

**Document of  
The World Bank**

Report No: 18565-MNA

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE

GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF SDR 4 MILLION (US\$ 5.61 MILLION EQUIVALENT)

TO

DJIBOUTI, EGYPT, JORDAN, SAUDI ARABIA<sup>1</sup>,  
NORTHERN SOMALI COAST, SUDAN AND YEMEN

FOR THE

REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC  
ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

WORLD BANK COMPONENTS:

COMPONENT 2: REDUCTION OF  
NAVIGATION RISKS AND MARITIME POLLUTION

COMPONENT 6: SUPPORT FOR  
INTEGRATED COASTAL ZONE MANAGEMENT (ICZM)

February 3, 1999

Rural Development, Water and Environment (MNSRE) - Middle East and North Africa Region  
Agriculture and Environment (AFTAE) – Africa Region

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<sup>1</sup> Non-GEF Resources.

## CURRENCY EQUIVALENTS

Currency Unit = US\$

**FISCAL YEAR - July 1 - June 30**

## ABBREVIATIONS AND ACRONYMS

AIS	Automatic Identification System
CTA	Chief Technical Advisor
DNV	Det Norske Veritas
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GIS	Geographic Information System
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
GRT	Gross Registered Tonnage
IALA	International Association of Lighthouse Authorities
ICR	Implementation Completion Report
ICRI	International Coral Reef Initiative
ICZM	Integrated Coastal Zone Management
IFAD	International Food and Agricultural Development
ILO	International Labor Organization
IMO	International Maritime Organization of the United Nations
IOMoU	Memorandum of Understanding on Port State Control in the Indian Ocean
IsDB	Islamic Development Bank
IUCN	World Conservation Union (formerly International Union for the Conservation of Nature)
LACI	Loan Administration Change Initiative
MARPOL	International Convention for the Prevention of Pollution from Ships
MEMAC	Marine Emergency Mutual Aid Center
MPA	Marine Protected Area
NGO	Non-governmental Organization
nm	Nautical mile (1 international nautical mile = 1.852 km = 1.1508 miles)
NEAP	National Environmental Action Plan
NPC	National Program Coordinator
PFS	Procurement and Finance Specialist
PC	Program Coordinator
PCU	Program Coordination Unit
PDF	Project Development Facility
PERSGA	Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden
PMT	Project Management Team
PSC	Port State Control
SAP	Strategic Action Program for the Red Sea and Gulf of Aden
SDR	Special Drawing Rights
SOLAS	Safety of Life at Sea Convention
TBD	To Be Determined
TF	Task Force
TSS	Traffic Separation Schemes
UKHO	United Kingdom Hydrographic Office
UNDP	United Nations Development Programme
UNDP-PC	UNDP Programme Coordinator
UNEP	United Nations Environmental Programme
VHF	Very High Frequency
VTs	Vessel Traffic System
WB	World Bank
WG	Working Group

Vice Presidents: Kemal Derviş and Callisto Madavo  
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Sector Directors: Doris Koehn and Hans Binswanger  
Task Team Leader: Stephen F. Lintner

**DJIBOUTI, EGYPT, JORDAN, SAUDI ARABIA,  
NORTHERN SOMALI COAST, SUDAN AND YEMEN**

**REGIONAL PROJECT FOR THE  
IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP)  
FOR THE RED SEA AND GULF OF ADEN**

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## **Map**

Map 1 Strategic Action Program for the Red Sea and Gulf of Aden – IBRD 29042

# Project Appraisal Document

Date: February 3, 1999	Task Team Leader: Stephen F. Lintner
Country Directors: Joint MNA and AFR Regional Project	Sector Directors: Hans Binswanger and Doris Koehn
Project ID: GE-63717	Program Objective Category: Environmentally Sustainable Development
Sector: Environment	Focal Area: International Waters
Lending Instrument: GEF Grant	Program of Targeted Intervention: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Project implementation period: 5 years Expected effectiveness date: Apr. 1, 1999 Expected closing date: Jun. 30, 2004

## A: Project Development Objective

### 1. Project development objective:

*Project Development Objective.* The Project development objective is to improve coastal and marine environments of the Red Sea and Gulf of Aden through a range of activities under the SAP, of which two would be carried out under the GEF/Bank administered project: a program to reduce navigation risks; and support for Integrated Coastal Zone Management. Achievement of the objectives would be measured by (a) reduction in shipping accidents and oil spills; and (b) adoption by selected local communities of integrated coastal zone management plans, to be prepared under the project.

The Project supports the cooperating countries in implementing the Jeddah Convention, other international agreements and national policies and legislation. It focuses on two sets of priority actions to be undertaken with support from the World Bank during the first phase of the SAP implementation process: Component 2 – Reduction of Navigation Risks and Maritime Pollution; and Component 6 – Support for Integrated Coastal Zone Management (ICZM).

*An Environmentally Important Region.* Located at the junction of three major biogeographical realms and characterized by an arid coastal zone with minimal freshwater input, the Red Sea and Gulf of Aden contain some of the world's most important coastal and marine environments and resources. The topography ranges from nearshore, protected shallows, to exposed sandy and rocky shorelines, and depths of over 4,000 meters, giving rise to complex ecosystems and high biological diversity. Although the Red Sea is still one of the least disturbed seas relative to other enclosed international water bodies, pressures on it are rapidly increasing. Transboundary concerns are wide ranging, from major navigation risks caused by international shipping, to unregulated exploitation of shared fish stocks, to widespread habitat destruction by uncontrolled coastal zone development leading to loss of important species. There is a growing risk of marine pollution, notably from maritime transport of petroleum, and environmental degradation from rapidly expanding coastal zone development including tourism facilities. In the Gulf of Aden, fisheries are under great pressure from over-exploitation and illegal fishing.

*Cooperative Development of the SAP.* With the support of the Global Environment Facility (GEF), the Regional Organization for the Conservation of the Marine Environment of the Red Sea and Gulf of Aden (PERSGA), which serves as the Secretariat for the Jeddah Convention,<sup>2</sup> initiated and coordinated the preparation of the Strategic Action Programme for the Red Sea and Gulf of Aden (SAP). Members of the PERSGA SAP Task Force included representatives of Djibouti, Egypt, Jordan, Saudi Arabia,<sup>3</sup> northern coast of Somalia, Sudan and Yemen. The SAP process was jointly supported by the three GEF partners—UNDP, UNEP and World Bank—and the Islamic Development Bank, which is based in Jeddah. The SAP was adopted by the PERSGA Council of Ministers in 1997 and issued by PERSGA in 1998.

*First Phase of SAP Implementation.* In late 1997 the GEF Council approved a US\$19.0 million grant to support the initial implementation phase of the SAP. This support is intended to allow GEF to play a “catalytic role” by establishing an institutional and technical foundation to undertake a long-term program of actions. Under the first phase, GEF support will strengthen the capacity of PERSGA to coordinate and manage the SAP implementation process, create a forum to bring together the key actors at the regional and national level, provide support for selected high priority activities and facilitate mobilization of resources from domestic and international sources. The SAP will be implemented in a series of phases that will require adjustments in their design to incorporate lessons learned from the GEF-supported activities and to address new issues that may arise in the future. It is not anticipated that future phases of SAP implementation will receive further core funding from the GEF; however, assistance may be made available for specific activities on a case-by-case basis.

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2 Final Act of Jeddah Plenipotentiary Regional Conference on Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden.

3 Costs for participation of Saudi Arabia in the SAP activities will not be funded from GEF resources.

*Removing Barriers for Transboundary Management.* The GEF funding provided for the proposed Project is designed to achieve global environmental benefits by removing barriers against implementation of the SAP by supporting incremental costs. These include additional transaction costs for joint planning of activities, development of common approaches to sectoral policies, data collection and analyses, and coordination of efforts among the participating countries. Consistent with GEF objectives, the Project supports complementary policy and technical measures on a regional basis under Component 2 to reduce navigation risks and associated marine pollution. Under Component 6, such measures are supported to strengthen institutional capacity in use of ICZM to protect the critical interface between the terrestrial and marine environments.

*Project Components.* The proposed Project will be implemented as an integrated activity by the Project Management Team (PMT) based in PERSGA. In order to facilitate management and to allow for clear assignments of responsibility within the PMT, the Project has been divided into a series of complementary components that will be supervised by the indicated GEF implementing organization. It will include the following outputs:

- Component 1: Institutional strengthening to facilitate regional cooperation - UNEP;
- Component 2: Reduction of navigation risks and maritime pollution - WB;
- Component 3: Habitat and biodiversity conservation - UNDP
- Component 4: Sustainable use and management of living marine resources - UNDP;
- Component 5: Development of a Regional Network of Marine Protected Areas (MPAs) - UNDP;
- Component 6: Support for Integrated Coastal Zone Management (ICZM) - WB;
- Component 7: Enhancement of public awareness and participation - UNDP;
- Component 8: Monitoring and evaluation of program impacts - UNDP and;  
Support for Project Management Team Costs - UNDP.

Assignment of responsibilities between the GEF implementing organizations has been based on the comparative advantage of these organizations to provide administrative and technical support for these activities. This includes use of the technical skills of the Bank and the well-developed network of UNDP field offices throughout the Region to facilitate activities.

## *2. Key performance indicators (see Annex 1):*

*Key Performance Indicators.* The key performance indicators for Components 2 and 6 will include:

### *Component 2. Reduction of Navigation Risks and Marine Pollution*

#### Output Indicators:

##### Element A - Implementation of Conventions and Port State Control

- Ratification of PERSGA Protocols.
- Adoption of Port State Control by PERSGA members.
- Training of inspectors to international standards in Port State Control.

##### Element B - Traffic Separation Schemes

- Establishment by International Maritime Organization (IMO) of two new Traffic Separation Schemes.

##### Element C - Hydrographic Surveys and Navigation Aids

- Survey of two priority areas and printing of updated charts.
- Installation of one navigational aid.

#### Element D - Vessel Traffic Systems

- Conduct a feasibility study towards the establishment of a Vessel Traffic System for the southern Red Sea for potential funding by EU, IsDB and/or other interested parties.
- Training of personnel in principles of Vessel Traffic Systems.

#### Element E - Oil Spill Prevention and Management

- Preparation and adoption of Regional Oil Spill Contingency Plan.
- Djibouti MEMAC Transferred to Supervision of PERSGA.

#### Outcome Indicators:

##### Element A - Implementation of Conventions and Port State Control

- Expanded application of international maritime conventions in the Region that results in reduced number of accidents and oil spills as monitored in international shipping databases.
- Reduction in occurrence of navigation, safety and environmental risks as measured by trends in type and frequency of PSC actions concerning inspected vessels at participating regional ports.

##### Element B - Traffic Separation Schemes

- Reduction of greater than 50 percent of maritime accidents resulting from vessel collisions and “near misses” over a 10-year period, following official establishment of the new traffic separation schemes, when compared to historic trends.

##### Element C - Hydrographic Surveys and Navigation Aids

- Reduction of greater than 35 percent of maritime accidents resulting from vessel groundings over a 10-year period, following official adoption, printing and dissemination of revised navigation charts, when compared to historic trends.

##### Element D - Vessel Traffic Systems

- Development of a feasibility study towards the establishment of a Vessel Traffic System for the southern Red Sea.

##### Element E - Oil Spill Prevention and Management

- Increased capacity of member countries to respond to oil spill emergencies as measured by the availability of area specific contingency plans, trained personnel and available equipment.

#### *Component 6. Support for Integrated Coastal Zone Management (ICZM)*

#### Output Indicators:

##### Element A - Regional Networking and Training

- Workshops to develop a common regional framework for ICZM plans.

##### Element B - Geographic Information Systems

- Harmonization of regional and national GIS systems used for ICZM.
- Development of standardized GIS data base on coastal environments.

##### Element C - Model ICZM Plans

- Preparation of “Model ICZM” plans in Djibouti, northern coast of Somalia, Sudan and Yemen.



Element D - ICZM Activities in the Four Southern Countries

- Development of ICZM in Djibouti, northern coast of Somalia, Sudan and Yemen.

Outcome Indicators:

Element A - Regional Networking and Training

- A common approach to ICZM that includes application of good practices and builds upon lessons learned from global and regional experience as measured by the establishment of "ICZM Frameworks" which will vary between the countries in structure and form.

Element B - Geographic Information Systems

- Harmonized GIS systems for ICZM used by PERSGA and cooperating countries result in comparable maps and data sets being available within the Region and used for planning and management at the regional, national and local level.
- PERSGA and cooperating countries are able to develop and share data allowing for development of a spatial information base that is used for planning and assessment of environmental trends.

Element C - Model ICZM Plans

- Model ICZM Plans provide a basis for demonstrating application of ICZM approaches at the national and local level which are adopted as part of the physical planning and management frameworks at the operational level.

Element D - ICZM Activities in the Four Southern Countries

- ICZM capacities in the four southern countries are able to influence, at the local level, development activities in a way that prevents unnecessary adverse impacts from major development activities and reduces incremental impacts from small-scale actions.

**B: Strategic Context**

*1.(a) Sector-related Country Assistance Strategy (CAS) goal supported by the Project (see Annex 1):*

This joint MNA and AFR Regional Project supports sustainable management of coastal and marine resources by the cooperating countries belonging to PERSGA, as outlined in the SAP. It is consistent with the priorities established under the Environmental Strategy of the MNA Region and the Coastal Zone Management Strategy of the AFR Region. It is also consistent with Bank commitments to support the objectives of the International Coral Reef Initiative (ICRI) and to implement the Global Representative System of Marine Protected Areas. In the case of Egypt, Jordan and Yemen, which have had a CAS prepared, the Project is consistent with their objectives of supporting sustainable development, sound management of natural resources, strengthening of local institutions and development of human resources. No CAS studies have been prepared for Djibouti, Somalia or Sudan. Saudi Arabia, as a non-borrowing country, is not subject to the CAS process.

*Egypt* - CAS document number: 16533-EGT      Date of latest CAS discussion: May 5, 1997

*Egypt - Improving Natural Resources Management.* The SAP supports CAS objectives relating to improved environmental management, specifically in the area of marine resources protection, and in the development of environmentally sustainable tourism on the Red Sea. The SAP component on Reduction of Navigation Risk and Marine Pollution also relates to the CAS in that it will help to improve the efficiency and safety of the marine transport sector.

*Jordan* - CAS document number: 14999-JOR Date of latest CAS discussion: September 29, 1995

*Jordan - Promoting Rapid and Sustainable Outward-Oriented Growth.* Environmental management is identified as an area where more government involvement is needed to ensure private investment does not damage the environment. The marine ecosystem in the Gulf of Aqaba is mentioned as an area where environmental degradation is already of particular concern. The SAP supports CAS objectives relating to improved environmental management, tourism development, and increasing local participation.

*Yemen* - CAS document number: 15286-YMN Date of latest CAS discussion: January 19, 1996

*Yemen - Promoting Improved Environmental Management.* Degradation of the coastal environment is identified as one of the three major constraints to growth. Yemen's coastal areas are of major economic importance because of the fisheries they support and their tourism potential. The SAP also supports CAS objectives relating to the implementation of the National Environmental Action Plan (NEAP) and improving natural resources management.

*(b) GEF Operational Strategy/program objective addressed by the Project:*

The Project addresses GEF Operational Program Number 9 (OP-9), "Integrated Land and Water Multiple Focal Area Operational Program."<sup>4</sup> The objective of OP-9 is to support "better use of land and water resource management practices on an area wide basis." As required, the Project's activities have a regional focus, include biodiversity considerations, and focus on the "prevention of damage to threatened waters..." In particular, as called for under OP-9, this Project focuses on "preventive measures to address threats rather than remedial, highly capital intensive measures." The Project supports measures to address these issues in a group of African countries identified as a priority area in guidance provided by GEF.

