fisheries collaborations on the east coast of SADC. The workshop unanimously recommended that the most appropriate vehicle for this would be through a Large Marine Ecosystem (LME) approach to ocean management that would link the fisheries sector with other users of the ocean.

In 2000 the Ministers responsible for marine fisheries and resources in the SADC region debated on the outcome of the workshop and endorsed the recommendation and requested that a concept note be drafted to attract resources to fund a larger stake holder meeting. This was done and the GEF was also approached on this issue.

SADC was delighted to hear through our contacts with Mr David LaRoche (UNDP) that the GEF plans to support LME initiatives for the Somali and Agulhas currents and wishes to express its

MEMBER STATES

ANGOLA
BOTSWANA

LESOTHO
MALAWI

MAURITIUS
MOZAMBIQUE

NAMIBIA
SOUTH AFRICA

SWAZILAND
TANZANIA

ZAMBIA
ZIMBABWE

All official correspondence must be addressed to the SADC Sector Coordinator

support and interest in these Initiatives. Our understanding to date is that the approach preferred by GEF is to start the process with three smaller projects broadly related to; deep water resources, inshore resources and oceanography and to later link the outputs of these to a more holistic LME approach. We would like to express our support to the concept of linking these projects and driving them towards the integrated ocean management approach of LME's. The Ministers responsible for Marine Fisheries and Resources expressed their concern that the wider approach was maintained as this is particularly pertinent to the many fishery issues in this part of the SADC.

I would therefore like to conclude by requesting you to keep the SADC SCU informed of any progress in this area and to again register the enthusiasm of the Ministers responsible for Fisheries and Marine Resources of SADC and their technical staff in the development of LME approaches to ocean management in the SADC region.

Yours sincerely


Linda Khoesee
Sector Coordinator

Cc: Linda Vanherke (UNDP)
David LaRoche (UNDP)

BLOCK A PDF

PART I – ELIGIBILITY	
1. Project name: <u>West Indian Ocean Fisheries</u>	2. GEF Implementing Agency: <u>The World Bank</u>
3. Country or countries in which the project is being implemented: Kenya, Tanzania, Mozambique, South Africa Requesting country: <u>Mozambique</u>	4. Country eligibility: <u>All countries are eligible for GEF assistance:</u>
5. GEF focal area(s): <u>International Waters</u>	6. Operational programs: OP 8, 9 & 10, cross-cutting OP 2
7. Project linkage to national priorities, action plans, and programs: The proposed regional West Indian Ocean Fisheries Project has been requested by Mozambique in concert with Kenya, Tanzania and South Africa. The project proposes to link poverty alleviation/economic development policies of the participating countries with its national programs for biodiversity protection. Mozambique's economy is largely natural resource based. These resources are the principal current source of income and of expected future growth. The national environmental policy focuses on the rational and sustainable management of coastal and marine resources, optimizing the benefits provided by the country's natural resources to all stakeholders and minimizing the conflicts between alternative uses. The national environmental program has been designed around four major themes: (i) coastal land use and development planning; (ii) resource management; (iii) research, training and environmental awareness; and (iv) institutional and legal aspects, including intersectoral coordination. The proposed West Indian Ocean Fisheries Project is particularly relevant to resource management, training and institutional/legal aspects of biodiversity protection and environmentally sustainable development. It also would promote regional cooperation and could be implemented through existing SADC structures. Existing projects/programs with complementary objectives to the West Indian Ocean Fisheries Project include:	
<ul style="list-style-type: none"> • National Program for Forestry and Wildlife (PNFFB), which outlines the social, ecological, and economic objectives for terrestrial and aquatic biodiversity conservation, including: (i) improved protection, management and sustainable use of terrestrial and marine conservation areas; (ii) increased community participation in terrestrial and marine resource management and conservation; and (iii) protection and conservation of globally important terrestrial and marine species; • National Biodiversity Strategy and Action Plan, prepared and now being implemented by relevant responsible institutions under the coordination of the Ministry for Coordination of Environmental Affairs (MICOA). The overarching strategic goal is “the conservation of biological diversity and the maintenance of the ecological systems and processes taking into account the need for sustainable development and a fair and equitable distribution of the 	

benefits arising from the use of biological diversity.”

- **Coastal and Marine Biodiversity Management Project (MICOA)**, The project tests and refines an approach to achieve sustainable economic development of coastal zone resources through a strategic development planning process that integrates their ecological, social and physical values, and balances the varying interests involved in their management. The approach is multi-pronged, and includes: (a) strategic spatial planning that fully integrates conservation with regional development; (b) establishment and strengthened protection of key marine conservation areas and initiation of conservation-oriented community activities in and around them; (c) capacity building of key government and non-government stakeholders responsible for biodiversity protection; (d) public awareness raising; and (e) establishing best practice for environmentally and biodiversity friendly development.

8. Project rationale and objectives:

The potential of the West Indian Ocean for commercial deep-sea fisheries is unknown. Its oligotrophic waters (with some notable exceptions) may not support a large indigenous fish population, but the zone can be an important migration route for fish species such as tuna, and the fish stocks that are present may be of high value. As a result, there is concern that many of the fish species in these “transboundary” waters could be under a level of fishing pressure (or under pollution-related threat) that may or may not be sustainable.

The government of Mozambique has requested the GEF to assist with the preparation of a joint program of work, in association with Kenya, Tanzania, Mozambique, South Africa and perhaps Madagascar, into the current status and viability of deep sea fish stocks within the 200 mile economic zone (Law of the Sea) off the Indian Ocean coast of these countries.

Information on commercial fishing stocks is generally based upon activities of commercial fishing fleets. The countries sharing the waters of the West Indian Ocean, with the possible exception of South Africa, do not have a deep sea trawling fleet. Any ships operating in these areas of the Western Indian Ocean would probably be from the traditional fishing countries such as Spain (or EU in general), Russian Federation, Taiwan and Japan. Unfortunately the commercial trawling, long-lining and purse seining fleets from these countries are unlikely to report information on catches to the “owners” of the resource.

In the context of environmentally sustainable development of the 200 mile offshore fishery resource of Mozambique, it is important to establish what fish stocks are present, which might be exploitable, which may already be under fishing pressure, and obtain a preliminary estimate of which stocks might need to be managed commercially by Mozambique and the other East and Southern African countries to preserve biodiversity. If specific fish stocks are presently subjected to fishing pressure, or could be subject to fishing pressure in the future because of its potential economic value, then that information should be available to the countries with jurisdiction over the resources of this part of the Indian ocean.

Management implies that there will be a cost, and the proposed West Indian Ocean Fisheries Project would also have the objective of establishing national and regional managerial structures, and a broad outline of how Kenya, Tanzania, Mozambique and South Africa might manage the fishery in a biologically and fiscally sustainable manner. For example, Mozambique could sell licenses to fleets from other countries, or set up its own deep sea fishing fleet with the accompanying port facilities and fish processing industry. *The objective is to develop a “win-win” scenario that links biodiversity protection of fish species in the West Indian Ocean to management of commercial exploitation of the fishery in the 200 mile economic zone of the countries bordering the West Indian Ocean on the basis of a LME (Large Marine Ecosystem)*

approach.

It is also essential that this “win-win” scenario be developed on a regional basis. For example, there are migrating fish populations may pass through the coastal zone of Kenya, Tanzania, Mozambique and South Africa. Indigenous fish populations may also regularly cross national borders. Larger scale fishing activity in one country’s coastal zone is likely to affect its neighboring countries. Significant and relatively costly input will be needed before Kenya, Tanzania, Mozambique, Madagascar, and (possibly) South Africa will be in a position to effectively manage the offshore fishery.

The proposed West Indian Ocean Fisheries Project would be the first step in a two-phase approach to identifying threats to fish species within or migrating between the 200 mile Law of the Sea economic zones along the east and southern coast of Africa. A two phase approach is needed because:

- Little is known of the species composition of the fish stocks in offshore areas of East and Southern Africa;
- Even less is known of which species could be (or are being) exploited;
- No effort has ever been made to regionalize management of the offshore fisheries in East and Southern African;
- There are serious deficiencies in trained manpower, equipment and support facilities related to assessment and management of offshore fisheries in East and Southern Africa.

PHASE ONE: A PDF-B proposal, based on the outcome of the conference funded by the proposed PDF-A, would be submitted to GEF by the end of calendar 2001 to support preparation of a fish stock assessment/regional fisheries management project (including an evaluation of incremental costs of a bilateral/multilaterally funded project). It is expected that the proposed Project would also support the development of the precursor to an East and Southern Africa Fisheries Commission. The stock assessment is expected to last for 3 years, with an additional year to analyze and present data for regional evaluation. It is also expected that preparation and implementation of this Project would be jointly organized between the Bank and UNEP, with technical assistance provided, where appropriate, by IUCN. The proposed West Indian Fisheries Project would be coordinated with the proposed UNEP-implemented Agulhas Current Assessment Project. This cooperation could even include harmonized data collection and information dissemination to ensure an “ecosystem-level” approach to offshore fisheries assessment.

PHASE TWO: A follow-on project (probably IDA funded) would be prepared to identify and implement appropriate transboundary management measures to protect threatened fish species and commercial fisheries in and environmentally, socially, and economically sustainable manner. This follow-on would be “programmatically” and long term (perhaps covering a period of 12-15 years).

9. Expected outcomes:

- The joint approach would strengthen harmonization of legislation and enforcement between countries.
- The joint approach would decrease the risk of unilateral and unsustainable development of (any) available fish stocks.
- The project should lead to increased economic activity in the coastal zone (port facilities, fish processing) which would only be viable in the long term if proper protection of fish biodiversity was also promulgated through the proposed project.

10. Planned activities to achieve outcomes:

The presumed outcome of the West Indian Ocean Fisheries Project would include:

- Development of a critical mass of trained fisheries scientists and managers, establishment of strong national and regional fisheries management institutions, and harmonization of legal structures between countries needed to implement environmentally and economically sound management of the offshore fishery resource;
- Assessment of environmental impact (biodiversity) of commercial exploitation of offshore fish stocks;
- Identification of species at “risk”, which includes commercially exploited fish species and species that could, at some reasonable time in the future, be subjected to commercial exploitation;
- Link the proposed West Indian Ocean Fisheries Project work with the UNEP-implemented West Indian Ocean oceanographic study currently under preparation and supported by a PDF-B grant (initial contact has already been made with UNEP to ensure that these two proposed projects do not overlap. Discussions are currently underway to investigate the possibility of joint implementation supervision of the proposed project between the Bank and UNEP).
- If justified by the results of the stock assessment, develop a longer-term, follow-on project, that would lead to environmentally and socially sustainable national and regional fisheries management process for the Indian Ocean fisheries along the East and Southeastern African coast.

Any potential fisheries project to evolve from the work supported by the PDF-A grant would need to include other organizations undertaking complementary activities. For example, it is anticipated that supervision activities would be undertaken jointly with UNEP/Nairobi. This would provide better, more cost effective, supervision and allow interchange of information between the presumed fisheries project and the work UNEP is proposing to undertake in the Western Indian Ocean on habitat evaluation. Likewise, it would also be useful to involve IUCN through its Maputo office in project preparation and implementation, particularly given its ability to assist with initial setup and operation of a potential regional fisheries commission.

11. Stakeholders involved in project:

- Governmental Agencies (e.g. Ministries dealing with Fisheries)
- International Agencies (particularly UNEP and IUCN)
- Bilateral Assistance Agencies
- Private sector

PART II – INFORMATION ON BLOCK A PDF ACTIVITIES

12. Activities to be financed by the PDF:

The GEF grant would be used for the facilitation of a meeting with the (vice-) ministers, relevant Permanent Secretaries or Directors for Fisheries, and fisheries scientists from Kenya, Tanzania, Mozambique and South Africa to agree on the principles for a joint regional project whose objective is fish stock assessment, institutional strengthening of the marine fishery organizations, and initiation of a process that could lead to a West Indian Ocean fishery commission. Specifically, the PDF A grant would be used :

- To prepare information on Indian Ocean Fisheries.
- To facilitate a two day meeting in Maputo (Mozambique) with the (vice-) ministers/department heads for Fisheries and other responsible for the Nairobi Convention

<p>for Kenya, Tanzania, Mozambique and South Africa.</p> <ul style="list-style-type: none"> • To prepare an agreed set of guidelines to be used to prepare a project to assess fish stocks in the 200 mile (Law of the Sea) economic zone along the Coastal Zone of Kenya, Tanzania, Mozambique and South Africa. • To lay the groundwork for application and implementation of a PDF-B grant to prepare the proposed project. 			
<p>13. Expected outputs and completion dates:</p> <ul style="list-style-type: none"> • Agreement on a project management structure that could form the basis of a West Indian Ocean Fisheries Commission for addressing regional fisheries issues; • Agreement on which fishery (pelagic, demersal, migratory, etc) is to have priority and how the proposed West Indian Ocean Fisheries Project will be conducted; • Agreement on regional procurement of the services of large vessels to undertake the stock assessment, and consultants to assist with interpretation of results; • Agreement on which of the participating countries will serve as the “regional focal point” for the proposed project, • Agreement in principle on developing an international agreement between participating countries that establish how the countries intend to cooperate in the preparation and implementation of the proposed project; <p>The PDF-A would host a 2-3 day conference between fisheries administrators and scientists from Mozambique, Kenya, Tanzania, South Africa and perhaps Madagascar. The tentative date for this conference, to be held in Maputo, Mozambique, is August 22, 2000. The results of the conference would be compiled and available to the participants by mid-September, 2000.</p>			
<p>14. Other possible contributors/donors and amounts:</p> <p>It is expected that many of the large fishing nations would be interested in supporting the proposed project. The Government of Iceland has expressed some interest in this regard already.</p>			
<p>15. Total budget and information on how costs will be met (including the Block A grant):</p> <p>Budget for Block A PDF Activities:</p> <table> <tr> <td>Total Requested Amount</td> <td>US\$25,000</td> </tr> </table> <p>This is to support:</p> <p>Maputo Meeting</p> <p>Travel and ground transport- (vice-)minister and Fish Management & Research Department heads from each country; Per diem (2 days) for each participant; Travel & per diem for one UNEP staff</p> <p>Project plan</p> <p>Travel and fees local consultants</p>		Total Requested Amount	US\$25,000
Total Requested Amount	US\$25,000		
<p>PART III – INFORMATION ON THE APPLICANT INSTITUTION</p>			
<p>16. Name: SADC Sponsored Activity implemented by the Ministry of Fisheries,</p>	<p>17. Date of establishment, membership, and leadership:</p>		

Mozambique	Vice-Minister of Fisheries, Alfredo Masinga
18. Mandate/terms of reference:	19. Sources of revenue: WHO
20. Recent activities/programs, in particular those relevant to the GEF: WB-GEF Transfrontier Conservation Areas Project; WB-GEF Coastal and Marine Biodiversity Management Project.	
PART IV – INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY	
21. Project identification number:	
22. Implementing Agency contact person: William Leeds Lane (Tel: 202 473-7325) The World Bank, 1818 H Street, NW, Washington DC, 20433 USA; Rod de Vletter (Tel +258-1-494650) The World Bank, Mozambique Resident Mission, Ave. Kenneth Kaunda 1224, Maputo, Mozambique	
23. Project linkage to Implementing Agency program(s): The proposed project would link fisheries management and fisheries research to work together to develop an environmentally sustainable set of management guidelines for offshore fisheries. It would also link fish management agencies of most countries along the boundary of the West Indian Ocean together in harmonized management and protection of the fisheries resource. The project would support the World Banks strategy to? The Bank’s CAS for Mozambique focuses on poverty reduction through sustainable economic growth. The CAS recognizes that the prospects for sustainable, poverty-reducing economic growth are closely tied to rapid, broad-based growth, centered on rural development, and coupled with sound management of the natural resource base. The West Indian Ocean Fisheries Project could contribute to the CAS by: (i) promoting rapid, broad-based private sector-led growth if commercially exploitable fish stocks are discovered; (ii) supporting capacity building and developing human resources both nationally and on a regional basis; and (iii) strengthening development partnerships. The approach being piloted aims to establish sustainable economic growth and management of offshore fisheries resources, which could broaden the natural resource base upon which Mozambique’s current and future economy is dependent.	

Project Preparation Financing - Block A

PDF funds may be available at the very early stages of project development to provide assistance for preparing a project brief. This is an opportunity, not a requirement. It is fully expected that many project briefs will be prepared without GEF project preparation financing.

Any project proposer can submit a request for PDF Block A financing for the purpose of preparing a medium-sized project brief. Project proposers are expected to provide some level of self-financing and co-financing for project preparation, including in-kind contributions.

Requests should be endorsed by the government (by its GEF operational focal point), before submitting them to an Implementing Agency. The Implementing Agency approves Block A PDF financing, and submissions are sent to the GEF Secretariat for information.

Block A funding can cover:

- (a) local consultations, national hearings, and/or workshops to discuss specific project and/or program concepts, including translation into local languages, where appropriate, and the preparation of background papers that could facilitate discussion;
- (b) travel costs for local experts to visit neighboring countries for consultations and discussions on potential transboundary projects;
- (c) consultancies to develop program and/or project options, including the preparation of terms of reference for feasibility studies, strategy papers, and, where possible, the preparation of such papers;
- (d) scientific, technical, and environmental reviews of proposed projects to ensure that they warrant further consideration; and
- (e) costs of external expertise, as appropriate.

Outputs of Block A grants can include:

- (a) project brief;
- (b) assessment of scientific, technical, environmental, and economic feasibility of the proposed activity, including its relevance for future funding; and
- (c) preparation of specific documents such as terms of reference for further feasibility work, short strategic notes on programs and policies designed to facilitate in-country discussion, sectoral strategy notes or issues and options papers designed to facilitate informed decision-making in the country.

THE SOUTHWEST INDIAN OCEAN FISHERIES PROJECT CONCEPT DOCUMENT

A. Approach to the Southwest Indian Ocean LME Program

1. The SW Indian Ocean Fisheries Project (SIOFP) is one of three inter-linked projects in the international waters focal area being prepared by the World Bank and the UNDP in response to country requests for assistance in better managing the living resources and habitat of their shared marine ecosystems. Consistent with the GEF Operational Strategy, an ecosystems approach is being proposed to assist the countries in the assessment and management of the two large marine ecosystems (LMEs) that make up the West Indian Ocean, namely, the Agulhas Current LME and the Somali Current LME. The SIOFP is aimed at building the capacity of the countries and collecting the needed information on the LMEs so that the countries may make an informed decision to develop a management strategy for the offshore living resources of the two LMEs that extend to the 200 Exclusive Economic Zones (EEZ) of Mozambique, Madagascar, Comoros, Kenya, Tanzania, and South Africa. The complexity of the situation and the subsequent need to divide the work into logical pieces for implementation requires three projects, which together will form a LME program for the West Indian Ocean. The inter-linkages among these three projects are described in Section E, below. This concept note request is solely to facilitate the preparation of the SIOFP.

B. Background and overview of the SIOFP

2. The ocean bordering the East coast of Africa is one of the last areas where fishing activities are largely unregulated. Even though the countries in the region have declared a 200 mile Exclusive Economic Zone (EEZ: Law of the Sea), they lack the institutional and financial capability to exercise their jurisdiction. While fisheries in a narrow coastal strip are harvested by the coastal states, the often valuable offshore fisheries are harvested mostly by distant-water fishing fleets from Europe and eastern Asia and landed outside the region. It is not in the interest of these fleet operators to report catches to the national authorities in the region. The result is that (1) there is inadequate information on the species composition and the quantity of fish taken in the area, (2) there is inadequate information on the threats to the ecosystem as a result of fishing pressure and (3) there is neither a regional vision nor a regional effort in terms of management institutions to protect biodiversity and the sustainable yield of the region's fish stocks.

3. Lessons learned from the collapse of fish stocks in presumably well-managed areas such as the Northwestern Atlantic and the North Sea have shown that the success of a regional fisheries strategy depends closely on the collection and sharing of adequate fishery, environmental and ecosystem observations and on a strong institutional framework. Long term and relatively costly effort will be needed before Kenya, Tanzania, Mozambique, Madagascar, South Africa and France will be in a position to acquire adequate knowledge about the resources, develop a common resource management strategy and adopt the institutional framework to effectively manage the region's offshore fishery and its interaction with artisanal fisheries.

4. The sustainability of the fisheries management strategy needs to be secured by a revenue generating and management scheme, developed by the SIOFP. This would enable the coastal nations in the region to use the revenues from fisheries in their offshore territories, either through licensing of foreign operators or through a home fleet, to monitor and enforce the regulations under the strategy through the institutions that are created, and to combine protection of the biodiversity with the sustainable exploitation of offshore fish stocks and their interaction with nearshore marine resources. It is expected that this process will take a period of 10 to 15 years to develop. The SIOFP is being formulated to address several issues simultaneously in order to generate significant results in this period.

5. The colonial and political past has divided the countries in the region into three cultural and language blocks. The predominantly English speaking countries are Kenya, Tanzania and South Africa. The language of Mozambique is Portuguese, while Madagascar and the Comoros are Francophone. Several smaller islands in the region are in fact still French territories. These differences underscore the importance of an International Waters project to bridge the cultural gaps and to harmonize the management policies concerning transboundary waters. Stimulating the exchange of relevant information between the countries, and strengthening the regional ties, will be an important element to achieve a regionally supported fisheries management vision and strategy that is consistent with the GEF approach to addressing LMEs..

6. To adequately address the issues above, the outcome of the project would be:

- stronger regional collaboration, a better management capacity and a strengthened institutional framework for the development/implementation of a common fisheries management strategy that is consistent with conservation of LMEs;
- filling in of essential scientific and management knowledge gaps necessary for the countries to commit to establishment of the management strategy;
- development of the joint vision on protection of biodiversity and fisheries management leading to a fisheries management strategy and the appropriate institutions.