The Project is consistent with GEF guidance and will contribute significantly to the "reduction of stress to the international waters environment" in the Region. The Project will support PERSGA and the cooperating countries in moving towards positive change in their sectoral policies and critical investments, and in developing the programs required to achieve these objectives. The concerned governments have demonstrated their long-term commitment to the fundamentals of the SAP by their ratification of the Jeddah Convention, support for PERSGA, participation in the SAP Task Force, and direct role in the individual Country Reports and Regional Studies, which cooperatively identified priority actions. The support of GEF will play an important catalytic role in the Project, and the expected participation of the European Community, international financial institutions, donors, and the private sector will also contribute to this multi-country and multi-stakeholder effort. The emphasis in the individual Project components on the evaluation of sustainable mechanisms for self-financing of a number of activities will contribute to the long-term financial sustainability of Project-initiated actions.

*2. Main sector issues and Government strategy:*

*(a) Sector Issues.* The main sector issues concerning management of the coastal and marine environment in the Red Sea and Gulf of Aden Region have been reviewed in the SAP. These include: development of an effective management structure for coastal and marine resources at the regional and national levels; reduction of navigation risks and maritime pollution; habitat and biodiversity conservation; sustainable use of living marine resources; establishment and management of marine protected areas; use of integrated coastal zone management; and promotion of public awareness and participatory approaches in conservation of these fragile resources. This analysis is consistent with the global experience of the Bank in coastal and marine resources management and the AFR and MNA regional strategies for environment and coastal resources management. It also tracks with the findings and recommendations developed for areas with extensive coral reefs under the International Coral Reef

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4 Global Environment Facility (April 1997). GEF Operational Programs.

Initiative (ICRI). The GEF-supported implementation program for the SAP has been specifically designed to support key measures to address these issues.

(b) *Government Strategy.* The Jeddah Convention, which will be implemented through the SAP, provides a multi-government approved strategy that is designed to undertake preventive and curative actions in a phased manner to maintain the sustainable use of shared resources. The Jeddah Convention is complemented by a range of international agreements, many sponsored by the IMO, which further the framework for protection of the marine environment. At the national level, many of the cooperating governments have established environmental policies and priorities. The country studies prepared under the SAP process provide specific recommendations for priority national and local actions, which complement the cooperating countries' efforts in implementing NEAPs and related strategy studies.

### *3. Sector issues to be addressed by the Project and strategic choices:*

The Bank-implemented components of the SAP represent a strategic choice to concentrate available human and financial resources on preventive measures that allow for cost-effective interventions to avoid or minimize the degradation of coastal and marine resources. The activities under Component 2 support a series of regional efforts at the policy and technical level to reduce the risk of navigation accidents and associated pollution. Activities under Component 6 provide for development of skills and experience in the practical application of ICZM, to allow the environmental dimension to be factored into the planning and investment process in this complex environment where the land and the sea interface with each other.

## **C: Project Description Summary (for Bank implemented components)**

### *1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown)*

The Bank implemented elements of the SAP include Component 2 - Reduction of Navigation Risks and Maritime Pollution and Component 6 - Support for Integrated Coastal Zone Management (ICZM). The key elements of these components are as follows:

#### *Component 2. Reduction of Navigation Risks and Maritime Pollution*

*Five Complementary Elements.* In order to support effective management and implementation of Component 2, it has been divided into five complementary elements:

- *Element A - Implementation of Conventions and Port State Control*
  - ◊ Identification of "baseline" conditions in each of the states with reference to the conventions.
  - ◊ Identification of technical, commercial, institutional or legal reasons why conventions have not been ratified by the states concerned.
  - ◊ Means of promoting the ratification of these conventions, drawing upon the experience of states in other parts of the world.
  - ◊ Review of existing PERSGA protocols and recommendations on the development of additional protocols as necessary.
  - ◊ Establishment of regional system and capacity for Port State Control.
  - ◊ Preparation of an assessment of regional, national and local self-financing mechanisms for navigation risk reduction and maritime pollution prevention and control.
- *Element B - Traffic Separation Schemes*
  - ◊ Actions to formally establish new TSS in selected priority areas. These areas include: Northeast Side and Southwest Side of the Hanish Islands.
  - ◊ Extension of Ras Muhammed TSS.
- *Element C - Hydrographic Surveys and Navigation Aids.*

- ◇ Under the SAP, two priority areas are proposed to be defined and surveyed: the proposed TSS to the northeast and southwest of the Hanish Islands
- ◇ Additional areas that may be considered for priority survey, subject to availability of funds, include: existing TSS in the Strait of Bab al Mandab; approaches to Port Sudan or Suakin in Sudan; and approaches to the Port of Aden.
- ◇ Support for a survey of the positions and characteristics of any navigational aids in the Region.
- *Element D - Vessel Traffic Systems*
  - ◇ A feasibility study would be prepared for establishment of a VTS that would initially monitor traffic in the area around the TSS in the southern end of the Red Sea through the Strait of Bab al Mandab. On the basis of this feasibility study, PERSGA would seek funding for the establishment of the VTS from the EU, IsDB and/or other interested sources.
  - ◇ Regional Workshop on Vessel Traffic Systems.
- *Element E - Oil Spill Prevention and Management*
  - ◇ Regional Oil Spill Contingency Strategy.
  - ◇ Support for Djibouti MEMAC.
  - ◇ Oil Spill Combating Training.

#### *Component 6 - Support for Integrated Coastal Zone Management-ICZM*

- ◇ *Four Complementary Elements.* In order to support effective management and implementation of Component 6, it has been divided into four complementary elements:

##### *Element A - Regional Networking and Training*

- ◇ Identify personnel to form a Regional Working Group of experts on ICZM with specialists drawn from each cooperating country.
- ◇ Convene a series of meetings at the regional or sub-regional level to review the status of ICZM and supporting instruments such as physical and environmental planning, environmental assessment procedures and Geographic Information Systems.
- ◇ Undertake site visits in the Region to review case studies at the field level in coastal zone management and the application of ICZM and supporting instruments in specific locations.
- ◇ Conduct regional, sub-regional and national workshops to enhance capability in this area.
- ◇ Based on the results of these activities, establish a common framework for regional ICZM plans.
- ◇ Identify outreach activities to increase support by decision-makers and stakeholders in use of ICZM as a mechanism for sustainable management of the coastal zone.
- *Element B - Geographic Information Systems*
  - ◇ Develop an improved understanding of the application of GIS to the development and implementation of ICZM.
  - ◇ Support development by the Working Group of PERSGA guidelines for standardization and routine updating of GIS.
  - ◇ Undertake a regional review of the present GIS and related databases in the Region that contain data relevant to ICZM.
  - ◇ Provide technical advice and support to harmonize the different systems to facilitate and expand information exchange with the Region.
  - ◇ Undertake well-designed GIS applications as an element of model ICZM activities supported under the component.
- *Element C - Model ICZM Plans.* The component will support the preparation and assist in implementation of model ICZM plans for selected sites in the four southern countries—Djibouti, Sudan, the northern coast of Somalia and Yemen.
- *Element D - ICZM Activities in the Four Southern Countries.* The component will support development of ICZM in Djibouti, Somalia, Sudan and Yemen and will focus on institutional

capacities and applied training of personnel in the principles and application of ICZM. This will be accomplished through national participation in the work program of the ICZM Working Group at the regional level, conduct of country-specific training activities, preparation of a model ICZM activity and use of GIS to support coastal zone management. These activities will be closely coordinated with the National Program Coordinator and national PERSGA Task Force member. Activities will include:

- ◇ A national representative will participate in the regional Working Group on ICZM. National specialists will attend regional and international workshops, training activities, exchange programs and study tours.
- ◇ Country-specific ICZM training activities will be conducted to address specific issues.
- ◇ A basic framework for ICZM at the national level will be developed to provide general guidelines for use in the respective countries.
- ◇ A model ICZM plan will be prepared for a site jointly selected by national and PERSGA representatives.
- ◇ The model ICZM activity will be supported using a participatory approach with broad-based stakeholder involvement.
- ◇ Support will be provided to facilitate national participation in a PERSGA regional GIS network designed to support the SAP process.
- ◇ Support for training of personnel in GIS applications will focus on the model ICZM plan and sensitivity mapping of the coastline using regionally standardized methods.

Details concerning proposed locations for ICZM activities are provided in Annex 2 and the Project Implementation Plan.

<u>Component</u>	<u>Category</u>	<u>Cost Incl. Contingencies (US\$M)</u>	<u>% of Total</u>	<u>GEF Financing (US\$M)</u>
<b>2. Reduction of Navigation Risks and Maritime Pollution</b>		<b>3.500</b>	<b>62%</b>	<b>3.500</b>
a. Implementation of Conventions and Port State Control	Institution	0.953	17%	0.953
b. Traffic Separation Schemes	Building			
	Physical/	0.112	2%	0.112
	Institution			
c. Hydrographic Surveys and Navigation Aids	Building	1.915	33%	1.915
	Physical/			
	Institution			
d. Vessel Traffic Systems	Building	0.143	3%	0.143
	Physical/			
	Institution			
e. Oil Spill Prevention and Management	Building	0.042	1%	0.042
	Institution			
f. Component Management	Building	0.335	6%	0.335
	Institution			
	Building			
<b>6. Support for Integrated Coastal Zone Management (ICZM)</b>		<b>2.110</b>	<b>38%</b>	<b>2.110</b>
a. Regional Networking and Training	Institution	0.470	8%	0.470
	Building			
b. Geographic Information Systems	Physical/	0.435	8%	0.435
	Institution			
	Building			
c. Model ICZM Plans	Institution	0.187	3%	0.187
	Building			
d. ICZM Activities in the Four Southern Countries	Physical/	0.709	13%	0.709
	Institution			
	Building			
e. Component Management	Institution	0.309	6%	0.309
	Building			
<b>Total</b>		<b>5.610</b>	<b>100%</b>	<b>5.610</b>

## *2. Key policy and institutional reforms supported by the Project:*

The Project has no policy or institutional reform conditionality; however, the whole Project promotes and supports coastal and marine resources management within the Red Sea and Gulf of Aden. Key policy and institutional issues to be addressed under the Bank implemented components include:

(a) *Component 2 - Reduction of Navigation Risks and Maritime Pollution.* This component will support measures to identify and overcome constraints by cooperating governments in signing, ratifying and implementing major maritime conventions and agreements. It will also facilitate establishing a regional framework for Port State Control. These policy measures will be complemented by institutional strengthening measures, through the activities of the Navigation Working Group, to provide specialized seminars, training and information on these issues to decision makers and personnel concerned with regional maritime affairs.

(b) *Component 6 - Support for Integrated Coastal Zone Management (ICZM).* At the regional level the ICZM Working Group will promote and exchange good practices in coastal zone management. In the four southern countries this will be further supported by preparing national “ICZM Frameworks,” and undertaking “Model ICZM Plans” to demonstrate these approaches at the national and local level. Seminars and training activities under this component are planned to support the establishment of basic institutional capacities concerning this issue by improving planning, management and enforcement of existing regulations.

## *3. Benefits and target population:*

The primary benefit from implementation of the SAP, with support from GEF, will be coordinated support for a series of measures for the long-term conservation and management of the coastal and marine resources of the Region. The benefits of Bank-implemented components will result from actions to strengthen regional, national and local management capacity, and preventive measures to reduce navigation risks and maritime pollution and to promote adoption and application of ICZM. By investing in preventive measures to manage the coastal and marine resources of the Region, the cooperating countries will save much needed resources which would likely be required for future curative actions and reduce the need to address emergency situations. Specific beneficiaries include:

(a) *Maritime Community.* Will benefit from clearer navigation guidelines and improved conditions and safety of vessel traffic. Local communities will benefit from a reduced threat of spilled oil affecting nearshore communities and living marine resources.

(b) *Coastal Communities.* Will benefit from coherent, standardized development practices that follow logical zoning, and make use of environmental assessment and other regulations to provide coastal residents with needed services while protecting them from significant environmental impacts.

(c) *Tourism Interests.* Will benefit from a positive recreation experience that emphasizes the natural resource and cultural values of the Red Sea and Gulf of Aden’s coastal environment, which directly contributes toward a sustainable tourism industry.

(d) *Fishing Communities.* Will benefit from actions that will incrementally support a move towards a sustained approach to the management of fisheries and conservation of critical habitats for these resources. These are among the lowest income populations in the region and special efforts will be undertaken to support their interests in the four southern countries.

#### 4. Institutional and implementation arrangements:

- (a) *Role of PERSGA.* Implementation of the SAP will be undertaken by the Project Management Team (PMT) located in the PERSGA Secretariat, which will operate under the supervision of the Secretary General of PERSGA. Day-to-day Project management will be the responsibility of the Program Coordinator (PC) and the GEF-funded Chief Technical Advisor (CTA) in close cooperation with the Navigation Advisor and Lead Specialists appointed for each component. For the GEF implementing agencies, the UNDP Resident Representative's Office in Saudi Arabia will provide day-to-day backstopping for the Project through the services of the UNDP-Program Coordinator (UNDP-PC) based in Riyadh. The UNDP-PC will provide both technical and administrative backstopping and monitoring for the Project on behalf of the three implementing agencies. The Riyadh-based UNDP-PC will travel to Jeddah at least once a month to attend one of the weekly PMT meetings, to ensure substantive and administrative support and backstopping to Project implementation. In the four southern countries—Djibouti, northern coast of Somalia, Sudan and Yemen—the Project will fund a National Program Coordinator (NPC). The NPC will coordinate various in-country components, in cooperation with the Task Force member, and will ensure that implementation of these components is progressing smoothly.
- (b) *PERSGA Task Force.* GEF funded activities will be supported by the PERSGA Task Force (TF) which operates under the Chairmanship of the Secretary General of PERSGA and includes representatives from each cooperating country, the three GEF partners (UNDP, UNEP, World Bank) and the Islamic Development Bank. The CTA and the UNDP-PC for the Project will also serve as members of the Task Force. The Task Force will serve as the technical advisory body to PERSGA regarding implementation of the SAP. It will coordinate the Project, provide strategic guidance, review and monitor Project progress, provide technical and political support and facilitate Project implementation in the respective countries. The TF is the forum whereby cooperation among participating countries, international financial institutions and donors is enhanced. The TF will meet at least once a year to discuss Project progress and facilitate implementation of the SAP. The membership of the TF may be expanded in the future to include representatives of additional parties participating in the SAP process.
- (c) *Cooperation and Coordination between the GEF Partners.* This will be the first project jointly prepared and implemented by all three of the GEF Partners—UNDP, UNEP and the World Bank. The three parties have taken specific measures to support a well coordinated and unified approach to implementation of the proposed Project. They include: support for a single Project Management Team under the supervision of PERSGA; use of a single Project Implementation Plan that has been jointly prepared by all cooperating parties; and agreement on the use of unified procedures for reporting implementation progress. In addition, all major activities related to supervision of overall GEF support to the SAP will be undertaken by the three cooperating GEF Partners in a fully coordinated manner. This will include joint undertaking of supervision missions, mid-term review and preparation of the Implementation Completion Report (ICR).
- (d) *Component 2 - Implementation Arrangements.* Implementation of this component will be coordinated by the Navigation Advisor. The Navigation Advisor will supervise the Navigation Working Group that includes specialists in maritime affairs, navigation and marine pollution control from the cooperating countries. The formal establishment of the PERSGA Navigation Working Group with a long-term role and a mandate to contribute to the objective of increasing navigational safety and protection of the marine environment in the Region will be a valuable means of achieving Project objectives. Special attention will be given to coordinating activities under this component with those concerning ICZM, habitat management and MPA development. The Navigation Working Group will build upon the experience gained from regional meetings held in Egypt and Yemen during the SAP preparation process.
- (e) *Component 6 - Implementation Arrangements.* Implementation of this component will be coordinated by the ICZM Specialist based in PERSGA. The Specialist will supervise the establishment and operation of an ICZM Working Group, comprising specialists from the cooperating countries

participating in this aspect of the SAP implementation process. Given the significant relationships between ICZM activities and those supported under other Project components, the ICZM Specialist will work closely with the PMT to exchange information, promote coordination and prevent duplication of effort. Special attention will be given to coordinating activities under this component with those concerning marine navigation, habitat management and MPA development. The component will also be coordinated with current GEF-supported activities in Egypt, Jordan and Yemen.