7. Bilateral grant and (possibly) an IDA loan will promote sustainability of the project results and support the continuation of the project through the full 10-15 year period. In this period, progress of the SIOP will be measured by (1) the adoption of a common vision on biodiversity protection and fisheries management within the two LMEs by the participating countries, (2) increased cooperation and information exchange between the participating countries on fisheries management issues, (3) improved overview of available data, (4) improved links to other relevant activities and initiatives, (5) adoption of a common fisheries management strategy and institutional framework by the participating countries, (6) increased revenues from fisheries to the participating countries and (7) a reduction of threats to the ecosystem by fisheries in the region.

8. The project draws on lessons learned in other areas of the world (e.g. the Northwestern Atlantic and the North Sea) and is in fact, an effort to build on past lessons learned from similar offshore, GEF-funded, LME projects such as the Benguela Current Project in Western Africa. The approach and the lessons learned during SIOFP should be replicable in other, smaller or larger scale, areas in the world.

C. Global significance

System description

9. The east coast of Africa represents a wide range of oceanographic environments and the western Indian Ocean is the site of some of the most dynamically varying large marine ecosystems (LMEs) in the world. Its waters are largely oligotrophic (with some notable exceptions), and a number of ocean currents predominate in the region-- notably the South Equatorial Current, the East Madagascar Current, the Mozambique Current and the East African Coastal Current. To the north is the Somali LME that develops during the southwest monsoon to become one of the most intense coastal upwelling systems in the world, bringing rich nutrients to the surface of tropical surface waters. Similarly, the Agulhas LME to the south represents a region of dynamic nutrient cycling and associated fisheries potential. Significantly, the Agulhas and Mozambique Currents link these two major LMEs of the western Indian Ocean which influence the region's ecosystems, biodiversity and fishery resources.

10. The Somali and the Agulhas LMEs are unique and are of great regional, and possibly global, importance. Yet there is generally little information about the LMEs and the systems linking them, nor is there adequate and specific information about the species composition, distribution, behavior and migration of non-commercial and commercial fish stocks. At their present level of economic development, the countries are unable to understand the potential of the marine ecosystems concerned, nor to monitor the human pressure on these systems.

Threats

11. While there is at present no evidence to suggest that the offshore ecosystems are under stress, or that species are at risk of collapse, this may well be due to the absence of adequate environmental and ecosystem observations, including the lack of adequate reports on fishing, effort, landings and by-catch. Inshore fish resources are harvested mostly by coastal states and reported landings by regional countries in the area have stagnated somewhat since the 1990s. The potentially valuable oceanic fisheries are harvested predominantly by distant-water fishing fleets from Europe and eastern Asia and reported catches by distant-water fishing nations have increased through the early 1990s, with Spain and France together accounting for over 50% of these catches (FAO 1997).. The proportion of unreported catches is largely unknown. As fish stocks elsewhere in the world are diminishing, more fleet operators are certain to turn their attention to the commercial fish stocks along the east African coast until these stocks have been exhausted and catches are no longer economically viable. This may be well below the threshold of a biological sustainable population of commercial fish species. Simultaneously, by-catches may already have put non-exploited fish species into commercial extinction, with possible damage to biodiversity and ecosystem of the West Indian Ocean

12. The economic growth of east African coastal states may lead to the development of new, locally operated offshore fleets, competing with existing fleets or with fleets from other coastal nations in the region. National interests may thus prevent governments from implementing adequate regulating measures in order to protect their own interests. Examples from other regions of the world have shown that these developments, if unregulated, inevitably lead to a short period of overexploitation and unsustainable high yields, followed by a rapid decline of the fish stocks and damage to the ecosystem. . These two LMEs are then strategically important for local

community livelihoods, for biodiversity, and for their economic potential if they are indeed two of the few remaining LMEs not already overfished. Without a management strategy leading to development of institutions, these threatened LMEs will surely become depleted in the near future.

Opportunities and benefits

13. Close to 1/3 of the world's population resides in countries edging on the Indian Ocean. Most of these nations place great reliance on the sea for food security, employment and socio-economic stability. Yet the Indian Ocean produces a mere 10% of the world's fish tonnage harvested. While lower productivity of the Indian Ocean contributes to such modest landings, the generally poorly developed status of Indian Ocean fisheries belies its real potential. Recent data suggest an escalation in effort and landings, especially by distant fishing nations. In order to avoid a boom and bust scenario with consequent impact on biodiversity, sustainable fisheries development and global fisheries management, it is urgently necessary to develop and implement a cohesive management strategy for the region. As the West Indian Ocean is least understood, has several major large marine ecosystems and is edged by numerous nations, this region was selected for primary focus.

14. Fishing, and its associated economic activities, is often extremely important to coastal communities and local economies. In some of the southwestern Indian Ocean countries, fish often represent the primary source of animal protein available to the local populations. Also, in a region faced with chronic scarcities of foreign exchange, exports of fishery products or income from licensing of fisheries may represent a vital sources of exchangeable earnings. Fish landings, processing and supporting operations associated with the fisheries industry would provide an important stimulus in the economic development of harbors and the coastal zone. The income generated by each country from fisheries in the region could be applied to the implementation of a regional strategy that links the protection of biodiversity to the sustainable exploitation of the marine resources. The recurrent costs of management institutions can then be supported by the users of th ecosystem.

15. While offshore, fish stocks may be part of an ecosystem at a regional scale, they may also regularly traverse national boundaries. A fisheries management strategy can only be successful if it is developed at a regional scale and implemented with the support of all coastal and stakeholder nations to prevent national interests predominating. It should be based upon adequate knowledge about the region's ecosystem and updated with regional reports of fishing efforts, catches and by-catches. The WIOP will assist the countries to acquire adequate knowledge and to set up the institutional framework to develop and implement a strategy for the sustainable exploitation of the marine resources.

D. Country-Driven, National level support

16. The process leading up to the development of the SIOFP is an good indication of the country drivenness of the project. The importance of a regional approach to the development of a win-win scenario was first recognized by the government of Mozambique. This led to the organization of a regional conference, supported by a GEF Block A grant through the World Bank. The conference was held in December 2000 in Maputo, Mozambique with representatives

from the governments of Kenya, Tanzania, Mozambique, South Africa and Madagascar as well as representatives from the FAO, ICEIDA, IUCN, NORAD, SADC, UNEP and the World Bank. During this conference, government representatives from Kenya, Tanzania, Mozambique and Madagascar expressed their intention to participate in the project. The delegation from South Africa indicated that, while not specifically authorized to confirm participation, they would undertake the promotion of this project with the Director General concerned and felt that a positive approach was probable.

17. During the meeting it was noted that France would be an important and relevant party but that unfortunately no French representative had initially been invited. In the follow-up of the conference the willingness of France to participate will have to be investigated, as well as the willingness of Somalia, Comoros, Seychelles and Mauritius to be associated with the project. The parties confirmed their commitment to the development of a win-win scenario and invited the World Bank to develop the project further and coordinate the application for funds.

18. The parties further agreed that: a regional approach was preferable to a country-by-country based project and that:

- the area for which this strategy would be developed was defined as a region along the coast of south eastern Africa ranging from South Africa (around 50 d S) up to the northern limits of Kenya and from the 150 meter depth contour up to the 200 mile economic exclusion zone, extending to eastern Madagascar.
- France should take part in the project by virtue of a number of small French islands in the region;
- Somalia, Seychelles, Reunion and Mauritius should be associated with the project as observers;
- there should be strong links with the UNEP-initiated Agulhas Current Assessment as well as the SADC East Coast Large Marine Ecosystem study.
- the project should support the FAO initiative at the establishment of a regional fisheries commission;
- a regional project secretariat should be based in Maputo, Mozambique and co-ordinate the activities, exchanges and meetings between the participating countries.

E. Project description

19. The objectives of the SIOFP are to:

- develop and implement a sustainable offshore fisheries management strategy for two LMEs of the Southwest Indian Ocean;
- acquire sound and adequate scientific and management knowledge to serve as a basis for the strategy ;
- build the institutional framework and strengthen the institutional capacity necessary for successful and sustainable implementation of the strategy in the region.

Proposed LME Program

The SIOFP is one of three inter-linked projects addressing the living resources and habitat of the two Large Marine Ecosystems of the W. Indian Ocean. This LME Program is in the international waters focal area and is being prepared in a cooperative and coordinated manner by the World Bank and the UNDP. It is also the first phase of a long-term approach to address LME issues that could cover a period of 15-20 years.

The LME Program is in response to country requests from Kenya, Tanzania, Mozambique, South Africa and Madagascar for assistance in better managing the living resources and habitat of their shared marine ecosystems. The 200 mile Exclusive Economic Zones of these countries include two LME's, namely the Somali Current and Agulhas LME.

The SIOFP would be prepared and executed by the World Bank. The other two projects would be prepared and executed by UNDP with close cooperation in preparation by the World Bank.. Project preparation as well as project execution will require intensive coordination of content and timing. The other two projects are:

1. A UNDP-led project on building capacity and science for the sustainable use of W. Indian Ocean LMEs that would fill gaps in the scientific understanding of the physical, biological and chemical environment of the two LMEs and linkages with inshore areas. The East Coast of Africa represents a wide range of oceanographic environments and the western Indian Ocean is the site of some of the most dynamically varying large marine ecosystems (LMEs) in the world. To the north is the Somali LME that develops during the southwest monsoon to become one of the most intense coastal upwelling systems in the world, bringing rich nutrients to the surface of tropical surface waters. Similarly, the Agulhas LME to the south represents a region of dynamic nutrient cycling and associated fisheries potential. It is therefore essential to fully describe the impact of these currents on the physical/chemical/biological environment of the proposed project area (the same area as that

20. The core project area of the SIOFP would be the Mozambique Channel, and the 150m depth contour inshore to the edge of the 200-mile EEZ of South Africa, Tanzania and Kenya- but not the waters off the east coast of Madagascar. The area is part of two LMEs, the Somali current in the north and the Agulhas current in the south. Ancillary assessment work consistent with the approach to LMEs would include Somalian waters (especially identified upwelling areas) and transboundary waters where the EEZ of the Project countries abut against the EEZ of Mauritius and the Seychelles (these countries may be "associate" members of the Project and may participate in the scientific program as observers depending on project preparation. They would also have access to all data/information derived from the Project in exchange for allowing Project vessels access to their waters).

21. The SIOFP consists of five major components:

- a) collection of data describing the various fish species (and particularly those under environmental or human-related threat) in the 200 mile EEZ of the Project countries
- b) a fish pressure survey to estimate the commercial fishing pressure within the study area, from which countries the pressure comes, the capture methods used, and the location of the pressure on a seasonal basis,
- c) establishing a project management structure, with associated links between Government managers of the offshore resource along the East and Southeastern coast of Africa that would build capacity, provide a forum to exchange essential information, and foster collaboration toward decision making that would facilitate creation of a Southwest Indian Ocean Fisheries Commission, should such be warranted based on the outcome of the proposed project; this

- would also undertake the coordination or linkage function with the other two projects;
- d) formulation of intermediate management guidelines, protected areas and seasons to reduce threats to endangered fish species and to control exploitation of fish stocks to environmentally sustainable levels and to ensure linkages with artisanal fishers' needs and those of coastal biodiversity.
 - e) the adoption by the end-of-project of a fisheries management strategy including appropriate institutions at a national and regional level for implementation of this ecosystem approach to LMEs and their fishery resources

22. SIOFP would lease between 3-4 vessels, including crew, operation and maintenance cost, insurance, etc. (i.e. a wet lease... the only thing the Government would need to do in regard to the vessels after they are leased is to set a ship schedule and supply the scientists to work on board). Stationary equipment needed (recording sonar for bottom mapping, GPS, mobile weather station, hydrographic wench) would be included in the technical specifications of the wet-lease procurement to collect basic oceanographic data while fishing to link catch to environmental conditions.

23. It is anticipated that fishing and oceanographic data collection will continue for a consecutive period of 30 months (two full climatic seasons and a 6-month period at the beginning of the Projects to "shakedown" and ensure everything is working according to plan. The final activity of the SIOFP is to development preliminary management measures to protect threatened fish species and to lay the policy groundwork for environmentally sustainable management of the offshore fish stocks while considering the linkage to artisanal needs and coastal biodiversity. This final activity is expected to require 6-12 months. This makes the SIOFP 4 years long.

Bilateral support

24. Informal discussions have already been held with ICEIDA and NORAD. It is expected that support from ICEIDA might come in the form of database, fisheries statistical evaluation and presentation software. NORAD and ICEIDA might also assist with other technical aspects of preparation. There appears to be some hope of obtaining use of the large NORAD fishing vessel (M/S Fredrick Nansen). Other sources of assistance would be Japan, the EU, Spain, DFID, etc. A dialogue will be held with EU consistent with their revision of the EU Common Fisheries Policy.

25. The SIOFP would require separate Grant Agreements between the GEF and each participating country. Most of the funds in each of the "National-Level" Projects would support the cost of the "Regional-Level" wet-lease of vessels, 50-60% of the total project cost would be in this single item (perhaps US\$10 million). There is also another "Regional-Level" activity that will need to be financed from the National Projects. This would be the "wet-lease" of airplanes/pilots/ground staff to undertake the fishing pressure survey (my estimate is that this will cost around US\$2-3 million). The remainder of Project costs will go to "National-Level" activities including;

- Hardship allowances for local scientist for the ship time;
- Equipment such as computers for data analysis, vehicles to move scientists from home base to wherever the ship may be (that might not be the home port), office equipment, fax

- machines, email/website, etc;
- Purchase of satellite images and other remote sensing data;
- Operation and maintenance of National-level Project Management Groups;
- Cost of meetings
- Oceanographic equipment to be launched off project vessels
- Stakeholder involvement and information activities;
- Training (mainly MSc/PhD degree courses).

26. During the initial years of the project these routine assessment and monitoring practices will have to be developed and implemented. This can only be achieved if the commitment to biodiversity protection and sustainable fisheries management, already existing in the region, is further strengthened and maintained through the free exchange of information and at regular meetings. The management information on fishing effort, catches and by-catches generated by the project and its participating member countries must be adequate and correct. Routine procedures will be developed and institutions or agencies will be set up or strengthened to implement these routine procedures.

27. The proposed two-year preparation project in this PDF-B sets up a regional structure for communication and implementation and prepares a two-year assessment of the region's ecosystems including commercial and non-commercial fish stocks, the existing fisheries pressure on those stocks, and linkages to artisanal fisheries.

28. The joint preparation and implementation of the assessments by the participating countries requires regular exchanges of information and meetings as well as stakeholder involvement. The countries agreed that a regional project preparation unit coordinates this from Maputo, with Mozambique providing accommodation and logistic support. The project coordination unit may eventually function as the secretariat of a West Indian Ocean Fisheries Commission. Although the countries participating in the project have different cultural backgrounds and working languages, this project will strengthen regional cohesion and stimulate exchange of information. It will provide English, French and Portuguese language courses for three to six representatives from agencies participating in the assessments.

SUSTAINABILITY

29. The LME approach links scientific evaluation of the physical and chemical environment to the biological community. The LME Program represents a long-term approach to identifying and defining the natural resource and pressures (natural and anthropogenic) and possible avenues for sustainable conservation of biodiversity and resource use. The first phase of the LME Program (the 4 to 5 year initial phase to include the SIOFP and the two projects implemented through the UNDP) will be designed to establish these links to the satisfaction of the scientific community and the political managers of the offshore resource. The objective of the SIOFP component of the LME Program is therefore to identify a "win-win" strategy that preserves species diversity and biodiversity values of the offshore fishery while simultaneously developing the environmentally and socially sustainable exploitation of commercially exploitable fish stocks. Successful achievement of this objective will trigger a second phase of the LME, which would

target environmentally sustainable use (and “use” in this context includes “non-use” or conservation) which would probably be supported through an Adaptive Program Loan from IDA.

- Proposed UNDP/Bank Coordination

- It is proposed that there be three separate projects to reducing the complexity, increase the accountability, and make the larger effort for the 2 LMEs more understandable for the countries involved. The proposal is for the Bank to assist the countries on the offshore fisheries aspect consistent along the lines expressed by the countries participating in the Marine Fisheries Conference supported by the Block A GEF grant. The UNDP would be accountable for the second project on LME science and the science community that would link quite closely with the strategy the Bank and countries propose utilizing in the first project. The UNDP would also propose for simplicity a separate project on community-based management of the living resources of the two LMEs that would also link to the other two projects. Consequently three Blocks B’s would be needed for the three projects and the World Bank Block B would need to have a linkage component to the UNDP Block B for the LME science capacity building project since both would need preparation in unison. This constitutes the IAs approach to these two linked LMEs.
 - Practically, the possible ways in which this can be achieved (using the existing example of the GEF Lake Victoria Environmental Management Project as an example) are:
 - Participation by the UNDP and/or Bank as observers in all preparation and supervision missions of all 3 projects under the Program. The GEF administrative budgets provided to the two agencies will need to take these additional mission costs into account;
 - Each project should make use of resources procured under one of the other projects in the Program, as appropriate. For example, the SIOFP will be procuring 3-4 wetleased vessels. The oceanographic activities under the UNDP umbrella could purchase ship time from the SIOFP rather than go through the time and expense of procuring vessels itself;
 - As oceanographic data will be collected under the Bank managed SIOFP, the UNDP managed oceanographic project should supply staff to the SIOFP to help collect these data (and incidentally collected any information needed by the oceanographic component.

Consideration should also be given to the linkage of living resources and habitat of the Agulhas with that of the neighboring Benguela.

30. The knowledge obtained from this first phase of a long-term commitment to natural resource management of the marine resource by the participating countries will establish that environmental protection, pollution control, sound land use and controlled exploitation of natural resources is the only economically sound approach. In addition, the management strategy should include the commitment to create the necessary institutions for management such as a commission for real-time management of living resources of the LMEs. The institutions and the potential for income from fees on the fisheries should ensure sustainability.

REPLICABILITY

31. The preparation and implementation of the 3 components of the West Indian Ocean LME Program to be undertaken through coordinated activities of UNDP and the World Bank should also be seen as a pilot for a new, and more integrated, approach by GEF Implementing Agencies. By combining several projects under a single *programmatic* umbrella, it should be possible to bring the unique skills and experience of two or more GEF Implementing Agencies to bear on a common problem without the unnecessarily high transactions costs currently experienced in joint, complex projects. This would benefit both the efficiency (a single institution would not have the skills or manpower to undertake such a complicated preparation and supervision) and impact of GEF interventions, while also providing better and more focused support to our client countries.

STAKEHOLDER INVOLVEMENT

32. The LME Program over the long-term (15-20 years, of which the proposed 4-year SIOFP and 2 UNDP-assisted components are but the first phase) has two levels of stakeholder involvement. First, the scientific and political managers of the resource must be strengthened through training, knowledge of the natural resource system, development of institutional tools (organization, laws, treaties and regulations), and procurement of the tools (equipment and facilities) to sustainably manage, and where necessary, conserve important coastal and marine resources.

33. Second, the coastal population, particularly those involved in artisanal fisheries and other subsistence use of coastal and near-shore resources, will need to benefit from sustainable use of the offshore resources within the 200 mile Exclusive Economic Zones of the countries bordering the West Indian Ocean. Again, the objective is to establish a “win-win” scenario of reducing pressure on over-exploited coastal and near-shore resource (forests, mangrove, wetlands, animal and plant species, etc.), reducing non-point source pollution tied to poor and unsustainable use of land in the coastal areas, while addressing the economic development imperative of reducing poverty.

INCREMENTAL REASONING AND INCREMENTAL COSTS

34. The concept of incremental finance from GEF grant is that the GEF supports activities that are incremental to those things that the Government traditionally is able to support through local finance- and particularly environmentally oriented activities. Use of GEF funds in the SIOFP will play a catalytic role in expanding government management into areas of environmental conservation and biodiversity protection of the offshore marine waters which they currently can not address. More importantly, GEF-support in the initial phase of the LME Program (of which the SIOFP is but one part) will leverage continued support of conservation and environmentally sustainable development principles by governments over the long-term through the larger and more ambitious second phase of the LME Program, supported by an Adaptive Program Loan from IDA. This relation between science and the transition to sustainable development is seen as occurring even without continued GEF involvement in phase 2 of the LME Program (although some relatively minor support may be needed depending on the situation).

35. The SIOFP links improved revenue growth to the Government and creation of new job opportunities for people living in the coastal zone, with reduced impact on the sensitive ecology of the coastal near-shore zones, preservation of biodiversity in the coastal and offshore areas, and sustainability of artisanal fisheries. The Project will be designed to ensure that an appropriate part of the improved revenue growth will be retained by the managers of the resource to ensure financial sustainability of Project recommendations even after the Project comes to an end. Likewise, the SIOFP will assist in the development of a national and regional framework for legal, administrative/enforcement management of the coastal and offshore resource that is environmentally and socially sustainable.

REGIONAL SUSTAINABILITY OF THE SIOFP

36. If the economic development of SE African region would allow the countries to develop a strategy to sustainable fish management, it would most likely be on the basis of individual countries. These strategies would not take into account transboundary issues and might lead to countries competing for fish stocks migrating along the costs. This inevitably leads to sub-optimal management schemes, overfishing and loss of biodiversity. SOIFP explicitly aims to overcome this national approach. This will be accomplished by establishing the framework of a Western Indian Ocean Fisheries Commission with the authority and resources to address transboundary issues, including:

- Regional cooperation in enforcement of fishing regulations and permits;
- Establishing license and catch quotas;
- Addressing coastal and catchment issues that directly and indirectly affect offshore fish stocks;
- Establishment of a regional scientific program to monitor fish stocks and impacts of ecological and anthropologic impacts on them.