(f) *Local Level Implementation.* The Bank components of the proposed Project will be implemented at the local level through the following mechanisms:

(i) *Component No. 2 - Navigation Working Group.* Building upon the experience of the SAP preparation process, the activities of the Navigation Working Group will be extended into the implementation phase. This Group will oversee the work of Project-funded activities related to international agreements, supervise the work of consultants and contractors, organize workshops and training programs, and coordinate preparation of an analysis of opportunities for sustainable financing. Workshops and training activities will be undertaken, as in the case of the SAP preparation phase, at key ports in the Region to provide for development of a comparative understanding of the issues shared by counterparts within the Region. All workshops and training activities will be conducted in a structured manner and will be individually evaluated. Counterpart organizations responsible for implementation of the activities of the Navigation Working Group include institutions with direct responsibility for maritime affairs and port management: for example, the Egyptian Lighthouse Authority and Suez Canal Authority in Egypt; the Port of Jeddah and the Royal Commission for Yanbu and Jubail in Saudi Arabia; and the Public Corporation for Maritime Affairs and the Yemen Ports Authority in Yemen.

(ii) *Component No. 6 - ICZM Working Group.* An ICZM Working Group, with a subsidiary GIS Working Group, will be established to support implementation of Component No. 6. The membership of the ICZM Working Group will be made up of individuals who have direct responsibilities for planning and management of key coastal areas in the Region. Many of these individuals will be from local governments of the main port cities and from special authorities established for the development of new ports and special investment zones. Emphasis will be given in the activities of the Working Group to sharing experiences gained within the Region from more advanced programs in the northern countries—such as the Gulf of Aqaba Environmental Action Plan—with those in the southern region where ICZM is less developed. The same principles will be used in the application of GIS to coastal and marine planning and management issues. Examples of counterpart institutions involved in the ICZM Working Group include: Djibouti—Planning Department for the City of Djibouti; Egypt—Egyptian Environmental Affairs Agency; Jordan—Aqaba Regional Authority; and Sudan—Red Sea Governorate. The activities of the GIS Working Group will be undertaken by specialists drawn from a range of organizations such as the GIS Center at the Meteorology and Environmental Protection Administration of Saudi Arabia and the GEF supported ICZM Unit at Hodeida in Yemen. Local counterpart units in Djibouti and the northern coast of Somalia will need to be developed. Sites that will be the focus of the ICZM and complementary GIS activities in the four southern countries are reviewed in Annex 2.

(g) *Procurement Responsibilities.* The PMT will have the overall responsibility for procurement for GEF-funded SAP activities. The PMT will work closely with the National Program Coordinators in preparing bidding documents, carrying out evaluations and drafting contracts. The responsibility for preparing technical specifications, terms of reference and draft bidding documents rests with the Navigation Advisor and Lead Specialists who will undertake these tasks with the support of the Procurement/Finance Specialist. Within the PMT, the Procurement/Finance Specialist will be responsible for providing guidance and assistance, as necessary, and for reviewing procurement documents and ensuring their compliance with the Bank's procedures. To ensure that the PMT will have the required



capacity to carry out procurement work, the GEF Project makes provisions for technical assistance and training on procurement, particularly in the first year of Project implementation. The Bank-implemented components of the GEF grant are expected to be disbursed over a period of five years. The completion date of the Project is expected to be December 31, 2003 and the closing date June 30, 2004.

(h) *Accounting, Auditing and Reporting Requirements.* The PMT will establish an accounting and auditing system which will have the capability of recording and retrieving all financial transactions associated with the GEF-supported activities of the SAP in a timely manner and will comply with generally accepted accounting standards. Project accounts will be audited annually, in accordance with the "Guidelines for Financial Reporting and Auditing of Projects Financed by the World Bank." The PMT will submit to the Bank and the other GEF Partners within six months of the end of each fiscal year during the life of the Project, an audit report of such scope and detail as the Bank may reasonably request. To ensure that the PMT will have the required capability to meet the accounting and auditing requirements, the Project makes provision for specialized technical assistance, particularly during the first year of implementation.

The PMT will be responsible for preparing Project reports and submitting them to the Secretary General of PERSGA and the GEF Partners including:

- *Annual, Semi-Annual and Quarterly Project Progress Reports* to be submitted in the intervals between Annual Reports. They will reflect: (a) status of implementation progress, problems encountered and corrective actions needed; (b) current costs of each Project component and estimated costs for completion; (c) degree of achievement of Project objectives, as measured by status of Project indicators; and (d) summary of sources and use of funds, project balance statement of affairs, cash withdrawal, cash forecast and special account statements. The annual reports will include a revised work program and the updated procurement and disbursement plan for the following year. Special sections on procurement and disbursement will provide information on: progress of procurement activities against plans set forth in the PIP, variations in progress, reasons for variations and actions taken to address these problems; and Project expenditures (foreign and local costs).
- *Annual Audit Reports* of Project expenditures and accounts; and
- *Implementation Completion Report (ICR)* within six months of Project completion.

Consistent with the requirements of the World Bank, including the provisions of the Loan Administration Change Initiative (LACI), an upfront agreement on accounting and auditing procedures acceptable to the Bank will be reached with PERSGA. This will include a time-bound action plan to address financial management issues, consistent with the requirements of LACI, that has been prepared as part of appraisal. In order to address this issue, a Bank approved financial management specialist will visit Jeddah to work with PERSGA and the GEF/UNDP funded Procurement and Finance Specialist to establish a financial management and reporting system that fully complies with Bank requirements.

(i) *Project Monitoring.* The PMT will be responsible for ensuring that all GEF-funded SAP activities are carried out in compliance with Project design and contracts. The role of the GEF Partners will be to monitor the performance of GEF-supported elements of the SAP to ensure conformity with Project objectives and to assist the PMT in addressing implementation issues. Special support will be provided over the first year of the implementation process to ensure that the PMT and other key parties are fully aware of Project implementation arrangements. The technical assistance nature of the Project and the specialized activities supported under the Bank-implemented components mandate intense supervision. It is planned that three supervision missions will be undertaken during the first year of implementation with an average of two supervision missions during each of the following four years.

(j) *Project Evaluation.* A Mid-Term and Final Evaluation will be conducted to evaluate the impact of the Project, degree to which Project objectives have been achieved, and the constraints encountered in Project implementation. The evaluation will rely on both qualitative and quantitative methods and will benefit from the data collected from the UNDP-implemented component of the SAP on “Monitoring and Evaluation of Program Impacts.” Resources have been set aside to support the conduct of both these evaluations by independent reviewers. The Mid-Term Evaluation will provide suggestions on possible improvement of the implementation plan and steps that could be taken to ensure achievement of Project goals in the remainder of the implementation period. It is planned that the Mid-Term Evaluation will be conducted during the early portion of the third year of Project implementation and that the Final Evaluation will be carried out not later than four months prior to closure of the Project.

## **D: Project Rationale**

### *1. Project alternatives considered and reasons for rejection:*

Preparation of the SAP and the supporting GEF Project included evaluation of a wide range of potential actions in a variety of sectors. The SAP Task Force reviewed these alternatives and decided to focus the efforts of SAP implementation on seven priority areas that have been formulated as components. Alternatives that were reviewed include:

(a) *Curative Investment Focused Program.* Consideration was given to support a curative investment focused program for major environmental infrastructure improvements in key coastal locations. This was rejected due to the limited funds available and the fact that the primary locations affected by point source pollution from municipal and industrial sources could be funded by national governments with assistance from international financial institutions and bilateral donors. A curative investment focused program would also focus efforts only on a limited number of major urban-industrial areas of the Region.

(b) *ICZM Focused Program.* The possibility of conducting a program restricted to ICZM, given its critical importance to management of the coastal and marine environment within the Region, was given consideration by the Task Force. This was rejected since the scope was restricted to only dealing with coastal management and did not address issues related to navigation risks, maritime pollution or living marine resources.

(c) *Maritime Pollution Focused Program.* Consideration was also given to only conducting a marine pollution focused program at the regional and local level. This was not adopted by the Task Force since this was viewed as limited to a reactive approach that would not provide support for preventive measures or address the full range of issues required for sustainable management of the Red Sea and Gulf of Aden.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned):

Sector issue	Project	Latest Supervision Ratings (PSR) (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
<i>Regional</i> Regional Strategy (GEF)	Strategic Action Program for Red Sea and Gulf of Aden		
<i>Bank-financed</i> Egypt – Environment (GEF)	Red Sea Coastal and Marine Resources Management	S	S
Egypt – Environment (GEF)	Gulf of Aqaba Environmental Action Plan (awaiting final approval)		
Jordan – Environment (GEF)	Gulf of Aqaba Environmental Action Plan	S	S
<i>Other development agencies</i> Djibouti – UNDP	National Environmental Action Plan		
Egypt – European Union	Ras Mohammed National Park		
Egypt – Denmark/Netherlands	ICZM		
Egypt – Denmark	Oil Spill Contingency Plan		
Jordan – European Union/Japan	Oil Spill Management		
Saudi Arabia – Self Financed	Oil Spill Management		
Saudi Arabia – Self Financed	ICZM		
Northern coast of Somalia - UNDP	Port Rehabilitation		
Sudan – Self Financed	Maritime and Oil Spill Legislation		
Yemen – UNDP (GEF)	Protection of Marine Ecosystems of the Red Sea Coast		
Yemen – UNDP (GEF)	Environmental Management of Socotra, Yemen		
Yemen – UNDP/World Bank (IDF)	National Environmental Action Plan		
Yemen – UNDP	National Biodiversity Strategy		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the Project design:

To support preparation of the SAP, the Bank prepared a review of the “lessons learned” from regional environmental programs and evaluated their specific application to the work of PERSGA. The review included evaluation of the experience from planning and implementation of regional environmental programs for the Baltic Sea, Black Sea and Mediterranean Sea and also benefited from experience with the Aral Sea and Danube River Basin Programs. This was supplemented with a detailed review of lessons learned by the Helsinki Commission and World Bank for the updating of the Baltic Sea Environment Program. In addition, the Bank, in cooperation with UNEP and the Mediterranean Action Plan (MAP), prepared an in-depth review of the experience of ICZM in the Mediterranean region. Preparation also included review of recent documents concerning the management of transboundary waters resulting from German and World Bank cooperation - the “Petersberg Declaration” and the “Berlin Recommendations.” These reviews indicate three key features for preparation and implementation of a successful program. They include: (a) sustained commitment—demonstrated by the regionally funded operation of PERSGA and willingness of countries to prepare and implement the SAP; (b) a shared vision—provided by the

cooperatively-developed SAP which was based on regional and country level studies; and (c) broad-based partnership—provided by the well-established cooperation between PERSGA, the cooperating countries, GEF partners and IsDB.

In addition, a series of projects concerning management of the coastal and marine environment in the Region were reviewed. These projects were undertaken with support of the GEF, international financial institutions, European Union and bilateral donors. The review consistently noted the critical need for local ownership of activities and expanded use of regional specialists. The constraints imposed by limited opportunities for training and availability of materials in Arabic, especially when working with personnel at the provincial and municipal levels, were another concern. In the area of navigation risk reduction and maritime pollution management, with the exception of the Gulf of Aqaba, the limited experience in addressing issues at the regional rather than national and port level was noted. Experience with ICZM, especially from the Gulf of Aqaba Environmental Action Plan, underlined the importance of focusing ICZM activities on land use planning and management, with an emphasis on development of enforceable regulations. Regional experience with ICZM also indicated that implementing agencies and communities should have maximum flexibility to adapt Project-supported activities to local and site-specific needs.

These “lessons learned” have been applied in the development of the proposed Project. Key measures in Components 2 and 6 include regional working groups to supervise activities, the use of Arabic in training and materials to the fullest extent possible, navigation and maritime pollution activities that emphasize a regional vision where appropriate, and adoption of a flexible approach to ICZM with a focus on land use management activities.

#### *4. Indications of borrower commitment and ownership:*

The cooperating Governments have demonstrated their commitment to regional cooperation for conservation of coastal and marine resources through ratification of the Jeddah Convention, establishment of PERSGA and participation in development of the SAP. The development of the SAP was initiated at the “Sea to Sea Conference,” held in Jeddah in October 1995, which reviewed the challenges and opportunities for conservation of the Red Sea and Gulf of Aden. The Project has been designed to support implementation of agreed priority actions identified in the SAP. The Ministerial level PERSGA Council has fully endorsed the outcome of the SAP process and has authorized the PERSGA Secretariat to pursue implementation of the SAP and its related initiatives. The PAD has incorporated the comments and suggestions gathered in the Fourth SAP Task Force Meeting and has received the official endorsement of all participating countries (Annex 2). Government commitment is further demonstrated in their financial contribution as listed in the finance section and the budget.

#### *5. Value added of Bank and global support in this Project:*

The external support provided to PERSGA is critical to the success of SAP implementation since the Bank is able to provide a wide range of practical experience from a series of regional coastal and marine environmental management programs (Baltic Sea, Black Sea, Mediterranean Sea). The global support provided by GEF facilitates the mobilization of regional efforts and resources to overcome barriers to addressing the management of transboundary environmental issues. Without the combined resources of the Bank and GEF, implementation of the SAP would proceed at a slower pace and would not fully benefit from the experience gained from other regional environmental programs worldwide.

## **E: Summary Project Analysis** (*Detailed assessments are in the Project file, see Annex 8*)

### *1. Economic (supported by Annex 4 - Incremental Cost Analysis):*

Consistent with GEF Operational Policy, the Project would finance only the incremental costs associated with addressing transboundary issues in the Region. The GEF Alternative Scenario has evaluated a series of critical measures for transboundary management that require support from the GEF and other international sources in order to remove barriers to implementation of the SAP. Support from the GEF was identified as necessary for the transaction costs for joint planning activities, development of common approaches to sectoral policies, data collection and analysis, and coordination efforts at a variety of levels. The GEF alternative would allow realization of the SAP work program on an accelerated basis, with support from a variety of sources. The cost of realizing the benefits of the overall SAP have been estimated at \$US19.0 million and are additional to what each government could be reasonably expected to finance if only national benefits were included in the economic analysis.

### *2. Financial (see Annex 5):*

The total cost for the two Bank-implemented components is estimated to be US\$6.23 million of which GEF will finance US\$5.61 million (90%). The GEF grant will finance all foreign and local investment costs and part of the recurrent costs. PERSGA will provide from its operational budget and cooperating governments will provide in kind contributions estimated to be US\$0.62 million. The PERSGA contribution will finance part of the recurrent costs including office space, salaries of PERSGA staff members, and some overhead costs. PERSGA is currently in the final stages of negotiations with the European Commission which are anticipated to result in an allocation of up to US\$1.0 million to support activities under both Components 2 and 6. The budgets for these components will be revised following completion of negotiations and formal signing of the cooperative agreement between these two parties.

### *3. Technical:*

The technical issues associated with the Bank-managed components have been reviewed as part of the SAP preparation process:

(a) *Component 2.* The Navigation Task Force reviewed technical issues during the SAP preparation meetings in Aden and Ismailia. It is recognized by PERSGA that technical approaches and standards for international issues in navigation are supervised by bodies such as the IMO, IALA and other international organizations. Personnel involved in maritime issues in the Region are generally well trained and have significant practical experience in the operation of vessels and on-shore facilities. During the SAP preparation phase they demonstrated a clear ability to identify problems, establish priorities and recommend cost-effective actions. Proposed technology for use under this component is defined by international agreements and is within the capacities of the cooperating countries to use and maintain.

(b) *Component 6.* Professional skills and experience in ICZM are unevenly developed in the region, with the northern countries being more advanced than the southern countries. In order to reduce this difference in skills and experience, the component will support institutional strengthening and training in the use and application of ICZM which is within the capabilities of counterparts to successfully master. The activities included in this component will use "basic" GIS technology that is well tested in the region and is now possible to use under a wide variety of conditions with limited support. The use of GIS in the four southern countries will be supported by the PERSGA Secretariat. The use of GIS equipment will be difficult in the northern coast of Somalia and it is planned that data will be collected in the field and then plotted at the PERSGA Secretariat.

#### 4. Institutional:

Institutional arrangements for the implementation of the SAP have been developed as part of the preparation process and are detailed in the Project Implementation Plan (PIP). They include:

- (a) *Executing Agency.* The Project will be implemented by PERSGA, which gained experience in project planning and management during the preparation process for the SAP. This included regular interaction with representatives of the GEF Partners and their procurement procedures. PERSGA, with the support of UNDP, has already internationally recruited a highly qualified CTA who worked on preparation of the SAP, and an individual with experience in international project management to serve as the Procurement and Finance Specialist. The Navigation Advisor and the Lead Specialists responsible for implementation of the GEF-supported components must have professional training, practical experience and language skills. The appointment of these individuals will be done by PERSGA in formal consultation with the GEF Partners.
- (b) *Project Management.* The PMT has been established by PERSGA and already has taken an active role in the preparation of the PIP. Some personnel assigned to the PMT gained earlier experience through their work on the SAP. To ensure that the PMT will have the required capacity to carry out Project implementation, technical assistance in project planning, procurement, disbursement, accounting, auditing and project monitoring has been included in Project design. Special training efforts will be undertaken during the first year of implementation to allow all members of the PMT to gain an understanding of project management skills and requirements. In addition, a Riyadh-based UNDP-Program Coordinator has been regionally recruited who has previous experience with UNDP and GEF projects and will be able to provide support to the PMT on a range of issues.

#### 5. Social:

Given the use of an active participatory process during preparation of the SAP, a social assessment was not prepared as part of the Project preparation process. GEF support for the SAP includes a component to be implemented by UNDP for “Enhancement of Public Awareness and Participation,” which will be implemented with support from local nongovernmental organizations and facilitate work with stakeholders and civil society. The two Bank-managed components of the SAP have been designed to provide social benefits to regional populations:

- (a) *Component 2.* This component will assist national governments and local populations in supporting preventive measures to avoid potential adverse impacts associated with navigation accidents and marine pollution. Actions under this component will focus on the reduction of oil spills in coastal and marine areas and lower the incidence and severity of accidents associated with the shipment of oil and other hazardous types of materials through regional waters.
- (b) *Component 6.* Under this component, support will be provided on a regional basis, and on a national basis in the four southern countries, to improve participation of communities in management of coastal and marine resources and to improve social welfare by promoting sustainable use of these critical and fragile resources. Special attention will be given to the needs of individuals involved in locally based commercial and artisanal fishing operations.

#### 6. Environmental assessment:    Environmental Category            ☐ A    ☐ B    ☒ C

The proposed Project has been placed in environmental assessment screening category “C” consistent with the provisions of Operational Directive 4.01, “Environmental Assessment.” Activities for reduction of marine navigation risks, oil spill management and ICZM are focused on planning, management and training activities that will not have an adverse environmental impact. Project-supported studies for installation of a regional Vessel Traffic System (VTS) and model ICZM plans will include preparation of

environmental reviews to support integration of these concerns into their design. Implementation of the model ICZM plans would not involve construction activities. An environmental data sheet is provided as Annex 13.

#### *7. Participatory approach:*

(a) *Primary Beneficiaries and Other Affected Groups.* The development of the SAP has been a participatory process demonstrating the broad-based commitment of a wide range of stakeholders. Country Reports were prepared for all cooperating countries with direct participation of diverse local experts, with a similar process used for the regional studies for navigation risk and living marine resources. With the support of UNDP, consultations were also held with the Government of Eritrea. To widen participation and facilitate consensus building, a series of four regional Task Force meetings were held to support joint preparation and review of the SAP. National workshops were held to support development of Country Reports and to identify priority actions required by each country to promote environmental management of the coastal and marine environment. A wide range of stakeholders participated, including representatives from national and local government, universities, research institutes, community groups, and NGOs. The activities of the Regional Navigation Working Group benefited from major workshops held in Egypt and Yemen, which brought together maritime experts from throughout the region. A regional workshop was also held to support preparation of the regional study on Living Marine Resources.

(b) *Benefits of the Participatory Process.* These processes, in some cases the first held in the cooperating country, allowed participants to identify key issues that should be addressed in the SAP at the regional, national and local level. In the case of Jordan, participants were able to identify a number of important issues related to the effective implementation of an Oil Spill Contingency Plan and ICZM Plan, which were already under implementation. They were also able to identify emerging issues such as floating solid waste associated with a major increase in regional ferry traffic. In the lengthy meeting in Yemen, special attention was given to the need to address navigation management and ICZM in a more uniform manner on both the Red Sea and Gulf of Aden coasts of the country. In this meeting the particular importance and management requirements of the Socotra Archipelago were also noted. The regional meetings of the Navigation Working Group provided a critical opportunity to bring together a full range of parties responsible for maritime and port affairs to self identify key issues and to reach agreement on a priority framework for action. The participation of individuals who had direct experience in the navigation of large and small vessels through regional waters, and their role in the identification of specific sites that should be considered for hydrographic survey and installation of navigational aids, provided a major contribution to the design process.

(c) *Other Key Stakeholders.* Field surveys conducted in Djibouti, the northern coast of Somalia, Sudan and Yemen included a range of informal meetings with local authorities and residents of coastal communities. The model ICZM plans to be supported in the four southern countries will expand upon this experience and increase the participation of local communities and stakeholders in planning and management of coastal and marine resources. The proposed Project will include the UNDP-implemented Component No. 7 - Enhancement of Public Awareness and Participation. This will support a wide range of activities to provide a broad base of public support for the long-term implementation of the SAP. The component will be implemented with the support of regional NGOs with experience in participatory outreach programs, such as the Jordan Environment Society. The activities under this component will be "cross-cutting" in their support of the SAP and specific activities will be designed to support the work programs under Components 2 and 6.

## F: Sustainability and Risks

### 1. Sustainability:

(a) *Government and Stakeholder Commitment.* The cooperating Governments have demonstrated their commitment to regional cooperation for conservation of coastal and marine resources through the ratification of the Jeddah Convention, establishment of PERSGA and participation in development of the SAP. The development of the SAP has been a participatory process demonstrating the broad-based commitment of a wide range of stakeholders in conservation of the Red Sea and Gulf of Aden.

(b) *Support for PERSGA.* Member countries have provided annual contributions in cash to support the work of PERSGA, including implementation of the SAP. The budget of PERSGA for fiscal year 1998 included contributions of US\$930,000 from member countries. This was complemented with supplemental support from various international and regional sources. The Kingdom of Saudi Arabia also provides PERSGA with offices and covers selected operational costs. The anticipated support of SAP implementation by the Jeddah-based Islamic Development Bank, an international financial institution, provides a regionally-based source of support for the Project. The planned participation of the European Commission in SAP implementation brings the experience and resources of the European Union to support the proposed priority actions. As noted in the SAP, there also exists significant potential for participation of internationally and regionally based private sector organizations through contributions in cash and kind.

(c) *Financial Sustainability.* The proposed Project includes a series of specific activities to develop appropriate mechanisms for sustainable financing of various SAP-related actions. These have been subdivided given the different parties that have authority and responsibility at the regional, national and local level for undertaking these actions and resource mobilization. They include:

Component	Action To Be Taken
Component 1 - Institutional Strengthening to Facilitate Regional Cooperation	PERSGA will retain regional and international specialists to develop a feasibility study for establishment of a "Red Sea Environment Fund." This will review the experience of other environmental funds and evaluate opportunities for public and private sector participation.
Component 2 - Reduction of Navigation Risks and Maritime Pollution	The Navigation Working Group, in cooperation with regional specialists and international maritime authorities, will undertake a detailed evaluation of measures that can be adopted at the regional and national basis for funding investments and improvements in marine navigation improvements. The Regional Oil Spill Contingency Strategy and MEMAC Study will also evaluate financing mechanisms for oil spill prevention and clean-up.
Component 3 - Sustainable Use of Living Marine Resources	The Living Marine Resources Working Group, with the support of regional specialists and the FAO, will undertake an evaluation of measures that could be adopted to provide sustainable funding for a "Regional Fisheries Monitoring and Surveillance System." This will draw upon the experience of other regions in the cooperative funding of such programs and seek to involve the participation of private sector fishery interests.
Component 4 - Development of a Regional Network of Marine Protected Areas	The MPA Working Group, with the support of regional and international specialists, will undertake a review of appropriate mechanisms for sustainable funding of MPAs. This issue will also be evaluated in the plans prepared for individual GEF-supported MPAs. The review will draw upon the recent work of the World Bank in evaluation of funding mechanisms for MPAs.
Component 6 - Support for Integrated Coastal Zone Management	The ICZM Working Group will review mechanisms which could be used on a regional and site specific basis to support planning, management and implementation actions in national and local budgets. Measures to address this issue will be included in the national level "ICZM Frameworks" and "Model ICZM Plans" prepared in the four southern countries.



While it may be difficult to undertake cost recovery activities, GEF-supported activities include a number of actions to examine and test possible measures that could be used to support sustainable financing of a number of activities.

*2. Critical Risks (reflecting assumptions in the fourth column of Annex 1):*

The risks associated with the proposed Project are summarized in the table below. Four areas require special consideration:

- (a) *Implementation of International Maritime Agreements.* Effective implementation of international maritime agreements requires policy, legal and technical actions that will allow implementation at the national and local level. In order to minimize risks associated with this process, the Navigation Working Group will conduct a series of workshops designed to review in detail the provisions and procedures of key agreements, especially those related to Port State Control, to foster a good understanding of the issues and implications. These will be complemented with technical support and structured training activities. Guidance and support will be provided to assist in identification of measures required to harmonize the provisions of these agreements with national and local procedures and requirements. Special emphasis will be placed on addressing these issues in the context of port management and operations. Emphasis also will be put on providing full texts and background information on these agreements in Arabic and in French for Djibouti.
- (b) *Transfer of MEMAC.* A risk exists that the cooperating parties responsible for supervision of MEMAC may not approve a Revised Agreement that would allow this facility to become a part of a PERSGA-supervised network of response centers. If this is the case, measures will be taken to find an alternative arrangement that allows the work of MEMAC to be more fully coordinated with the activities of PERSGA and arrangements made to strengthen its work in the Bab al Mandab and Gulf of Aden. This risk is reduced by the direct participation of the cooperating countries in the SAP process, including the Navigation Working Group, which proposed this action. The proposed action also provides MEMAC with increased opportunities for access to equipment and training through expanded regional cooperation.
- (c) *Development of ICZM.* The development of ICZM under the proposed Project will support the adoption of an ICZM approach that integrates environmental management concerns into the land use planning and management system in coastal areas. Given the wide range of legal and institutional structures in the Region, the activities will use ICZM principles that can be adapted for use under national and local conditions in a flexible manner. To achieve this objective, the ICZM Working Group will provide regional and international specialists to work on the development of both the "ICZM Frameworks" and "Model ICZM Plans," which will be designed to meet national and site specific conditions. This will include regionally based administrative and legal specialists to support development of measures required to integrate ICZM into land use planning and management procedures and to review processes and facilitate the expanded use of environmental planning instruments, including environmental assessment, into the decision making process.
- (d) *Sharing of GIS Data.* Traditionally countries in the Region have been reluctant to share many types of data, including those required for GIS applications. To address this issue, GIS activities will be coordinated by a Working Group composed of regional specialists who will jointly design the activities at the regional, national and local level. This will provide local ownership and minimize misunderstandings concerning the types of data required, potential applications and their control. Most data required will be collected and processed by regional experts working at the national level, with selected types of information shared with PERSGA for use in regional level analyses. By clearly recognizing this issue in the design of GIS activities, it will be possible to minimize the risk of designing activities that cannot be undertaken successfully due to data problems. It should be noted that the majority of the hydrographic information for "international waters" in the Region is maintained by the United Kingdom Hydrographic Office and is available without restriction by national governments.

<u>Risk</u>	<u>Risk Rating</u>	<u>Risk Minimization Measure</u>
<b>Annex 1, cell "from Outputs to Objective"</b>		
Poor coordination between IMO, PERSGA, and PERSGA member states.	N	High level contacts maintained between PERSGA and IMO concerning navigation risks and maritime pollution.
National Maritime and Port Authorities do not participate at sustainable level.	N	Ensure high level communication between PERSGA and National Maritime and Port Authorities.
PERSGA will be unable to ensure the required hydrographic surveys are carried out to reduce navigation risks.	N	The Navigation Working Group has identified a number of priority sites for surveys and will oversee this activity.
MEMAC member countries are unwilling to transfer oversight to PERSGA.	M	A review of MEMAC will be jointly undertaken by PERSGA and its member countries concerning its future role.
Appropriate political authority and technical expertise is unavailable for participation in Regional and National ICZM Working Groups.	M	PERSGA will work with national environmental authorities and local governments in coastal areas to ensure participation and provide training as appropriate.
National commitment to implement ICZM models and sustain GIS systems is not obtained.	N	Regional and National ICZM and GIS Working Groups will ensure political commitment is maintained through the PERSGA Task Force.
Countries are unwilling to harmonize their GIS Systems for use in ICZM.	M	GIS Working Group is being established to facilitate cooperation among countries.
Countries are unwilling to share data for use in GIS systems.	M	GIS Working Group is being established to facilitate cooperation among countries. It will access available data and develop a plan to collect data needed to fill gaps.
<b>Annex 1, cell "from Components to Outputs"</b>		
Additional regional and donor financing is not forthcoming to support the implementation of the SAP.	M	PERSGA will develop a resource mobilization plan to keep interested donors involved and informed of opportunities. The SAP will support development of sustainable funding mechanisms.
<b>Overall Risk Rating</b>	<b>M</b>	
Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)		

### 3. Possible Controversial Aspects:

None.

## **G: Main Loan Conditions**

### *1. Effectiveness Conditions:*

- (a) The CTA and Navigation Advisor have been appointed by PERSGA with qualifications and experience satisfactory to the Bank.
- (b) A detailed work program and procurement plan for the first year of Project implementation is submitted to and accepted by the Bank.