37. The activities to be carried out under the PDFB are specified below, including the proposed source of funding.

Activity during project preparation	Funding source
<p>1. Regional harmonization in the development of the Program of Activities to be undertaken through the SIOFP. Establishment and funding of operation of a Project Preparation Unit in the relevant fisheries ministry in each participating country. Establishment and operation of a Regional Project Preparation Unit in Maputo, Mozambique. Funding of harmonization meetings between participating countries to discuss project activities and to identify stakeholders for involvement. This would also entail development of the coordination component of the full project to ensure close linkages to the other 2 projects. Funding of regional workshops of relevant line ministries responsible for fisheries and international relations and development or implementation of International Treaties to discuss and draft an agreement between the participating countries. The agreement should facilitate regional implementation of the SIOFP and can take the form of an MOU or Treaty. It should cover issues such as customs, immigration, information sharing, etc .</p>	PDF-B
<p>2. Desk study of existing and proposed 'project' and 'regional cooperation' initiatives. The objective is to link the SIOFP to other projects, particularly those that relate to physical/chemical assessment of waters included in the SIOFP study area and regional initiatives aimed at joint management of natural resources in the Southwest Indian Ocean. Funding for a consultant is needed.</p>	Bilateral
<p>3. Desk study of existing information on fish stocks in the proposed project study area. This would include data from the files of the participating and associated countries in the SIOFP and from private and government groups of distant fishing nations that operate in the Southwest Indian Ocean. The study will require funding of a consultant and a team of scientists from countries participating in the project. It will also require development of a linkage component to the other two projects in this array of activities.</p>	Bilateral & Countries

4. Funding of an exchange program of scientific staff between relevant fisheries organizations in the participating countries. The objective would be to place English-speaking scientists (given intensive language training before leaving on his/her assignment) from participating countries in the fisheries departments of French and Portuguese-speaking participating countries and vice versa. Assignments would be expected to last one year and result in staff able to undertake postgraduate degrees in countries speaking the language of the country to which the scientist had been seconded.	PDF-B & Countries
5. Funding for a consultancy to prepare a database, linked to a fisheries statistics, data manipulation and presentation module to transform raw catch-related data from the various cruises into a form readily usable by managers and scientists forming the regional scientific review panel for the Project. This software will be needed almost immediately after the SIOFP begins.	Bilateral
6. Funding of a consultancy to prepare a ‘wet-lease’ tender of three to four large fishing vessels and the tender for air survey services to undertake the fishing pressure assessment. This would need to include provision of training for national staff from participating countries in procurement, so that they would be able to assess the consultant’s work and evaluate the responses to the tenders on a regional basis so that a common contractor could be procured for all participating countries.	Bilateral/GEF & Countries

F. PDF-B output

38. The output of the PDFB activities are:

- strengthened regional ties through the formulation of a joint vision on biodiversity protection and fisheries management amongst the regional participants, further enhanced through the stimulation of foreign language capability amongst participants of the project;
- set-up of the project structure, with the regional project preparation unit as a hub between national project preparation units and coordination component with the two other projects;
- an overview of all existing relevant activities and planned initiatives in the region and strengthened ties between the SIOFP and those activities and initiatives.

inventory of available environmental and ecological information, including fish stocks and fishing activities; preparation of the procurement strategy for survey vessels, aircraft and other equipment
project brief completed.

G. Eligibility

39. OP 8 makes provision for the long-term, programmatic approach to addressing technically challenging projects in international waters. The SIOFP is the first Project in a program requiring long-term commitment from the countries involved and the various donors supporting these countries. This was discussed in the regional fisheries management conference (supported by a PDF-A grant) held in Mozambique to discuss regional cooperation for implementation of an LME assessment in the West and Southwest Indian Ocean. Specifically, OP 8 states in Paragraph 8.10: *“International water project normally require a long-term commitment on the part of governments, implementing agencies, donors, and the GEF to leverage the intended sectoral changes – to address the root causes – of complex environmental problems in this focal area”*. The 5 countries attending the conference upheld the need for taking a regional approach to assessing fish stocks within an LME approach. The conference also:

- Agreed that national and regional policies would need to be created/changed to properly manage regional fisheries and related environmental issues in the West and Southwest Indian Ocean;
- Agreed that the SIOFP would be implemented at the national level, but coordinated at the regional level. To this end, the conference agreed that a regional coordinating body within the SIOFP would be needed and that body would be situated in Maputo, Mozambique;
- Agreed that the countries would harmonize requests to donors supporting coastal, marine and regional cooperation to support implementation of the SIOFP.

40. The proposed SIOFP is eligible under provisions of the GEF/OP8 that relate specifically to LME's. Of particular relevance are:

Paragraph 8.21 of OP8 states- *"...Technological advances are being introduced that use information technology and computer simulation to help make critical management decisions for marine resources and tools such as the Code of Conduct for Responsible Fishing consistent with the Law of the Sea Convention..."*. The SIOFP and its sister project addressing oceanographic characterization of the LME's forming the study area will make use of computer simulations and remote sensing data to explain the systematics of fish species studied (in fact, some of this simulation has already been done). Likewise, the SIOFP concentrates on the Law of the Sea Convention as the framework in which environmentally sustainable development and sound conservation practices to manage the fishery can be implemented.

41. Paragraph 8.21 of OP8 continues by stating –

"Some projects may address issues (e.g. destructive fishing techniques) that are common to many countries in which changes in sectoral policies or activities are needed to maintain the environmental sustainability of marine and coastal resources." The SIOFP aims to identify the biodiversity conservation and resource use issues, prioritize these issues, develop capacity to address these issues, and set the stage for regional management of fish stocks in the 200 mile Exclusive Economic Zone of the countries bordering the West and Southwest Indian Ocean. It is very unlikely that any single country would have the ability to identify, much less manage, the fish stocks within its waters, given the mobility of the stocks and the lack of manpower and facilities to study and protect the fishery.

ANNEX 4



REPÚBLICA DE MOÇAMBIQUE

MINUTES OF THE FIRST WORKSHOP OF AGULHAS & SOMALI CURRENT LMEs
PROJECT

12 – 13 SEPTEMBER 2002
CARDOSO HOTEL, MAPUTO- MOZAMBIQUE

MICOA

OPENING SESSION: Welcome and Project Concept

The National Director for Management of Environment from Ministry of Co-ordination for Environmental Affairs (MICOA) addressed the opening remarks to the participants of the Agulhas & Somali Current LMEs Project. He started by mentioning other ongoing coastal zone integrated management efforts towards sustainable use and conservation of natural resources such as the Nairobi Convention and NEPAD initiative. He also pointed out that this project apart from undertaking comprehensive ecosystem assessments, it will envisage for alternatives to improve the quality of lives of the local communities within the study area.

The fisheries sector was congratulated for the positive results reached in the 2nd Workshop of the SWIOFP, held in Maputo from 9 to 12 of September of 2002. The UNDP, the WB and other organizations were thanked for making this workshop possible and the workshop was officially declared opened.

The team task manager of the project preparation presented the concept of the LME Programme. It was also recognized that there are many gaps and needs, which could be included in the project, but they will have to be prioritized to fit in the funding system. In order to bring the participants to the context of the project, the task manager recalled the statement from the Agenda 21 of Nairobi Convention: *“The marine environment – including the oceans and all seas and adjacent coastal areas – forms an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development”*

The LMEs were referred as being global centers of effort to:

- Reduce coastal pollution
- Restore damaged habitats
- Recover depleted fishery stocks

The participants were also informed about the GEF project cycle and explained that the purpose of PDF-A is basically to (1) assess possible project sites, (2) identify threats and root causes or key barriers, (3) evaluate institutional frameworks, (3) meet and consult stakeholders and, (4) identify co-funding possibilities.

This workshop constituted the first step of preparation of the project, technically denominated PDF-A or Block-A grant. The results from the discussions will allow the UNDP to prepare the PDF-B proposal document, which is to be submitted to the GEF in early to mid-2003. In order to gather information for the preparation of a PDF-B proposal document, two working groups were formed to work on the following themes:

3. Ecosystem Assessment/Science Data Collection Component of the Programmatic Approach. The topics proposed for discussion in this working group included:

- g) Identification of physical and chemical elements of the Agulhas and Somali Currents requiring further definition in order to assist the work of the SWIOFP and the Community-Based Demonstration Projects
- h) Preliminary Discussion of ongoing scientific assessment and data collection initiatives taking place in the Agulhas and Somali Current LMEs
- i) Preliminary discussion of scientific assessment and data collection needs that should be undertaken as part of the Ecosystem Assessment/Science Data Collection Component
- j) Discussion of necessary linkages between the Ecosystem Assessment/Science Data Collection Component and the SWIOFP and Community-Based Demonstration Component
- k) Discussion of the outline of a GEF PDF-B for preparation of a project for this component
- l) Rapporteur review of discussions and presentation of material to be considered for the PDF-B

4. Community-Based Demonstration Component of the Programmatic Approach. The topics proposed for discussion in this working group included:

- e) Discussion and identification of the most pressing near-shore issues to coastal communities of countries abutting the Agulhas Current

- f) Establishment of criteria for the selection of the community-based, site-specific, and results oriented demonstration projects in transboundary integrated marine and related land resources of the countries abating the Agulhas LME
- g) Discussion of appropriate linkages to be created and maintained with the SWIOFP and the Ecosystem Assessment/Science Data Collection Component of the Programmatic Approach
- h) Discussion of the outline of a GEF PDF-B for this component
- i) Rapporteur review of discussions and material to be considered for the PDF-B.

Before the breakout for the working group sessions, there was time for questions and clarifications. **The first question was on how community-based demonstration projects would fit in transboundary matters.** Answering this question, the team task manager said that these projects would come under a very specific GEF program that will address the most common and important issues before they are incorporated into the project. It was also added that the same community based demonstration projects might be implemented in more than one country as long as similarities are found in their objectives. The demonstration activities will be initially under GEF funding.

The other question raised was **on how the poverty and other related social issues would be addressed within the community based demonstration projects.** The need of having a consistent linkage among demonstration projects, poverty reduction, and ongoing efforts in the region was the answer. These linkages will make easy the funding process by GEF. The demonstration projects are substantially to benefit local people in the coastal zones.

WORKING GROUP SESSION

Ecosystem Assessment Discussion Group

The discussions in this group initiated with Dr. Davies reminding all the participants of the group about the objectives and expected outcomes from the debate. She highlighted that the main objective of the PDF Block-A meeting was to undertake a brainstorming exercise aiming at identification of preliminary project's elements to be further discussed under the PDF-B phase of the project. After these introductory considerations, there was a short debate on the procedure/methods to be adopted to achieve the established goal of the group. This debate resulted in the five-modular LME approach which are: (1) Productivity, (2) Fish and fisheries, (3) Pollution and Ecosystem Health, (4) Governance, and (5) Socio-economics. For each of the first three modules there were:

- Identification of knowledge gaps
- Identification of opportunities for long term solutions of gaps
- Prioritization of activities

The group proceeded to the identification of knowledge gaps in the study area. The Productivity Module was the first to be discussed.

Under this module it was agreed that:

- Inter/intra systemic linkages between mangroves/coral reefs/sea grasses and offshore muddy bank systems be addressed as they are poorly understood in the study area
- Riverine inflows are important, as they are linked to inputs of nutrient and coastal areas salinity change
- Primary productivity was an important parameter to be measured, as there is an untested hypothesis of existence in the area of important subsurface productivity. These measurements can now be easily carried out with arise of new technologies for measuring *in situ* primary productivity, where radiocarbon is only used for calibration
- Environmental variability related to ENSO Events, Extreme Weather Events, Climate Change and Atmospheric Fluxes is important and a transboundary issue that also needed attention, as it affects recruitment
- Gyres/eddies are hypothesized to be important in transport of Biodiversity, productivity, and uplift of thermocline. Therefore, this project is an opportunity to test this hypothesis
- Monsoons and atmospheric conditions need better understanding as they are related to subsurface currents, upwelling and subsequent nutrient flow

Having been identified the knowledge gaps in the Productivity Module, the group debated on whether to address next the Fish and Fisheries Module or the Pollution and Ecosystem Health Module. It was agreed first to discuss the Fish and Fisheries Module, although some participants didn't agree, arguing that the fish and fisheries issues were covered in previous three and half days of the 2nd SWIOFP workshop. It was pointed out that, the importance of discussing fish and fisheries was in the fact that important environmental issues that affect fisheries would be identified allowing for the establishment of linkages between the SWIOFP and the Ecosystem Assessment projects in the LME programme.

In regard to the Fish and Fisheries Module, after lengthy discussions, it was agreed that the main knowledge gaps that needed immediate attention were:

- Larval transport, particularly in the Somali Current
- Recruitment, as it is not well understood in the area
- Trophic relationship (e.g. as it is been demonstrated, depletion of certain zooplankton species can lead to a collapse of the related fishery)
- Fishery interdependent surveys (e.g. Biodiversity, Bottom topography, etc.)
- Toxic tides/Algal blooms
- Systems functioning and its relationships to fisheries (e.g. Mangroves, Coral Reefs, etc.)

- Optimization of resources partitioning as Industrial Fishery tend to crowd out Subsistence Fishery
- Impact of fisheries on Biodiversity
- Value of non-consumptive use interfaced with consumptive use
- Commercial/subsistence landings/effort

Ended the discussion on the fish and fisheries module, it was decided to break for rest until the next day.

Continued Working Group Session: Ecosystem Assessment

In the second day of this working group session, after the group has presented to the plenary the findings of the previous day (identified knowledge gaps in Productivity and Fish and Fisheries Modules), the group agreed to start discussing Pollution and Ecosystem Health Module. Initiating the debate, it was recognized that there were two types of threats related to pollution and ecosystem health. i) Anthropogenic, as those caused by human activities and ii) Natural, as those caused by natural disasters or extreme weather events.

Anthropogenic threats identified were:

- Mangrove degradation
- Burn of biomass, causing nutrient loading and erosion of coastal habitats
- Tourism induced threats (need for quantification in the study area)
- Waste/effluent management problems in urban areas
- Development in sandy beaches
- A need for monitoring of petroleum spills and heavy metals as the study area is been subjected to intense traffic of tankers
- A need for monitoring of bioaccumulation at hot spots as urban/rivers areas
- A need for determination of caring capacity of development of Coastal Aquaculture
- It was mentioned that some fishing methods were very destructive, therefore a need for determination of fishing methods effects
- There is a problem of alien species

Natural perturbations identified were:

- Erosion of coastline due to wave action/tide flux accretion
- Climatic patterns related problems as coral bleaching
- Thermal change as a result of Agulhas Current water movement
- ENSO induced change by large current system

It was recognized that there were threats resulting from the interaction of Anthropogenic and Natural causes. The threat identified under this category is the transboundary movement of waters, which could transport pollutants.

Concluded the identification of the knowledge gaps in the three LME modules, the group debated about several other issues that are summarized as:

The need for considering addressing issues that although originated from outside the region could have impact in the region, including effects of socio-economic nature.

The need for establishing high priority actions to be carried out under the PDF-B phase of the project, after knowledge gaps have been identified. It was found this to be important, as those activities should be included in the PDF-B Proposal Document to be submitted to the GEF.

There was a suggestion that, on-going initiatives in the study area be taken in account when identifying high priority activities. It was also agreed that, as the countries did not have in hand the list of such activities, they would provide it later by e-mail.

It was recognized that many oceanographic data sets about the study area were scattered in the countries. Therefore,

an assessment and exchange of the data between scientists of the region was proposed to be addressed in the project. In connection to this, it was pointed out that ODINAFRICA Project is been involved in similar task of developing a Metadata database. Therefore, collaboration with ODINAFRICA project would be more practical option to consider.

Another issue discussed related to historical data sets, was the data collected by foreign vessels and transported to foreign countries with no copies left in the region. It was proposed that regulations in the countries be improved to prevent this from continuing to happen.

In the follow-up of discussions, the group deliberated on priority activities to be carried out during the PDF-B phase. The debate concluded with the following as the main PDF-B priority activities:

1. Collection of data residing in foreign countries, including data in former Soviet Union
2. Establishment of Information Exchange/Network system, including assembly of metadata database (long term activity)
3. Start-up phase of processes to continue to full phase of the project
4. Undertaking of discipline-specific workshops
5. Assessment of existing assessments activities in the countries
6. Development of Capacity Development strategy
7. Establishment of data collection protocols for assessment by non-regional entities
8. Thematic and temporal prioritization of assessment needs identified under PDF-A
9. Programmatic integration of the three projects of the LME Programme and other ongoing activities on Socio-economics/Governance issues
10. Source co-financing
11. Address multilanguage issue
12. Prepare GEF Project Proposal Document

Ended the identification of PDF-B activities, the PDF-B management structure issue was raised and debated. There were concerns related the management of a very technical project like this to have been assigned to a GEF focal point institution. The Tanzanian GEF Focal Point delegate commented on this and pointed out that, coordination of technical projects like the Ecosystem Assessment component of the current LME is generally adequate to be assigned to a technical institution. Although few more interventions came up, an effective answer to the issue was not achieved. Therefore, it was decided that the discussion continued in the plenary session, so that all participants could have an opportunity to deliberate on the issue.

Closing the working group session, the facilitator of the discussion group informed the participants of the group that the UNDP as the implementing agency will be collecting the contributions of the countries, and will be drafting the PDF-B proposal document to be submitted to the GEF. The document would be circulated through the countries for comments before submission. It was also mentioned that the countries would be called on to endorse the project document at that stage by means of an endorsement letter to be sent to the GEF. It was proposed that project's focal point institutions be identified and a list of addresses of those institutions be prepared to facilitate future communications.

Community-Based Demonstration Discussion Group

In order to achieve the objectives of this working group session, the participants agreed on focusing their discussion to the following working structure:

- Identify the existing activities in the field covered by Agulhas Current (country by country)
- Attempt to add in what is missing in the existing spectrum in terms of sustainable development (gap analysis)
- Identify the potential opportunities for the GEF program including geographic ones
- Find out who to gather the information we need to develop potential project designs
- Identify goals and activities, which might be brought in to an identified project.

In total were identified nine initiatives and the majority of them focus more on community benefits, Marine Protected Areas (MPA), fisheries and collaborative management (Figure 1). The most important regional programmes attached to these initiatives included:

- CORDIO
- Indian Ocean Commission
- ICRAN
- Jakarta Mandate
- RFIS – SADC – DFID
- UNEP – GPA – GEF
- SECAM
- EAME process sponsored by WWF

In addition, some existing Concept projects within the LME area, pending for funding, were referred as showing a very comprehensive analysis of what is needed in this LME study area. It was recommended that the document describing the 19 project proposals developed by the PAN African Sustainable Conservation Programme in 1998 now adopted by NEPAD, will have to be taken in account during the project preparation phase as it contains remarkable additional information. Several initiatives taking place in the participating countries were also listed during the session.

This was referred to be very illustrative information and very fragmentary to give a complete idea of what is happening now related to community-based demonstrations programs in each country. In fact, what has been accounted represents probably 70% of what does exist. No information was available from Mauritius as the country delegates were not present in this working group session.

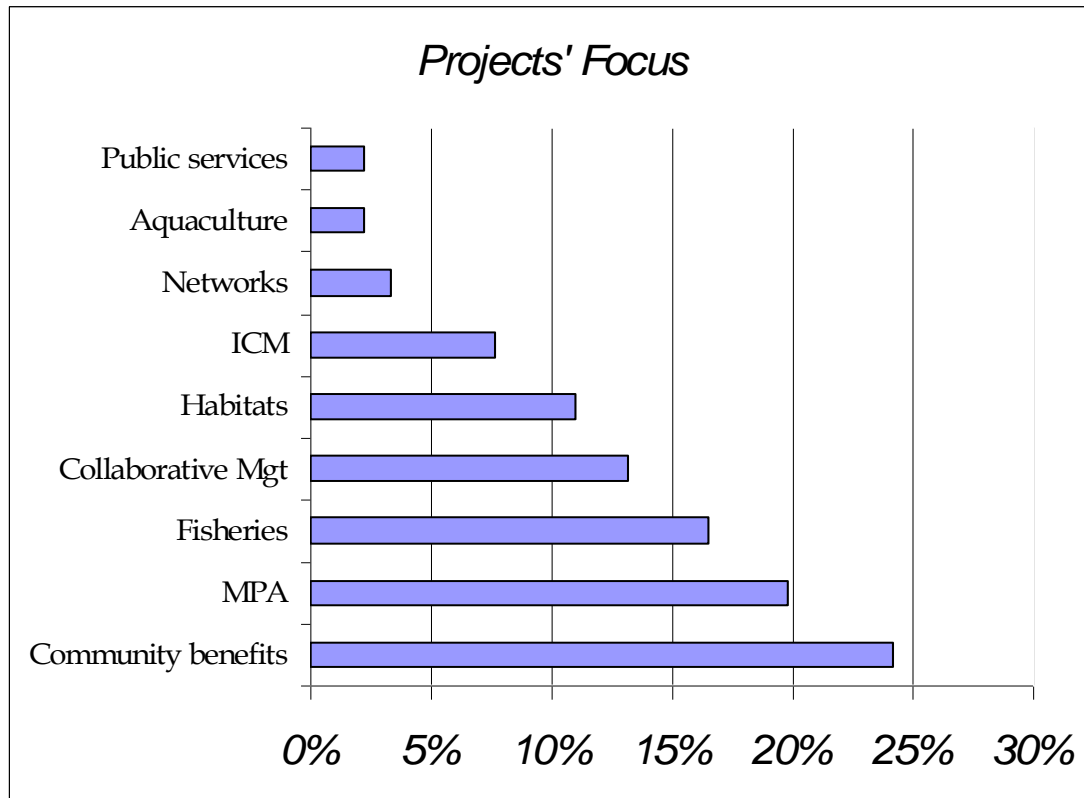


Figura 1: Projects' focus

Regarding what is lacking within the existing initiatives, three major aspects were pointed out: (1) Governance, (2) Socio-economics, and (3) Sustainability. In Governance, it was recommended more attention be given to legal and policy framework for community-based management and to increase in efforts to improve the security of stakeholder rights. The socio-economics component has to look at aspects of quantitative assessment of impact of conservation on food security, support for community-based small enterprise development, improvement of participation methodology, and establishment of linkages to the private sector. Lastly the sustainability component has to take into account economics, awareness for the decision makers, communications (e.g. exchanges), and issues of adaptation and vulnerability.