### *2. Other:*

The PMT shall:

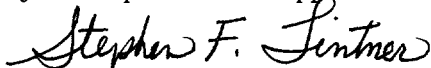
- (a) Maintain accounting practices acceptable to the Bank and arrange for an annual audit to be undertaken by independent auditors acceptable to the Bank;
- (b) Submit quarterly reports to the Bank and other GEF Partners in a format acceptable to these parties; and
- (c) Undertake in coordination with the GEF Partners a Mid-Term and Final Evaluation.

## **H. Readiness for Implementation**

The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality. The procurement documents for the first year's activities will be completed and ready prior to the start of Project implementation.

## **I. Compliance with Bank Policies**

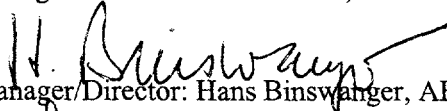
This Project complies with all applicable Bank policies.



Task Team Leader/Task Manager: Stephen F. Lintner, ENV



Sector Manager/Director: Doris Koehn, MNSRE



Sector Manager/Director: Hans Binswanger, AFTA



Director: Inder K. Sud, MNCMS



Director: Oey Astra Meesook, AFC06



**Annex 1**  
**REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP)**  
**FOR THE RED SEA AND GULF OF ADEN**

**Project Design Summary**  
**for World Bank Implemented Components:**  
**Component 2: Reduction of Navigation Risks and Maritime Pollution**  
**Component 6: Support for Integrated Coastal Zone Management**

<b>Narrative Summary</b>	<b>Key Performance Indicators</b>	<b>Monitoring and Evaluation</b>	<b>Critical Assumptions</b>
<p><i>Sector-related SAP Goal:</i></p> <p>Improved Natural Resource Management for the Red Sea and Gulf of Aden.</p> <p><i>GEF Operational Program:</i></p> <p>OP-9 – Integrated Land and Water Multiple Focal Area Operational Program.</p>	<p>On-going regional cooperation and coordination for the environmental protection and conservation of the Red Sea and Gulf of Aden..</p> <p>Reduced number of major marine accidents, particularly oil spills, and faster accident response times.</p> <p>Improved national institutional capacity and adoption/implementation of ICZM approaches in PERSGA member states</p>	<p>Improved data collection and sharing among international, regional and national maritime and environmental organizations..</p> <p>Statistics on accident rates, oil spills, and response times routinely published by IMO.</p> <p>After project completion, PERSGA to continue publishing Annual Report which monitors SAP Implementation</p>	<p><i>(Goal to Bank Mission)</i></p> <p>Political commitment and support to PERSGA by all member states.</p> <p>Continued effective cooperation among maritime affairs agencies.</p> <p>Willingness to adopt ICZM to local conditions.</p> <p>Continued support is made available in the future from the operational budget of PERSGA, contributions of member states and other sources such as the Islamic Development Bank, European Union and bilateral donors.</p>
<p><i>Project Development Objective:</i></p> <p>Improve the coastal and marine environments of the Red Sea and Gulf of Aden through a range of activities under the SAP, of which two would be carried out under the GEF/Bank administered project: a program to reduce navigation risks; and support for Integrated Coastal Zone Management.</p>	<p>2. Ratification of key international maritime conventions.</p> <p>2. PSC adopted by PERSGA member states..</p> <p>2. Agreement reached on PERSGA Protocols.</p> <p>2. Publication of updated navigation charts.</p> <p>2. Revised agreement for MEMAC.</p> <p>6. Adoption of ICZM Plans by PERSGA member states.</p> <p>6. Harmonization of regional ICZM databases and GIS systems</p> <p>2. &amp; 6. Countries sustain and participate in Working Groups established under SAP</p>	<p>2. Convention compliance confirmed by IMO.</p> <p>2. Compliance with PSC confirmed by IMO.</p> <p>2. Protocols confirmed by Bank</p> <p>2. Revised charts approved by UKHO and IMO.</p> <p>2. MEMAC integrated into PERSGA framework.</p> <p>6. PERSGA monitors and publishes results in Annual Report.</p> <p>6. PERSGA monitors harmonization and supports instillation/ training on standardized software.</p> <p>2. &amp; 6. Working groups in existence five years after project completion.</p>	<p><i>(Objective to Goal)</i></p> <p>Proper coordination between UNDP, UNEP and WB implemented activities.</p> <p>Sustained political commitment for SAP implementation from all PERSGA member states.</p> <p>PERSGA member states commit, on both regional and national levels, to sustain and finance GIS Operations.</p> <p>Sustainable financing and institutional schemes developed by PERSGA for: Regional and National Oil Spill Contingency Programs; and Regional and National Navigation, ICZM and GIS Working Groups.</p>

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p><i>Outputs:</i></p> <p>2. Reduction of navigation risks and maritime pollution</p>	2.a.1 Implement PSC in PERSGA member states.	2.a.1 Review and approval of PSC agreement by IMO and adoption of procedures by PERSGA member states.	<p><i>(Outputs to Objective)</i></p> <p>Effective coordination among IMO, PERSGA, and PERSGA member states.</p> <p>Participation of National Maritime and Port Authorities in activities of component and Working Group.</p> <p>Hydrographic surveys are possible to conduct in priority areas.</p> <p>MEMAC members are willing to transfer oversight to PERSGA.</p>
	2.a.2 Conduct a PSC seminar and annual PSC training courses.	2.a.2 Annual review and reporting of training evaluations and evidence of national implementation of training recommendations by PERSGA to the Bank.	
	2.b.1 Implement proposed Traffic Separation Schemes (TSS).	2.b.1 TSS adopted and promulgated by IMO.	
	2.c.1 Conduct hydrographic survey.	2.c.1 Hydrographic survey results delivered and accepted by UKHO, IMO and PERSGA.	
	2.c.2 Conduct lighthouse survey.	2.c.2 Lighthouse survey results delivered by IALA and accepted by PERSGA.	
	2.c.3 Install lighthouse.	2.c.3 Lighthouse in place and operating.	
	2.d.1 Conduct Vessel Traffic System (VTS) feasibility study.	2.d.1 VTS study results delivered and accepted by PERSGA Task Force.	
	2.d.2 Conduct VTS Feasibility Study.	2.d.2 Feasibility Study completed; PERSGA seeking funding for VTS based on results.	
	2.d.3 Conduct VTS training.	2.d.3 Annual review and reporting of training evaluations and evidence of national implementation of training recommendations by PERSGA to the Bank.	
	2.e.1 Draft Regional Oil Spill Contingency Plan Study of MEMAC.	2.e.1 Contingency Plan and MEMAC study results delivered and accepted by PERSGA Task Force.	
6. Support for integrated coastal zone management (ICZM)	6.a.1 Establish Regional ICZM Working Group.	6.a.1 PERSGA publishes minutes of ICZM Working Group Meetings.	<p>Appropriate expertise and political authority represented on Regional and National ICZM Working Groups.</p> <p>National commitment to implement ICZM Models and GIS systems.</p> <p>Countries willing to harmonize their GIS systems for use in ICZM.</p> <p>Countries willing to provide and share data for use in GIS systems.</p>
	6.a.2 Conduct annual regional ICZM training.	6.a.2 PERSGA annual review/reporting of training evaluations and evidence of national implementation of training recommendations.	
	6.b.1 Establish GIS Working Group.	6.b.1 PERSGA publishes minutes of GIS Working Group Meetings.	
	6.b.2 Conduct Regional GIS Review.	6.b.2 GIS Review delivered and accepted by PERSGA Task Force.	
	6.b.3 Develop model GIS applications.	6.b.3 Model applications delivered and accepted by GIS Working Group and PERSGA Task Force.	

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
	6.c.1 Develop model ICZM plans.	6.c.1 Model ICZM plans delivered and accepted by ICZM Working Group and PERSGA Task Force.	
	6.d.1 Establish National Working Groups in Djibouti, northern coast of Somalia, Sudan and Yemen.	6.d.1 National Working Group minutes published by National ICZM Coordinator.	
	6.d.2 Conduct annual training on ICZM and GIS in Djibouti, northern coast of Somalia, Sudan and Yemen.	6.d.2 Annual review and reporting of training evaluations (feedback from participants) and evidence of national implementation of training recommendations by PERSGA to the Bank.	
	6.d.3 Implement ICZM Model Activity in Djibouti, northern coast of Somalia, Sudan and Yemen.	6.d.3 Model ICZM plans delivered and accepted by national ICZM Working Group, regional ICZM Working Group and PERSGA Task Force.	
<i>Project Components/Sub-components (see Annex 2 for Project description)</i>  <b>2. Aids to Navigation.</b>  Project Management	<i>Inputs (budget for each component)</i>  <b>2. US\$3.50 million</b>  US\$335.0 thousand	2. & 6. Regular progress, procurement and disbursement reports to UNDP, UNEP and World Bank.  2. & 6. Mid-term and Final Evaluations for GEF, UNDP, UNEP and World Bank.  2. & 6. Implementation Completion Report for World Bank.	<i>(Components to Outputs)</i>  2. & 6. Additional regional and donor financing is available to support implementation of the SAP.
2.a Implementation of International Conventions and Port State Control.	2.a US\$953.0 thousand		
2.b Introduction of new Traffic Separation Schemes.	2.b US\$112.0 thousand		
2.c Conducting Hydrographic Surveys and installing new Navigation Aids.	2.c US\$1.915 million		
2.d Support for Vessel Traffic Systems.	2.d US\$143.0 thousand		
2.e Oil Spill Prevention and Management.	2.e US\$42.0 thousand		
<b>6. ICZM.</b>  Project Management	<b>6. US\$2.11million</b>  US\$309.0 thousand		
6.a Enhanced Regional Networking and Training for ICZM	6.a US\$470.0 thousand		
6.b Improved Regional Understanding and Use of GIS.	6.b US\$435.0 thousand		
6.c Developing Model ICZM Plans	6.c US\$187.0 thousand		
6.d Completion of ICZM Planning and Training Activities in Four Southern Countries.	6.d US\$709.0 thousand		

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p><i>Outcomes:</i>  <i>Component 2. Reduction of Navigation Risks and Marine Pollution</i></p>			
<p><b>Element A – Implementation of Conventions and Port State Control</b></p>	<ul style="list-style-type: none"> <li>• Ratification of selected International Maritime Conventions and PERSGA Protocols.</li> <li>• Adoption of Port State Control by PERSGA members.</li> <li>• Training of inspectors to international standards in Port State Control.</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded application of international maritime conventions in the Region that results in reduced number of accident and oil spills as monitored in international shipping databases.</li> <li>• Reduction in occurrence of navigation, safety and environmental risks as measured by trends in type and frequency of PSC actions concerning inspected vessels at participating regional ports.</li> </ul>	<p><i>(Components to Outcomes)</i></p> <p>Effective coordination among IMO, PERSGA, and PERSGA member states.</p> <p>Participation of National Maritime and Port Authorities in activities of component and Working Group.</p> <p>Hydrographic surveys are possible to conduct in priority areas.</p> <p>An acceptable site is identified and agreed to for the VTS.</p> <p>MEMAC members are willing to transfer oversight to PERSGA.</p>
<p><b>Element B – Traffic Separation Schemes</b></p>	<ul style="list-style-type: none"> <li>• Establishment by International Maritime Organization (IMO) of two new Traffic Separation Schemes.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of greater than 50 percent of maritime accidents resulting from vessel collisions and “near misses” over a 10-year period, following official established of the new traffic separation schemes, when compared to historic trends.</li> </ul>	
<p><b>Element C – Hydrographic Surveys and Navigation Aids</b></p>	<ul style="list-style-type: none"> <li>• Survey of two priority areas and printing of updated charts.</li> <li>• Installation of one navigational aid</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of greater than 35 percent of maritime accidents resulting from vessel groundings over a 10-year period, following official adoption, printing and dissemination of revised navigation charts, when compared to historic trends.</li> </ul>	
<p><b>Element D – Vessel Traffic Systems</b></p>	<ul style="list-style-type: none"> <li>• Establishment of a Vessel Traffic System for the southern Red Sea.</li> <li>• Training of personnel to operate Vessel Traffic Systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of greater than 50 percent of maritime accidents resulting from vessel collisions and “near misses” over a 10-year period, following official establishment of the Vessel Traffic System in the southern Red Sea, when compared to historic trends.</li> <li>• Measurable increase in the number of professionals capable of addressing vessel traffic and navigation hazards based upon standards.</li> </ul>	
<p><b>Element E – Oil Spill Prevention and Management</b></p>	<ul style="list-style-type: none"> <li>• Preparation and adoption of Regional Oil Spill Contingency Plan.</li> <li>• Djibouti MEMAC Transferred to Supervision of PERSGA.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased capacity of member countries to respond to oil spill emergencies as measured by the availability of area specific contingency plans, trained personnel and available equipment.</li> </ul>	



Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p><i>Outcomes:</i>  <i>Component 6. Support for Integrated Coastal Zone Management (ICZM)</i></p>			
<b>Element A – Regional Networking and Training</b>	<ul style="list-style-type: none"> <li>• Workshops to develop a common regional framework for ICZM plans.</li> </ul>	<ul style="list-style-type: none"> <li>• A common approach to ICZM that includes application of good practices and builds upon lessons learned from global and regional experience as measured by the establishment of “ICZM Frameworks” which will vary between the countries in structure and form.</li> </ul>	<p>Appropriate expertise and political authority represented on Regional and National ICZM Working Groups.</p> <p>National commitment to implement ICZM Models and GIS systems.</p>
<b>Element B – Geographic Information Systems</b>	<ul style="list-style-type: none"> <li>• Harmonization of regional and national GIS systems used for ICZM.</li> <li>• Development of standardized GIS data base on coastal environments.</li> </ul>	<ul style="list-style-type: none"> <li>• Harmonized GIS systems for ICZM used by PERSGA and cooperating countries result in comparable maps and data sets being available within the Region and used for planning and management at the regional, national and local level.</li> <li>• PERSGA and cooperating countries are able to develop and share data allowing for development of a spatial information base that is used for planning and assessment of environmental trends.</li> </ul>	<p>Countries willing to harmonize their GIS systems for use in ICZM.</p> <p>Countries willing to provide and share data for use in GIS systems.</p>
<b>Element C – Model ICZM Plans</b>	<ul style="list-style-type: none"> <li>• Preparation of “model ICZM” plans in Djibouti, northern coast of Somalia, Sudan and Yemen.</li> </ul>	<ul style="list-style-type: none"> <li>• Model ICZM Plans provide a basis for demonstrating application of ICZM approaches at the national and local level which are adopted as part of the physical planning and management frameworks at the operational level.</li> </ul>	
<b>Element D – ICZM Activities in the Four Southern Countries</b>	<ul style="list-style-type: none"> <li>• Development of ICZM in Djibouti, northern coast of Somalia, Sudan and Yemen.</li> </ul>	<ul style="list-style-type: none"> <li>• ICZM capacities in the four southern countries are able to influence, at the local level, development activities in a way that prevents unnecessary adverse impacts from major development activities and reduces incremental impacts from small-scale actions.</li> </ul>	



## Annex 2

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

## Detailed Project Description

### A. Overview

1. **An Environmentally Important Region.** Located at the junction of three major biogeographical realms and characterized by an arid coastal zone with minimal freshwater input, the Red Sea and Gulf of Aden contain some of the world's most important coastal and marine environments and resources. The topography ranges from nearshore, protected shallows, to exposed sandy and rocky shorelines, and depths of over 2,000 meters, giving rise to complex ecosystems and high biological diversity. Although the Red Sea is still one of the least disturbed seas relative to other enclosed international water bodies, pressures on it are rapidly increasing. Transboundary concerns are wide ranging, from major navigation risks caused by international shipping, to unregulated exploitation of shared fish stocks, to widespread habitat destruction by uncontrolled coastal zone development leading to loss of important species. There is a growing risk of marine pollution, notably from maritime transport of petroleum, and environmental degradation from rapidly expanding coastal zone development including tourism facilities. In the Gulf of Aden, fisheries are under great pressure from over-exploitation and illegal fishing.