Continued Working Group Session: Community-Based demonstration Projects

After presenting to the plenary the major findings of the first day working session (ongoing activities and identification of gaps), the working group session proceeded. A dream scheme based on innovations and experiences from similar projects was elaborated in the second day of discussions in this working group and presented to the plenary. The **mandatory criteria** in this scheme would have to deal with replicability, sustainability (including financial, technical and legal aspects), uniqueness and co-financing for ongoing projects. The **group criteria**, where a good governance is a key aspect, would insure that the LME approach is within the limits of absorptive capacity, the long term vision, access to the short term and long term impacts in the program, provide environment for community empowerment and full stakeholder involvement, work very closely with the private sector, be based on local needs, knowledge and priorities, and also be cross programmatic.

A partnership between private, community, and state for management of coastal and marine resources was taken as an example of a programme that can fit in the dream scheme considered.

In this programme would be appropriate to carry out a fisheries research using local knowledge and participation to:

- Develop capacity within local fishermen (associations or co-management groups), so that they provide inputs into the more structured assessment process on LMEs, including deep-water fisheries resources. The assessment would be aimed at co-management of resources, which would generate revenues from taxes, and resources *per se*
- Use research to set quotas, limits and monitoring the available of resources
- Bring in issues such as certification, licenses, and tax breaks to fund management research

In addition:

- If site is near MPA, fees paid from tourism or fisheries, would be recycled (link to private sector)
- Information would help reinforcing traditional management and community empowerment (judicial support)
- Capacity building and increase of information exchange would take place
- Participatory research and monitoring on coral reefs in relation to bleaching (biodiversity, global warming) and location of MPAs that would assist improving local and national economies can be addressed.

In summary, a very solid cooperation between Government, private sector, Communities (CBO), science and judiciary sector is indispensable for success in any community based demonstration programme.

CLOSING SESSION

After the groups have presented the outcomes of their discussions, the UNDP Facilitator addressed the plenary, making considerations regarding the steps to be taken moving forward from the workshop. He pointed out that the next steps would consist in harmonizing and improving the design of the projects under preparation by UNDP and WB. He also pointed out that UNDP was departing from this workshop with sufficient information to prepare two

PDF-Bs, expecting both proposal documents to be submitted to GEF by early to mid 2003. In addition he reminded that as a GEF requirement, the countries would have to send endorsement letters to GEF.

Following the facilitator's address, the chairmen invited the countries to make their final comments. South Africa took the lead and thanked for the invitation to attend the meeting. In addition, thanked Mozambique for hosting the workshop. The NOAA representant followed. He thanked the WB and UNDP for the opportunity that was given to the NOAA to help develop the LME Programme for this region. In addition, he congratulated all participants of the workshop for the great achievement that was accomplished in only few days of work. The representant of the Nairobi Convention also acknowledged the UNDP and WB for the opportunity that was given to them to participate and help develop the PDF-B proposals. He added that was very convinced that the work that have initiated with the workshop would continue and would end with success. In the end, he thanked Mozambique for hosting the workshop and also thanked everyone present in the workshop for the collaboration offered. The Tanzanian GEF Focal Point representant pointed out that the initiative and the approach chosen were positive. Therefore, strongly believe that these will lead to good results and will speed-up the preparation of the project. The WB followed and in their address congratulated UNDP and IIP for having showed close cooperation in the preparation of the workshop. Comores also thanked for having been invited to take part in the discussions. They pointed out that this was also a valuable opportunity for establishment of partnerships with others countries. France declared their full commitment to the development of the project and guarantied to do everything necessary to make the initiative a success. France also thanked Mozambique for having hosted the meeting. Mauritius and Seychelles declared their intention to participate in the project as observers. They wished to be able to have access to the data to be produced by the project, and also wished the project to be successful. In particular, Seychelles supported the initiative of improving scientific knowledge on the resources, because they strongly believe that it is through science that better management can be achieved. Madagascar also thanked for having been able to participate in the workshop, and declared that, although is still not a full partner in the project, they will put all effort towards their integration in the near future. At last, UNDP thanked MICOA for their collaboration and stressed that all the success that was achieved in the workshop wouldn't be possible without their support.

After the final remarks by the countries, the Chairman of the session acknowledged the Maputo UNDP office for having well coordinated the PDF-B, especially for having succeeded bringing all the delegates to the workshop. He also congratulated all participants for all the effort and commitment that showed during the workshop. The chairman did expand its gratitude to the IIP, for having organized the first part of the workshop. He mentioned that this was a good example of inter-ministerial cooperation. The chairman also declared that was very grateful to the WB and GEF for their full collaboration. In addition, asked the UNDP and WB as partners in this process, for their additional support in speeding up the preparation of the programme. Closing the workshop informed all delegates that the Minister of MICOA wished to all delegates a good return home.

**1st Workshop of the Agulhas and Somali Current LME's Project,
12 – 13 September 2002**

List of Focal Points

Name	Institution	Position	Country	Address
Alan Aldrin Meyer	University of Cape Town	Researcher	South Africa	UCT, Department of Oceanography, Private Bag, Rondebosh, 7701, South Africa Tel.: 27 21 650 3277/3280 ameyer@physci.uct.ac.za
Rui Silva	IIP	Head of Department of Aquatic Environment	Mozambique	P.O. Box 4603, Maputo, Mozambique Tel.: (258) 1 490307 Fax.: (258) 1 492112 rsilva@moziip.org
Rondolph Payet	Seychelles Fishing Authority	Resource Manager	Seyshelles	Fishing Port, P.O. Box 449, Mahe, Seychelles Tel.: (248) 730600 Fax: (248) 224508 rpayet@sfa.sc
Asha Devi Poonyth	Mauritius Oceanography Institute	Project Officer (Ecologist)	Mauritius	France Centre, Victoria Ave, Quatre Bornes, Mauritius Tel.: (230) 4274434 Fax: 230 4274433 moi@intnet.mu
Ratomamenina Onésime	Ministry of Scientific Research for Development (MRSD)	Oceanographer	Madagascar	Madagascar Tel.: 22 238 28 richardrato@hotmail.com
Mohamed Youssouf Oumouri	U.T.G. DUFEM Comores	Point-Focal Operationnel	Comores	B..P. 234 Moroni-Comores Tel.: 269 73 62 22/736688 Fax: (269) 736263/736849 decvas@snpt.km pnudg32@snpt.km
Renison K. Ruwa	Kenya Marine and Fisheries Research Institute	Deputy Director	Kenya	P.O. Box 81651, Mombasa, Kenya Tel.: (254) 11 471435 Fax: (254) 11 475157 kruwa@recoscix.org
T Maembe	Ministry of Natural Resources and Tourism	Director of Fisheries	Tanzania	
Eric De Chavanes			France	Eric.De-chavanes@equipement.gouv.fr

**1st Workshop of the Agulhas and Somali Current LME's Project,
12 – 13 September 2002**

List of Participants

Name	Institution and Position	Address
Alan Aldrin Meyer	University of Cape Town Researcher	UCT, Department of Oceanography Private Bag, Rondebosh, 7701, South Africa Tel.: 27 21 650 3277/3280 ameyer@physci.uct.ac.za
Ali Mahomed	Ministry of Environment and Natural Resources National Environmental Management Authority Coordinator: Coastal and marine programmes	Box 67839, Nairobi, Kenya Tel.: 254 2 248852/247795 Fax: 254 2 248851 biofish@africaonline.co.ke
Ana Paula Baloi	IIP Deputy Director	P.O. Box 4603, Maputo, Mozambique Tel.: (258) 1 490307 Fax.: (258) 1 492112 apbaloi@moziip.org
Andrew Cook	Resolve consulting Director	101 Antananarivo BP 8352, Madagascar Tel.: (261) 33 11 33345 Fax: (261) 22 56939
Anna Mwashu	Vice President's Office. Assistant Director: Poverty eradication Division	Box 5380, Dar-Es-Salaam Tel.: 022 2151688 Mobile: 0741 453493 Fax: 2152276 asmwasha@hotmail.com
Anselmo Gaspar	MICOA Chefe de Departamento de Gestao Costeira	Acordos de Lusaka Av. 2115 – Maputo P.O. Box 2020 Mozambique Tel.: (258) 1 465622 Fax.: (258) 1 466679/ 465849 biocoast@tropical.co.mz
António M. Hoguane	UEM – Faculty of Sciences. UNESCO Chair of Marine Sciences and Oceanography	Tel.: 258 1 493102 Fax: 258 1 493049 Hoguane@hotmail.com
Antonio Sanchez - Benedito	Spanish Embassy First Secretary	Damiao de Gois Road Tel.:258 1 492025/ 27/30 Fax.: 258 1 494769
Argentina Mause	Ministry of Planning and Finance Deputy Director	P.O.Box 1101, Maputo, Mozambique Tel.: (258) 1 492705/492708 Fax.: (258) 1 492708 amausse@hotmail.com
Asha Devi Poonyth	Mauritius Oceanography Institute Project Officer (Ecologist)	France Centre, Victoria Ave, Quatre Bornes, Mauritius Tel.: (230) 4274434 Fax: 230 4274433 moi@intnet.mu
Benigna Gama Cuambe	IDPPE Gender issues	IDPPE Marginal Av. Block 141/8

		P.O. Box 2473 Maputo - Mozambique
Bill Lane	World Bank SWIOFP task team leader	1818 H St. NW Washington DC, USA 1-202-4737325 (office) Fax: 1-202-4738178 wlane@worldbank.org
Brad Brown	US NOAA Fisheries Senior Adviser	75 Virginia Beach Dr., Miami, FL 33149, USA Tel.: (305) 361 4284 Fax.: (305) 361 4219 brad.brown@noaa.gov
Chris Horril	Centro de Desenvolvimento Sustentavel de Zonas Costeiras	P.O.Box 66, Xai-Xai – Gaza Mozambique Tel.: 082 886457 Fax: 022 35004 E-mail: colscoastal@teledata.mz
Custódio Voabil	SEACAM	P.O. Box 4220 Maputo – Mozambique Tel.: 258 1 300641/2 Fax: 258 1 300638 seacam@vircom.com
David Boulle	Seychelles Fishing Authority Research Director	P.O. Box 449, Fishing Port, Mahe Seychelles Tel. (248) 730600 Fax.: (248) 244508 dboulle@sfa.sc
David La Roche	UNDP, Task Manager	David11727@starbnd.net
Didier Slachmuylders	Indian Ocean Commission Technical Assistant Management Natural Resourcess	Ave. Sir Guy Forget, BP 7, Quatre Bornes, Mauritius didierslach@coi.intnet.mu
Ducrocq Manuel	French delegation, Mayotte fishing officer Member of delegation – Head of the fishing bureau	DAF/SPEM BP 103 97600 Muoudzou Mayotte France Tel.: 02 69 61 35 13 Fax: 02 69 61 35 13 daf.spem.mayotte@wanadoo.fr
Dumori Muhamed Youssouf	Point Focal du FEM Unite Technique de Gestion du FEM Comores	BP: 234 Muroani-Comores Tel.: (269) 73 62 22 / 73 66 88 Fax: (269) 73 62 63 / 73 68 49 decvas@snpt.km pnudg32@snpt.Km
Eusébio Feliciano Siquela	SADC Secretariat Fisheries Senior Expert	SADC House/Private Bag 0095, Gaborone, Botswana Tel.: (267) 3 (9) 51863 Fax: (267) 3 (9) 72848 siquela@sadc.int
Evaristo Baquete	MICOA National Director	2115 Acordos de Lusaka Av. Maputo, Mozambique Tel.: (258) 1 465947 Fax.: (258) 1 465948 ebaquete@tropical.co.mz
Gaelle Putzeus Gobet	Cooperacao Francesa Assistente do Adido de Cooperacao	1419 Julius Nyerere Av, Maputo, Mozambique Tel.: (258) 1 491019

		Fax.: (258) 1 491666 coopmoz@virconn.com
Gareth Johnstone	IDPPE – Maputo, Mozambique	IDPPE – P.O. Box 2473 Maputo – Mozambique Tel.: 258 82 318 727 Gjohnstone@idppe.org
Geoff Bailey	Marine & Coastal Management Assistant Director in Charge of Ocean Environment Sub- division	Private Bag X2, Rogge Bay 8012 Cape Town, South Africa Tel.: 27 21 402 3306 Fax.: 27 21 425 6976 gwbailey@mcm.wcape.gov.za
George Habib	Fisheries Department, Kenya Consultant	P.O. Box 90423, Mombasa, Kenya Tel: 011 315 904 Fax: 011 315 904 ghabib@africaonline.co.ke
Guelle Putzeys-Gobet	Cooperação Francesa	Tel.: (258 1) 491019 Coopmoz@vircom.com
Hermes Pacule	MICOA – Centro de Desenvolvimento Sustentável de Gestão Costeira	P.O. Box 66 Xai-Xai – Gaza Tel./Fax: 258 (022) 35004
Hironi Isa	World Bank Fisheries Specialist	1818 H Street, NW Washington DC 20433, USA Tel.: 1 202 458 7682 Fax: 1 202 522 3308 Hisa@worldbank.org
Isabel Chaúca	MICOA-Mozambique	Tel.: (258 1) 466337 Dinapot@teledata.mz
Isilda Nhantumbo	IUCN Country Program Coordinator	23 Fernando Melo e Castro Road, Maputo, Mozambique Tel.: (258) 1 490599 Fax.: (258) 1 490812 isi@sortmoz.com
J. Russo de Sa	IIP Director	P.O. Box 4603, Maputo, Mozambique Tel.: (258) 1 490307 Fax.: (258) 1 492112 russo@moziip.org
Janet Mutiso	National Environment Management Authority Assistant Director of Environment	P.O. Box 67839, Nairobi, Kenya Tel./ Fax.: 248851 biofish@africaonline.co.ke Director@nes.co.ke
Juan I. Pita	Cooperacao Espanhola Coordenador Geral	347 Damiao de Gois road, Maputo, Mocambique Tel.: (258) 1 492053 Fax.: (258) 1 495257 Juan.pita@aeci.org.mz
Jude Peter Bijoux	Marine Parks Authority Research Officer	P.O.Box 1240, Victoria Mahe Seychelles Tel.: (248) 378096 Fax.: (248) 378679 jbijoux@yahoo.cs.uk mpa@seychelles.net
Kennet Sherman	NOAA NaFS	USA Tel.: 401 782 3211 Fax.: 401 782 3201 kenneth.sherman@noaa.gov
Lizette P. Sousa	IIP Head of Department of	P.O. Box 4603, Maputo, Mozambique Tel.: (258) 1 490307

	Industrial Fisheries	Fax.: (258) 1 492112 lsousa@moziip.org
Mahamoud Satfillah	Ministere de l'agriculture et de la pêche	BP 41 Pnudg32@snpt.km
Margarida David e Silva	FAO	Fao-moz@fao.org.mz
Martha Mukira	Fisheries Department Marine Senior Fisheries Officer	P.O. Box 90423, Mombasa, Kenya Tel.: 011 315904 Fax: 011 315904 fishdept@africaonline.co.ke
Miguel Castanha	PNUD Programme Officer	931 Keneth Kaunda Av., Maputo, Mozambique Tel.: (258) 1 481400; 481404 Fax: (258) 491691 miguel.castanha@undp.org
Mohamed Youssouf Oumouri	U.T.G. DUFEM Comores Point-Focal Operationnel	B.P. 234 Moroni-Comores Tel.: 269 73 62 22/736688 Fax: (269) 736263/736849 decvas@snpt.km pnudg32@snpt.km
Muhamed Saefillah	Comore Ministere du del'environnement de la Peche Regional Peche	BP 41 - Comores Pnudg32@snpt.km
Mwendaweli Mathews	SADC SCU Economist	P.B. 25845 Windhoek, Namibia Tel.: (264) 61 2053042 Fax.: (264) 61 235269 mmwendaweli@mfmr.gov.na
Nik Sekhran	UNDP-GEF Regional Coordinator	P.O. Box 6541 Pretoria 0001 South Africa Nik.sekhran@undp.org
Obadias J. Cossa	INAHINA Physical Oceanographer	Karl Marx Av. P.O. Box 2089, Maputo, Mozambique Tel.: (258) 1 430186/8 Fax.: (258) 1 430186 objacoe@hotmail.com
Paul Siegel	WWF Marine Conservation Advisor for Africa and Madagascar	B.P. 22928, Dakar, Senegal Tel.: 221-869-3700 Fax: 221-869-3702 psiegel@wwfmafca.org
Philippe Lemerrier	Delegation of France Head of Delegation	Ifremer Rua Jean Bertho B.P. 60 Le Port Cedex 97822 France Tel.: (262) 420340 Fax.: (262) 433684 Philippe.lemerrier@ifremer.fr
Rabarison A. Guy	Centre National de Recherches sur l'Environnement Head of Department	C.N.R.E. B.P. 1769, Antananarivo, Madagascar Tel.: (261) 22 20 264 69 dircnre@dts.mg darmrs@dts.mg
Rathacharen, B.D.	Ministry of Fisheries Divisional scientific officer	Albion fisheries research centre, Mauritius Tel.: (230) 238 4829 Fax: (230) 238 4184 fish@intnet.mu

Ratomamenina Onésime	Ministry of Scientific Research for Development (MRSD) Oceanographer Centre National de recherches sur l'Environnement	Madagascar Tel.: 22 238 28 richardrato@hotmail.com
Renison K. Ruwa	Kenya Marine and Fisheries Research Institute Deputy Director	P.O. Box 81651, Mombasa, Kenya Tel.: (254) 11 471435 Fax: (254) 11 475157 kruwa@recoscix.org
Richard Muyongi	Vice President's office Division of environment	P.O. Box 5380 Dar-es-Salaam – Tanzania Tel.: 255-222-113983 Fax: 255-222-113856 Sotchair@afraonline.co.tz
Richard Mwyirigi	Vice President's Office. Assistant Director – Environment GEF technical officer	P.O. Box 5300 Dar-Es-Salaam Tel.: 022-2113985 Sotchair@africaonline.co.tz
Rob Tilney	Marine and Coastal Management Deputy Director, Offshore Resources Research	Private Bag X2, Rogge Bay, 8012, South Africa Tel.: 27 21 402 3105 Fax: 27 21 421 7406 rtilney@mcm.wcape.gov.za
Rod De Vletter	World Bank Consultant	P.O. Box 4053 Maputo - Mozambique Tel.: (258) 82 301286/258 1 492141 Fax: (258) 1 422893 rod@africaonline.co.sz rvletter@worldbank.org
Rondolph Payet	Seychelles Fishing Authority Resource Manager	Fishing Port, P.O. Box 449, Mahe, Seychelles Tel.: (248) 730600 Fax: (248) 224508 rpayet@sfa.sc
Rouja Johnstone	IDPPE	IDPPE, C.P. 2473 Maputo - Mozambique Tel.: 258 82 318 727 r.johnstone@idppe.org
Rudy van der Elst	ORI Director	4056 Marine Parade; PO Box: 10712 South Africa Tel.: +27 31 3351204 Fax: +27 31 3322845 rudy@ori.org.za
Rui Silva	IIP Head of Department of Aquatic Environment	P.O. Box 4603, Maputo, Mozambique Tel.: (258) 1 490307 Fax.: (258) 1 492112 rsilva@moziip.org
Sandy Davies	SADC Adviser	P.Box 11625, Klein Windhoek, Namibia Tel.: (264) 61 2053049 Fax.: (264) 61 223334 sdavies@mfmr.gov.na
Sidónia Muhorro	MICOA – Departamento de Gestão Costeira; Tecnica Superior de Gestão	Mozambique Tel.: (258) 1 465622 Fax.: (258) 1 466679/465849 biocoast@tropical.co.mz
Sue Wells	IUCN Eastern African Regional	IUCN EARO P.O.Box 68200, Nairobi, Kenya

	Office Marine and Coastal Co- ordinator	Tel.: (254) 2 890606 Fax.: (254) 2 890615 smw@iucnearo.org
Suzannah Walmsley	Regional Fisheries Information Systems Project (RFIS) – IDPPE - Mozambique	IDPPE - P.O. Box 2473 Maputo – Mozambique Tel.: 258 (0) 82 840500 Swalmsley@idppe.org Sfwalmsley@yahoo.co.uk
Takayuki Hirai	World Bank Senior Fisheries Specialist	1818 H Street N.W. Washington D.C., USA Tel.: (202) 473 1292 Fax.: (202) 522 3308 thirai@worldbank.org
Thomas Benjamin	Regional Council of Reunion Project manager: International linkages	BP 7190 – 97719 ST-Denis Messag CEDEX 9, France (Reunion Island) Tel.: (262) 487338 Fax: (262) 487071 benjamin.thomas@cr-reunion.fr
Yoko Watanabe	WWF Multilateral Donor Liaison	1250 24 th , NW Washington DC 20037, USA Tel.: 1 202 778 9569 yoko.watanabe@wwfus.org