2. **Strategic Action Program.** In order to conserve these internationally significant resources, the Regional Organization for the Conservation of the Marine Environment of the Red Sea and Gulf of Aden (PERSGA), which serves as the Secretariat for the Jeddah Convention,<sup>1</sup> initiated and coordinated the preparation of the Strategic Action Program for the Red Sea and Gulf of Aden (SAP). Members of the PERSGA SAP Task Force included representatives of Djibouti, Egypt, Jordan, Saudi Arabia,<sup>2</sup> northern coast of Somalia, Sudan and Yemen. The SAP process was jointly supported by the three GEF partners—UNDP, UNEP and World Bank—and the Islamic Development Bank, which is based in Jeddah. The SAP preparation process included a number of Task Force meetings and preparation of regional and country studies. It benefited from consultative meetings with a range of stakeholders at the regional and national level. The preparation process was funded by the GEF PDF mechanism, with supplemental support from PERSGA, the Government of Norway, UNDP and the World Bank. The SAP was adopted by the PERSGA Council of Ministers in 1997 and issued by PERSGA in 1998.

3. **Project Objective and Goal.** The Project development objective is to improve the coastal and marine environments of the Red Sea and Gulf of Aden through a range of activities under the SAP, of which two would be carried out under the GEF/Bank administered project: a program to reduce navigation risks; and support for Integrated Coastal Zone Management. Achievement of the objectives would be measured by (a) reduction in shipping accidents and oil spills; and (b) adoption by selected local communities of integrated coastal zone management plans, to be prepared under the Project. The Project supports the cooperating countries in implementing the Jeddah Convention, other international agreements and national policies and legislation. The Project will also enable implementation of a series of complementary preventive and curative actions identified in the SAP. The GEF funding provided for the proposed Project is designed to

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1 Final Act of Jeddah Plenipotentiary Regional Conference on Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden.

2 Costs for participation of Saudi Arabia in the SAP activities will not be funded from GEF resources.

achieve global environmental benefits by removing barriers against implementation of the SAP, which addresses transboundary issues, and to support high priority preventive actions to reduce navigation risks in the Region. The SAP activities are designed to complement those being supported under a series of already approved and proposed GEF-supported projects within the Region. The SAP also supports implementation at the regional level of the International Coral Reef Initiative (ICRI) and the Global Representative System of Marine Protected Areas developed by the Government of Australia, IUCN and the World Bank.

4. Components of the SAP. In late 1997, the GEF Council approved a Project Proposal for "Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden" with an allocation of US\$19.0 million. The Executing Agency for the GEF-supported implementation of the SAP will be PERSGA. The Project includes seven complementary components with the following budgetary allocations:

Component 1 - Institutional Strengthening to Facilitate Regional Co-Operation (\$2,315,000).

Component 2 - Reduction of Navigation Risks and Maritime Pollution (\$3,500,000).

Component 3 - Habitat and Biodiversity Conservation (\$1,069,000)

Component 4 - Sustainable Use and Management of Living Marine Resources (\$2,297,000).

Component 5 - Development of a Network of Marine Protected Areas-MPAs (\$3,270,000).

Component 6 - Support for Integrated Coastal Zone Management-ICZM (\$2,110,000).

Component 7 - Enhancement of Public Awareness and Participation (\$2,546,000).

Component 8 - Monitoring and Evaluation of Program Impacts (\$496,000).

Project Management Team Support Costs (\$1,397,000).

Total - \$19,000,000.

#### B. Project Management

5. Implementing Agency Responsibilities. At the request of the GEF Secretariat the implementation of the SAP, as was the case with the preparation, is being undertaken cooperatively between PERSGA and the GEF partners. Under the arrangement approved by the GEF Secretariat, Implementing Agency responsibility has been assigned as follows:

UNDP - Components 3, 4, 5, 7 and 8.

UNEP - Component 1.

World Bank - Components 2 and 6. The World Bank has been assigned lead responsibility for Components 2 and 6 due to its comparative advantage in undertaking these activities.

A Project Implementation Plan (PIP) for the GEF-supported elements of the SAP has been jointly prepared by PERSGA, UNDP, UNEP and the World Bank. A summary of the budgets and implementation schedule for the World Bank implemented components is provided in Tables A, B and C.

6. PERSGA Project Management. The Project will be managed by a Project Management Team (PMT) at the headquarters of PERSGA in Jeddah. The PMT will be managed by the Program Coordinator who will be a PERSGA staff member, with the support of an internationally recruited Chief Technical Advisor and a UNDP Program Coordinator. A regional specialist will be recruited to coordinate implementation of each component. The PMT will also include an internationally recruited Procurement/Finance Specialist. PERSGA staff will interact with the established PERSGA National Focal Points and with Project supported National Program Coordinators who will facilitate in-country activities. The headquarters costs for PERSGA are paid for by Saudi Arabia.

C. SAP Component 2 - Reduction of Navigation Risks and Maritime Pollution -World Bank Serves as GEF Implementing Agency (US\$3.5 million)

7. Introduction. The Red Sea and Gulf of Aden extend over a distance of some 1700 nautical miles and are on average between 120 and 150 nautical miles wide. They form part of a major world shipping route which currently carries around 7 percent of world seaborne trade. Much of the world's crude and refined oil cargoes pass through the Red Sea and Gulf of Aden and this Region would suffer significant damage if and when a major oil spill occurred. The overall aim of this component of the Project is to support the objectives of the SAP by reducing the risks of maritime accidents and minimizing maritime pollution in the Region. As per agreement with the GEF Secretariat and PERSGA, the World Bank will serve as the Implementing Agency for this Component.

8. Component Preparation Process. In order to coordinate and support development of this component of the SAP, the PERSGA "Navigation Working Group" was established in November 1996 and chaired by the PERSGA Navigation Advisor, a regional expert in maritime affairs. Two regional workshops were held—one organized by the Public Corporation for Maritime Affairs of Yemen in Aden and the other by the Suez Canal Authority of Egypt in Ismalia. At the first workshop, Det Norske Veritas (DNV) of Norway, made an initial presentation on the report it was preparing for PERSGA under the supervision of the World Bank, entitled "Navigation Risk Assessment and Management Plan for the Red Sea and Gulf of Aden." The seminar in Aden discussed matters relating to navigation safety and pollution control and generated a number of recommendations. A follow-up seminar held in Ismalia brought together many of the same experts from the Region to assess the semi-final DNV report, suggest amendments to this report and put forward further recommendations to PERSGA. Following completion of the DNV Report and the SAP, two internationally recognized experts in maritime affairs—one from the region and a second with long-term experience in the region—prepared a detailed work plan for implementation of the component under the supervision of PERSGA and the World Bank. This work plan is available in the Project files.

9. Component Objectives. The recommendations arising from these seminars, as reflected in part in the DNV report, have been used in the SAP process for the identification of priority actions to be included in this component for improvement of navigation safety and the control of marine pollution in the Region. These objectives emphasize the need to take "preventive actions" in a number of areas to avoid potential risks through better practices and improved navigation and safety methods. The objectives of the component are to support PERSGA and cooperating countries to:

Implement international conventions to which the countries are signatory.

Establish a Memorandum of Understanding on Port State Control (PSC) specific to, or which includes, regional states.

Provide means by which Port State Control training requirements may be met.

Introduce, in coordination with the International Maritime Organization (IMO), additional Traffic Separation Schemes (TSS) and other routing systems.

Survey selected portions of the Red Sea and Gulf of Aden.

Consider the provision of additional aids to navigation in the Region.

Study requirements for additional Vessel Traffic Systems (VTS), particularly in the southern Red Sea.

Strengthen regional cooperation in combating oil pollution.

Support regional workshops on key topics.

The Navigation Working Group will also review potential financing mechanisms to support long-term operation of navigation systems and oil spill management programs at the regional, national and local levels. Recommendations on these will be prepared for consideration and/or adoption by regional states and local authorities. The implementation of the Navigation Working Group recommendations will contribute directly to achieving the objectives of the SAP.

10. Component Implementation Arrangements. Implementation of this component will be coordinated by the Navigation Advisor who will be regionally based and make regular visits to PERSGA. The Navigation Advisor will supervise the Navigation Working Group that includes specialists in maritime affairs, navigation and marine pollution control from the cooperating countries. The Working Group will be chaired by the Navigation Advisor who will arrange the meetings, prepare the agenda and facilitate follow-on activities. The Navigation Advisor will work at the country level with the National Program Coordinators, PERSGA National Focal Points and specialist members of the Navigation Working Group to develop and implement regional and national level activities. The Working Group will support regional training and exchange programs and activities regarding environmental aspects of maritime affairs. The Working Group will provide a forum for joint planning of activities, evaluation of progress, exchange of data and lessons learned.

11. Coordination of Working Group Activities. PERSGA will act as the channel through which contacts with the IMO, International Labor Organization (ILO) and other international organizations are made. Given the significant relationships between reduction of navigation risks and control of maritime pollution activities, and those supported under other Project components, the Navigation Advisor will work closely with the Project Management Team to exchange information, promote coordination and prevent duplication of effort. Special attention will be given to coordinating activities under this component with those concerning habitat management, MPA development and ICZM. Copies of reports and all significant correspondence concerning the activities of the Working Group will be provided by the Navigation Advisor to PERSGA.

12. PERSGA Navigation Working Group. The formal establishment of the PERSGA Navigation Working Group with a long-term role and a mandate to contribute to the objective of increasing navigational safety and protection of the marine environment in the Region will be a

valuable means of achieving Project objectives in this regard. To this end, a number of steps will be taken, including:

Definition of the Terms of Reference for the Working Group during the implementation phase of the SAP.

Definition of the membership of the Working Group during the implementation phase, to be made up of one expert from each of the cooperating countries, that is, Djibouti, Egypt, Jordan, Saudi Arabia, northern coast of Somalia, Sudan and Yemen, led by an expert from the Region.

Definition of a five-year work program tied to the SAP implementation process.

13. Elements of Component 2. In order to support effective management and implementation of Component 2, it has been divided into five complementary elements:

Element A Implementation of Conventions and Port State Control.

Element B Traffic Separation Schemes.

Element C Hydrographic Surveys and Navigation Aids.

Element D Vessel Traffic Systems.

Element E Oil Spill Prevention and Management.

Element A. Implementation of Conventions and Port State Control

14. Implementation of Major Maritime Conventions/PERSGA Protocols. Accession to the major IMO conventions varies considerably among PERSGA member countries. Some countries have acceded to many of these conventions, but others have not so far been able to do so. For the successful introduction of Port State Control in the ports of the Region, it is essential that more countries ratify key maritime conventions,<sup>3</sup> particularly those relating directly to Port State Control. A substantial amount of work will need to be carried out in order to move the ratification of these conventions forward, including:

Identification of "baseline" conditions in each of the states with reference to the conventions.

Identification of technical, commercial, institutional or legal reasons why conventions have not been ratified by the states concerned.

Means of promoting the ratification of these conventions, drawing upon the experience of states in other parts of the world.

Review of existing PERSGA protocols and recommendations on the development of additional protocols as necessary.

15. The Working Group would play a key role in bringing to the attention of the Governments concerned the need to accede to and implement these Conventions. It would obtain guidance and assistance from IMO and bi-lateral sources on methods of obtaining support for

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<sup>3</sup> Such as the International Labor Organization (ILO) Convention on the inspection of crew's quarters.

these procedures. It would also seek exposure for key personnel to the experience of states that are well advanced in the ratification process and in the implementation of PSC procedures.

16. Support for Port State Control. The SAP identified the establishment of a Regional Agreement on Port State Control as a priority action to reduce risks from ships with substandard conditions and crews. Under the component, the Navigation Working Group will receive support to undertake the required administrative actions to establish PSC in the PERSGA Region; conduct a Regional Workshop on PSC; and fund a series PERGSA-sponsored courses to train Port State Control Officers in international standards and establish reporting procedures in the Region. The objectives of the workshop are to inform key personnel in the Region and to bring them together to discuss the benefits and methods used in implementation of Port State Control. This will provide a framework for later Project-supported training activities for Port State Control. As part of the process of developing PSC, the Navigation Working Group will review Port Regulations at each port in the region and promote inclusion in the regulations of essential safety clauses. Such clauses could include the requirement for anchors to be ready for dropping from the time a vessel reaches the port approaches; requirements for berthing and final departure from the port, and “model” rules on safety for use by regional ports.

17. Regional Agreement on Port State Control. One issue that will need to be resolved is whether the cooperating countries of PERSGA should develop a Regional Agreement for the Red Sea and Gulf of Aden, or whether they should join the larger Regional Agreement for the Indian Ocean that is currently being developed under the auspices of IMO and with the support of ILO. This process has resulted in the signing of a Memorandum of Understanding on Port State Control in the Indian Ocean (IOMoU) by nineteen countries in the “Indian Ocean Region.” The IOMoU is based on financial and other commitments by its members and provides for the establishment of a Secretariat, located in Goa, India, and an Information Center located in Pretoria, South Africa. The PERSGA countries represented at this meeting included Djibouti, Eritrea, Ethiopia, Somalia (through a UNDP nominee), Sudan and Yemen, each of whom has signed the IOMoU. However, a number of PERSGA countries bordering the Red Sea were not represented at the Pretoria meeting, in particular Egypt, Jordan and Saudi Arabia. In light of the new development, the Navigation Working Group, as a priority action, will review the matter and make recommendations with regard to the most efficient way to develop a Regional Agreement on PSC.

18. Improved Communications for Shipping. A Global Maritime Distress and Safety System (GMDSS) has been established in recent years. Under the IMO SOLAS (Safety of Life at Sea) Convention, all vessels above 300 tons will need to carry radio and other equipment that allows them to contact coast radio stations and communicate by satellite or other means with Maritime Rescue Coordination Centers, “Ship Earth Stations” (ships), vessels in distress, etc. The GMDSS system also requires “Coast Earth Stations” to be provided with modern equipment to allow them to carry out their communications responsibilities. To accelerate implementation of this system in the Region, the Navigation Working Group will review plans for the installation of GMDSS equipment at centers in the Region and make recommendations on the most cost-effective means of achieving satisfactory regional coverage, strengthening institutional capacities and training the required skilled personnel.

19. Financial Sustainability. The Navigation Working Group, in cooperation with regional specialists and international maritime authorities, will undertake a detailed evaluation of measures that can be adopted at the regional and national basis for funding investments and improvements in marine navigation improvements. The Regional Oil Spill Contingency Strategy and MEMAC Study will also evaluate financing mechanisms for oil spill prevention and clean-up. This will



include an evaluation of ways user groups may be charged for development of improved navigation charts, navigation aids and use of the VTS. The review will examine the distribution of benefits from these investments and operational activities among global, national and local beneficiaries. It will specifically review requirements for private sector trade association funding of various types of oil spill management and emergency activities.

#### Element B. Traffic Separation Schemes

20. Traffic Separation Schemes (TSS). The whole of the Red Sea may be considered to be an “environmentally sensitive area” and any damage to ships or spillage of oil may adversely affect the area. The concept of TSS and other ships’ routing measures has been accepted for more than 20 years as a means of improving the safety of navigation. The IMO is the only international body that has been recognized as competent to approve ships’ routing measures at the international level. However, IMO does not act to initiate or provide routing measures. The definition and submission to IMO for approval are primarily the responsibility of the government or governments concerned. These requests can be organized and coordinated by special regional bodies such as PERSGA.

21. Reducing the Risk of Navigational Accidents. TSS were introduced some years ago in the Gulf of Suez, the Strait of Tiran and the Strait of Bab al Mandab and have been amended from time to time to improve the safety of navigation in these areas. The introduction of additional routing measures under this component of the SAP is intended to further increase the safety of navigation in the Region. Routing measures are introduced to improve the safety of navigation, to prevent or to reduce the risk of marine pollution and/or other damage to the marine environment caused by ships colliding and/or grounding, and to prevent or reduce the risk of new obstructions being created along international trading routes. The accuracy of navigation on board ships has increased in recent years due to the introduction of modern position fixing methods such as satellite navigation systems (Global Positioning Systems-GPS, Doppler GPS etc.). DNV stated in its report that around 1 million “end on” situations between northbound and southbound vessels transiting the Red Sea occur each year. These vessels, when using the routes from Bab al Mandab to the southern entrance to the Gulf of Suez, which are very similar, risk being involved in “end on” collisions. The purpose of the routing measures proposed for the Red Sea is therefore to separate the tracks of the northbound vessels from those of the southbound vessels by a suitable distance.

22. Proposed Areas for New TSS. Under the component, the Navigation Working Group, in full coordination with the IMO and concerned national governments, would undertake actions to formally establish new TSS in selected priority areas. These areas include:

- *Northeast Side and Southwest Side of the Hanish Islands.* It is proposed to improve the safety of navigation in the Region thorough introduction of two new TSS on the northeast and southwest side of the Hanish Islands. The schemes have been proposed since vessels passing to the northeast and southwest of the Hanish Islands must navigate in areas in which shallow water, rocks, islands and other navigational hazards are found. The introduction of new TSS for these specific areas is intended to provide safe routes around the various hazards, supported by additional aids to navigation where required. New obstructions are being reported each year in areas which are used by transiting vessels. By defining TSS and Recommended Tracks, the extent of the area that would ideally be re-surveyed as a matter of urgency to handle the larger vessels “in transit” would be reduced. Two TSS have been initially defined for submission to IMO. These would connect with the existing TSS in operation for Bab al Mandab and the southern entrance

of the Gulf of Suez through the use of “Recommended Tracks.” The Tracks could be shown on charts of the Red Sea, or could be referred to in notes on the charts covering the area.

The Recommended Tracks have been designed to separate the two streams of traffic; the proposed tracks lie 2.5 nautical miles on each side of defined positions. By connecting existing TSS at the southern and northern ends of the Red Sea to the new TSS around the Hanish Islands by tracks, the desired separation of northbound and southbound traffic by a distance of around 5 nautical miles would be achieved. The tracks have been designed to ensure that ships remain in deep water areas close to the center of the Red Sea where possible; are routed well clear of shallow areas (to allow searoom in the case of navigational errors, engine and/or rudder failure, drifting etc.); and make maximum use of existing and possible future navigational aids and other routing measures.

- *Extension of Ras Muhammed TSS.* Another “routing measure” which has been proposed is the extension of the TSS around Ras Muhammed at the southern tip of the Sinai Peninsula in Egypt. An “area to be avoided” is regarded as a routing measure as it prevents vessels from entering certain defined areas at sea. UK Admiralty Chart No. 8 indicates that an “area to be avoided” exists south of Ras Umm Sidd. This is a particularly sensitive area of the marine environment. The notes states that “to avoid risk of pollution, vessels carrying dangerous or toxic cargoes, or any other vessel exceeding 500 Gross Registered Tonnage (GRT) should avoid the area indicated.” It is recommended that IMO be asked to extend this “area to be avoided” to the west of Ras Muhammed to ensure that traffic is kept clear of the headlands and reefs around the southern end of the Sinai Peninsula. An “area to be avoided” is considered by IMO to be a routing measure which can be introduced when “...it is exceptionally important to avoid casualties...”. Any unauthorized vessel entering the area to be avoided would be warned that it is entering this area by the VTS stations operating in Gulf of Suez and the Strait of Tiran.

23. **Improved Navigation Tracks.** The objective of separating northbound and southbound traffic transiting the Red Sea is partially achieved by introducing the two proposed TSS adjacent to the Hanish Islands. To confirm this separation, it is envisaged that this traffic would navigate between Bab al Mandab and the southern end of the Gulf of Suez along Recommended Tracks. These tracks will be defined for presentation to the IMO Navigation Sub-Committee responsible for Routing Measures as soon as the necessary foundation work has been done. This work will include and require the positive contribution of the Navigation Working Group in achieving the approval of Egypt, Eritrea, Saudi Arabia, Sudan and Yemen for submission of agreed tracks to the IMO.

#### **Element C. Hydrographic Surveys and Navigational Aids**

24. **Hydrographic Surveys and Navigational Aids.** A fundamental requirement for safety of navigation and implementation of this component of the SAP is the accuracy of navigational charts and other navigational information that is made available to vessels operating in the area. An examination of navigational charts for the Region reveals that surveys for large areas of the Red Sea and Gulf of Aden were carried out many years ago, using the technology available at that time. Subsequent surveys, or accidents to ships, have demonstrated that isolated rocks and other obstructions were not discovered or recorded on surveys which may have been carried out 100 years or more ago, or that depths have changed since the surveys were done. Shallow water, rocks or other obstructions in or near routing measures must be recorded on charts and in other

navigational publications. The failure to carry out surveys in the past has led to problems in TSS, and IMO requires survey results to be submitted to it before it will approve a new or revised scheme.

25. **Survey Procedures.** The United Kingdom Hydrographic Office (UKHO), is responsible for producing charts of this area and for carrying out survey work in the Region. It receives data from a number of sources. These include surveys carried out by naval or private survey vessels for Governments in the Region, surveys carried out for oil companies involved in offshore exploration, data from United Kingdom naval survey vessels which may be sent to the Region or are in transit and depth recordings from commercial ships. Much of the survey work required by the UKHO is now carried out by commercial survey companies under contracts with standards set by the UKHO, and frequently under the direction of a naval survey officer or naval hydrographic adviser. Charts are also produced by other organizations, such as the French Navy in the area around Djibouti, and the Saudi Arabian Ports Authority for the coast of Saudi Arabia.

26. **Priority Areas for Survey.** Under the SAP, two priority areas are due to be defined and surveyed. The cost of hydrographic survey work is very high and it must be assumed that the surveying required would be carried out by a commercial company at normal commercial rates. In order to limit costs, it is recommended that the two areas selected for these surveys be the proposed TSS to the northeast and southwest of the Hanish Islands. It is therefore proposed that these areas should be surveyed, covering the planned TSS and beyond these to a distance of 500 meters on either side of the traffic lanes and 1000 meters to the north and south of the boundaries of each scheme.

27. **Additional Areas for Survey.** Additional areas that may be considered for priority survey, subject to availability of funds, include: the existing TSS in the Strait of Bab al Mandab, particularly if the Navigation Working Group decides that an amendment to this scheme should be submitted to IMO; the approaches to Port Sudan or Suakin in Sudan, as these ports are being expanded and the need for new survey work is recognized by the Government; and the approaches to the Port of Aden, which may be given priority because it is anticipated that there will be increased use of the port by very large container vessels from late 1999 onwards, following completion of improvements currently under construction. As these locations are relatively close to each other, additional mobilization costs for the survey vessel should be low if a larger number of surveys can be conducted at one time.

28. **Survey and Improvement of Navigational Aids.** The component would facilitate arrangements and provide support for a survey of the positions and characteristics of any navigational aids in the Region. This survey will be independently prepared and provide the basis for possible SAP-supported actions to upgrade these facilities. It is planned that, subject to the approval of the Navigation Working Group and concerned National Authorities, the regional members of the International Association of Lighthouse Authorities (IALA) should ask IALA to carry out a separate survey of navigation aids in the Red Sea and Gulf of Aden. This survey would exclude the Gulf of Suez, which has already been inspected by IALA. The IALA survey would be required to determine the present status of these aids and what actions, if any, may be necessary to improve or extend them. Proposals for improving their effectiveness and/or means of operation may be put forward by IALA. These would then be reviewed by PERSGA and the Navigation Working Group for consideration for funding under the SAP.

## **Element D. Vessel Traffic Systems**

29. **Vessel Traffic System (VTS).** A Vessel Traffic System (VTS) is described as “any service implemented by a competent authority primarily designed to improve the safety and efficiency of traffic and the protection of the environment.” It may range from the provision of simple information messages to extensive management of traffic within a port or waterway. It may cover some or all of the following functions: provision of routine information; coordination of ship movement reports; monitoring of compliance with established traffic rules; provision of advice or guidance; and/or regulation of traffic. The principal function of the surveillance is to monitor traffic flow in and around the TSS and detect any vessels that fail or may be about to fail to comply with the traffic regulations. It is then possible to broadcast warnings to the vessel “at fault” and to all vessels operating in the area. Modern VTS vary from simple radar/VHF-based systems to complex installations involving multiple radars, VHF stations and channels, and computerized data processing. The functions of the VTS can vary from the provision of relatively simple information to relatively complex traffic regulation.

30. **Use of VTS.** VTS are frequently associated with port areas and some, but by no means all, IMO Traffic Separation Schemes (TSS). The establishment of ships’ routing measures implies that vessels in the area will be navigated in accordance with the requirements and constraints that the measure imposes. Experience shows that this is not always the case and that some ships will be navigated in contravention to the measure, leading to possibly dangerous situations for these vessels and for other users. This implies that a routing measure should be monitored to achieve maximum effectiveness, and that vessels which do not follow the requirements of the measure, and which may be standing into danger, should be warned and/or penalized as appropriate. The future fitting of transponders to ships carrying hazardous cargoes will allow for their automatic identification (Automatic Identification System, AIS). It will then be possible to display on a radar screen data on the ship’s identity, type, size, course, speed, cargo carried etc..

31. **VTS in the northern Red Sea.** Some of the larger Port Authorities in the region already operate “Vessel Traffic Services.” Outside the Suez Canal and port areas in the Red Sea, Traffic Separation Schemes exist along the whole length of the Gulf of Suez and the Strait of Tiran. In addition, certain vessels are not allowed to enter the environmentally sensitive area south of Ras Muhammed on the Sinai Peninsula. The need to introduce VTS to allow both surveillance of and guidance for these areas has been recognized for some years and steps are now being taken to provide these. The Gulf of Suez VTS will be a multi-station installation covering the whole of this Gulf to the southern limit of the TSS. It is expected to be in operation by the end of 1999. The VTS for the Strait of Tiran and its approaches is also expected to come into operation in 1999. These VTS will monitor important areas in the northern end of the Red Sea.

32. **Support for VTS in the southern Red Sea.** Traffic using the TSS in the southern end of the Red Sea through the Strait of Bab al Mandab has not been and is not currently monitored. The radar and/or VHF communications equipment could be set up on Mayyun (Perim) Island or on the higher land (possibly on Jebel al Menhali, 270 meters high) on the coast of Yemen 5 nm east-northeast of the island or on the Djibouti side of the Strait. If it is decided that the VTS should be located on the Yemeni side of the Strait, it may be necessary to link the VTS to the Port of Aden. Under the component, a feasibility study would be prepared for establishment of a VTS at the southern end of the Red Sea that would initially monitor traffic in the area around this TSS. The Terms of Reference have been prepared, based on consultation with IMO, IALA and local authorities. Under the Terms of Reference, the Consultant would evaluate alternative sites for the VTS, provide detailed cost estimates for investment and operation of the facility, review training requirements for operators and users, and assess potential user-based funding mechanisms. On the

basis of this feasibility study PERSGA would seek funding for the installation of the VTS from the European Union (EU), Islamic Development Bank (IsDB) and/or other interested parties.

33. **Regional Workshop and VTS Training.** The Consultant would also plan and conduct a Regional Workshop on Vessel Traffic Systems. The objectives of the workshop are to increase appreciation within the Region for the importance of VTS in monitoring Traffic Separation Schemes and other routing measures, as well as their role in improving safety in port areas. This will provide a framework for later Project-supported training activities for VTS. The workshop would be attended by members of the Navigation Working Group and by other key personnel involved in these issues.

#### **Element E. Oil Spill Prevention and Management**

34. **Oil Spill Prevention and Management.** The component, using GEF and PERSGA funding, will support three complementary activities for oil spill prevention and management at the national level, including:

- *Regional Oil Spill Contingency Strategy.* Terms of Reference for the conduct of a feasibility study on a Regional Oil Spill Contingency Strategy will be prepared, within which sub-regional, national and local Oil Spill Contingency Plans will be located. Following evaluation and approval, the strategy will be implemented by the countries of the Region, under the coordination of PERSGA.
- *Djibouti MEMAC.* Under earlier international support to the Region, the Djibouti Marine Emergency Mutual Aid Center (MEMAC) was established to provide support for control of oil spills. Under this assistance a stockpile of equipment and materials for combating oil spills has been established at Djibouti, and personnel have been trained. The current agreement for operation of the center provides for its response to demands for assistance in case of oil pollution incidents in Djibouti, Somalia and the Gulf of Aden coast of Yemen. Under the component, technical assistance will be provided to prepare and negotiate a Revised Agreement to allow this facility to become part of a PERSGA-supervised network of response centers and to update its current Sub-Regional Oil Spill Contingency Plan.
- *Oil Spill Combating Training.* Under the PERSGA-funded work program, courses for oil spill preparedness and combating procedures will be held, making use of centers within the Region where possible and of opportunities for training at specialized centers outside the Region as necessary in order to achieve training objectives.

#### **D. SAP Component 6 - Support for Integrated Coastal Zone Management - World Bank Serves as GEF Implementing Agency (US\$2.11 million)**

35. **Introduction.** Integrated coastal zone management in most countries in the Region is adversely affected by weak coordination between ministries, overlapping jurisdictions, conflicting objectives, and weak implementation of land use plans. Effective implementation of Integrated Coastal Zone Management (ICZM) plans will reduce the incidence of inappropriate development decisions and provide an effective mechanism for sustainable long-term use of the coastal zone. Throughout the Region the adoption of this planning and management process to support development decisions could significantly decrease unnecessary degradation of the coastal and marine environments. The effective use of ICZM is especially important in supporting the cooperating countries to meet challenges related to long-term development of coastal settlements and development zones, further expansion of international and domestic tourism, and

maintenance of the rich biodiversity and cultural heritage of the coastal zone. *As per agreement with the GEF Secretariat and PERSGA, the World Bank will serve as the Implementing Agency for this Component.*

36. **Strengthening ICZM.** Preparation of the SAP identified the need to strengthen integration of environmental and natural resource concerns into the planning and management of the coastal zone. An important activity to be supported under the component will be the creation of a PERSGA-coordinated network of regional specialists to promote the use of ICZM and exchange experiences between cooperating countries. This will be complemented at the regional level by support for training activities focused on the use of ICZM and related tools such as environmental assessment and Geographic Information Systems (GIS) in planning and management of the coastal zone. Current use of ICZM is concentrated in the northern countries in the PERSGA Region and is mainly taking place at the national level. Under the component support will be provided for model ICZM activities in the four southern countries to balance efforts and to demonstrate sub-national approaches to ICZM for selected priority areas. A mechanism for the promotion of ICZM in these areas will take the form of national and/or local level ICZM working groups that include a full range of stakeholders including relevant Government agencies, academic institutions, community leaders, private sector interests and NGOs.

37. **Component Objectives.** The component has as objectives to:

- Enhance regional exchange of expertise, experience and information on coastal zone management through establishment of a regional Working Group.
- Strengthen national and local government capacity to develop and implement ICZM plans at the national and local level through training and model projects.
- Promote the capacity of both national and local government departments to work cooperatively to implement land use planning and environmental planning policies and procedures.
- Provide training in the practical skills of policy planning, environmental assessment, monitoring and management in the context of the ICZM process.
- Reduce environmental degradation within the Region through use of management tools such as environmental assessment and environmental auditing. Improve the technical support base and the provision of information required by decision makers through use of guidelines for standardization and routine updating of Geographic Information Systems.
- Increase political and public support for ICZM by use of participatory approaches in development and implementation.

A comparative summary of ICZM-related legislation and institutional capacity is provided as Table D. This review shows the uneven development of ICZM between the northern and southern countries of the Region.

38. **Component Implementation Arrangements.** Implementation of this component will be coordinated by the Integrated Coastal Zone Management (ICZM) Specialist based in PERSGA. The Specialist will supervise establishment and operation of an ICZM Working Group that includes specialists from the cooperating countries participating in this aspect of the SAP

implementation process. The Specialist will work at the country level with the National Program Coordinators and PERSGA National Focal Points to develop and implement national level activities, including planning and management of model ICZM activities to be undertaken in the four southern countries. Given the significant relationships between ICZM activities and those supported under other Project components, the ICZM Specialist will work closely with the PERSGA Project team to exchange information, promote coordination and prevent duplication of effort. Special attention will be given to coordinating activities under this component with those concerning marine navigation, habitat management and MPA development. The component will also be coordinated with current GEF-supported activities in Egypt, Jordan, and Yemen; others planned under the SAP for the four southern countries; and programs supported by national Governments, international financial institutions and donor organizations in the cooperating countries.

39. **Elements of Component 6.** In order to support effective management and implementation of Component 6, it has been divided into four complementary elements:

- Element A Regional Networking and Training
- Element B. Geographic Information Systems
- Element C. Model ICZM Plans
- Element D. ICZM Activities in the Four Southern Countries.

#### **Element A. Regional Networking and Training**

40. **Regional Networking.** The ICZM Working Group will constitute a forum for joint planning of activities, evaluation of progress, exchange of data and lessons learned. It will be chaired by the ICZM Specialist who will arrange the meetings, prepare the agenda and facilitate follow-on activities. The ICZM Working Group will support regional training and exchange programs and activities concerning GIS. It will also provide advice on the field level model ICZM activities to be undertaken in the four southern countries. In addition, the Working Group will act as a link between the regional Project and a range of national and local government bodies responsible for ICZM. To support this process, the following will be undertaken:

- Identify personnel to form a regional Working Group of experts on ICZM with specialists drawn from each cooperating country.
- Convene a series of meetings at the regional or sub-regional level to review the status of ICZM and supporting instruments such as physical and environmental planning, environmental assessment procedures and GIS.
- Undertake site visits in the Region to review case studies at the field level in coastal zone management and the application of ICZM and supporting instruments in specific locations.
- Conduct regional, sub-regional and national workshops to enhance capability in this area.
- Based on the results of these activities, establish a common framework for regional ICZM plans.

- Identify outreach activities to increase support by decision makers and stakeholders in use of ICZM as a mechanism for sustainable management of the coastal zone.

41. **Regional Training and Exchange Program.** The component will support regional activities for capacity building and human resources development. Training programs will be conducted in conjunction with meetings of the ICZM Working Group to the fullest extent possible. The exchange program will be facilitated by the ICZM Working Group and activities will be developed on an individual basis for a limited number of well qualified candidates. The proposed training programs will be coordinated with complementary activities included under other Project components. Exchange programs, study tours and formal training outside the Region are a non-GEF funded activity under the SAP for which PERSGA will seek to mobilize funding from public and private sources.

42. **Planned Activities.** In general, training and exchange activities will concern the following:

- Role of coastal and marine ecosystems in economic and social development.
- Role of coastal and marine protected areas in ICZM.
- Environment and development trends in the Region.
- Planning and implementation of ICZM.
- Use of physical and environmental planning in the ICZM process.
- Use of environmental assessment and environmental audits in the ICZM process.
- Use of strategic environmental assessment in the ICZM process.
- Use of resource valuation and environmental economics in ICZM.
- Mechanisms for inter-governmental and cross-sectoral coordination.
- Public participation in the planning process in coastal areas.
- Public information programs to support the ICZM process.
- Methods of conflict resolution.
- Monitoring and evaluation of ICZM programs and activities.

## **Element B. Geographic Information Systems**

43. **Geographic Information Systems.** ICZM and related environmental planning and management efforts in the Region require measures to strengthen operational use of GIS and related information data systems. The component will include support for measures to:

- Develop an improved understanding of the application of GIS to the development and implementation of ICZM.



- Support development by the Working Group of PERSGA guidelines for standardization and routine updating of GIS.
- Undertake a regional review of the present GIS and related databases in the Region that contain data relevant to ICZM.
- Provide technical advice and support to harmonize the different systems to facilitate and expand information exchange with the Region.
- Undertake well-designed GIS applications as an element of model ICZM activities supported under the component.

#### **Element C. Model ICZM Plans**

44. **Model ICZM Plans.** The component will support the preparation and assist in implementation of model ICZM plans for selected sites in the four southern countries—Djibouti, Sudan, the northern coast of Somalia and Yemen. The development of ICZM in these countries is less advanced than in the northern countries and measures need to be taken to improve their knowledge of the ICZM planning and management process in order to achieve regional goals for conservation of the coastal and marine environment. ICZM activities supported by the Project will focus on a series of representative areas that are under pressure due to current and/or planned development; locations potentially subject to major land use changes associated with port or aquaculture development; important areas of critical habitat; or areas adjacent to declared or proposed Marine Protected Areas (MPAs). All model ICZM plans will be prepared through use of broad-based participation with a range of stakeholders. Work to be undertaken in these countries will be closely coordinated with the activities supported under other components, especially those concerning marine navigation, conservation of habitats and biota, and MPAs. In order to support this activity a Terms of Reference for a representative ICZM study has been prepared that can be used by PERSGA and the cooperating countries as the basis for development of TORs for the site-specific model ICZM Plans.

#### **Element D. ICZM Activities in the Southern Countries**

45. **ICZM Activities in Djibouti.** The component will support development of ICZM in Djibouti and will focus on institutional capacities and applied training of personnel in the principles and application of ICZM. This will be accomplished through Djiboutian participation in the work program of the ICZM Working Group at the regional level, conduct of country-specific training activities, preparation of a model ICZM activity and use of GIS to support coastal zone management. These activities will be closely coordinated with the National Program Coordinator and national PERGSA Task Force member. Most elements of this component will be executed nationally and measures will be taken to have national level training courses and materials prepared in French. Activities in Djibouti under the ICZM component will include the following:

- A national representative will participate in the regional Working Group on ICZM. National specialists will attend regional and international workshops, training activities exchange programs and study tours.
- Country-specific ICZM training activities will be conducted to address the specific issues in Djibouti, especially tourism development.

- A basic framework for ICZM at the national level will be developed to provide general guidelines for use of this approach in Djibouti.
- A model ICZM plan will be prepared for a site jointly selected by Djiboutian and PERSGA representatives; candidates for this site include the Djibouti City region and Iles des Sept Frères and Ras Siyan.
- The model ICZM activity will be supported using a participatory approach with broad-based stakeholder involvement.
- Support will be provided to facilitate Djiboutian participation in a PERSGA regional GIS network designed to support the SAP process.
- Support for training of personnel in GIS applications will focus on the model ICZM plan and sensitivity mapping of the coastline using regionally standardized methods.

The activities under this component will be coordinated with the MPA component activities at Iles des Sept Frères and Ras Siyan.

46. **ICZM Activities in the Northern Coast of Somalia.** The component will support development of ICZM in the northern coast of Somalia and will focus on institutional capacities and applied training of personnel in the principles and application of ICZM. This will be accomplished through Somali participation in the work program of the ICZM Working Group at the regional level, conduct of country-specific training activities, preparation of a model ICZM activity and use of Geographic Information Systems to support coastal zone management. These activities will be closely coordinated with the two National Program Coordinators and PERGSA Task Force members. Most elements of this component will be executed nationally. Activities in the northern coast of Somalia under the ICZM component will include the following:

- Two Somali representatives will participate in the regional Working Group on ICZM. Specialists will attend regional and international workshops, training activities exchange programs and study tours.
- Country-specific ICZM training activities will be conducted to address the specific issues in northern Somalia.
- Discussions will be conducted concerning the use of ICZM in the future development process in northern Somalia and a preliminary framework prepared with support from local specialists.
- A model ICZM plan will be prepared for a site jointly selected by Somali and PERSGA representatives; possible locations include Berbera, Bosaso and the site of the proposed MPA of Aibat and Saad ad-Din Islands and Saba Wanak on the coast near Zayla. Depending on political developments in the future, consideration could also be given to activities being undertaken in the Berbera and Bosaso regions, which include the largest coastal settlements and port facilities.
- The model ICZM activity will be supported using a participatory approach with broad-based stakeholder involvement.

- Support will be provided to facilitate Somali participation in a PERSGA regional GIS network designed to support the SAP process.
- Support for training of personnel in GIS applications will focus on the model ICZM plan and sensitivity mapping of the coastline using regionally standardized methods. It is anticipated that for technical reasons, the data will be collected in Somalia and processed at PERSGA for use by national counterparts.

The activities under this component will be coordinated with the MPA component activities at Aibat and Saad ad-Din Islands and Saba Wanak.

47. **Activities for ICZM in Sudan.** The component will support development of ICZM in Sudan and will focus on institutional capacities and applied training of personnel in the principles and application of ICZM. This will be accomplished through Sudanese participation in the work program of the ICZM Working Group at the regional level, conduct of country-specific training activities, preparation of a model ICZM activity and use of GIS to support coastal zone management. These activities will be closely coordinated with the Port Sudan-based National Program Coordinator and national PERGSA Task Force member. Most elements of this component will be executed nationally. Activities in Sudan under the ICZM component will include the following:

- A national representative will participate in the regional Working Group on ICZM. National specialists will attend regional and international workshops, training activities exchange programs and study tours.
- Country-specific ICZM training activities will be conducted to address the specific issues in Sudan, including free zone and port development, expansion of aquaculture and tourism.
- A basic framework for ICZM at the national level will be developed to provide general guidelines for use of this approach in Sudan.
- A model ICZM plan will be prepared for a site jointly selected by Sudanese and PERSGA representatives; candidates for this site include the Port Sudan region, proposed free zone port area, selected areas being considered for aquaculture development and Mukkawar Island and Dunganab Bay.
- The model ICZM activity will be supported using a participatory approach with broad-based stakeholder involvement..
- Support will be provided to facilitate Sudanese participation in a PERSGA regional GIS network designed to support the SAP process.
- Support for training of personnel in GIS applications will focus on the model ICZM plan and sensitivity mapping of the coastline using regionally standardized methods.

The activities under this component will be coordinated with the MPA component activities at Sanganeb Marine National Park, Mukkawar Island and Dunganab Bay.

48. **ICZM Activities in Yemen.** The component will support development of ICZM in Yemen and will focus on development of institutional capacities and applied training of personnel

in the principles and application of ICZM. This will be accomplished through Yemeni participation in the work program of the ICZM Working Group at the regional level, conduct of country-specific training activities, preparation of a model ICZM activity and use of GIS to support coastal zone management. These activities will be closely coordinated with the National Program Coordinator and national PERGSA Task Force member. Most elements of this component will be executed nationally. Activities in Yemen under the ICZM component will include the following:

- A national representative will participate in the regional Working Group on ICZM. National specialists will attend regional and international workshops, training activities exchange programs and study tours.
- Country-specific ICZM training activities will be conducted to address the specific issues in Yemen, including port development, oil and gas export facilities and expansion of tourism.
- A basic framework for ICZM at the national level will be developed which will provide general guidelines for use of this approach in Yemen.
- A model ICZM plan will be prepared for a site jointly selected by Yemeni and PERGSA representatives; candidates for this site include the Aden region, Hodeidah region, areas in the vicinity of current and proposed oil and gas export sites, and the Belhaf and Bir Ali area.
- The model ICZM activity will be supported using a participatory approach with broad-based stakeholder involvement.
- Support will be provided to facilitate Yemeni participation in a PERGSA regional GIS network designed to support the SAP process.
- Support for training of personnel in GIS applications will focus on the model ICZM plan and sensitivity mapping of the coastline using regionally standardized methods.

The activities under this component will be coordinated with the MPA component activities in the Belhaf and Bir Ali area.

49. These activities will be coordinated with proposed World Bank-supported activities for development of an enabling framework for ICZM at the national level, strengthening environmental assessment and potential GEF medium-size grants for selected protected areas. They will also be coordinated with the GEF-supported program for development of a management plan for Socotra Archipelago.

## Regional Project for the Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden

Table A. Itemized budget by fiscal year for Component number 2, Navigation Risk Assessment

Budget Item	1999	2000	2001	2002	2003	TOTAL
<b>Component Management</b>						
Navigation Advisor and Support	20,000	32,000	33,000	33,000	16,000	134,000
Navigation Consultant	37,500	80,000	55,000	28,500	0	201,000
<b>Subtotal:</b>	<b>57,500</b>	<b>112,000</b>	<b>88,000</b>	<b>61,500</b>	<b>16,000</b>	<b>335,000</b>
<b>A) Conventions and Port State Control</b>						
Working Group Meetings and Admin	60,000	100,000	100,000	100,000	60,000	420,000
International Conventions	18,000	31,000	31,000	0	0	80,000
PSC Implementation	17,000	40,000	40,000	40,000	0	137,000
PSC Seminar	10,000	16,000	0	0	0	26,000
PSC Training	30,000	70,000	70,000	70,000	0	240,000
Contingency	8,000	15,000	15,000	8,000	4,000	50,000
<b>Subtotal:</b>	<b>143,000</b>	<b>272,000</b>	<b>256,000</b>	<b>218,000</b>	<b>64,000</b>	<b>953,000</b>
<b>B) Traffic Separation Schemes</b>						
TSS Costs	12,500	29,500	29,000	29,000		100,000
Contingency	1,500	4,000	3,500	3,000		12,000
<b>Subtotal:</b>	<b>14,000</b>	<b>33,500</b>	<b>32,500</b>	<b>32,000</b>		<b>112,000</b>
<b>C) Hydrographic Surveys and Navigation Aids</b>						
Hydrographic Seminar	12,000	12,000	0	0		24,000
Lighthouse Survey	0	15,000	0	0		15,000
Hydrographic Survey Spec/Tender	25,000	25,000	0	0		50,000
Hydrographic Surveys	0	725,000	721,000	0		1,446,000
Hydrographic Survey Supervision	0	50,000	50,000	0		100,000
Lighthouse Installation	0	80,000	0	0		80,000
Contingency		150,000	50,000	0		200,000
<b>Subtotal:</b>	<b>37,000</b>	<b>1,057,000</b>	<b>821,000</b>	<b>0</b>		<b>1,915,000</b>
<b>D) Vessel Traffic Systems</b>						
VTS Seminar	15,000	15,000	0	0		30,000
VTS Feasibility Study	0	100,000	0	0		100,000
Contingency	3,000	10,000	0	0		13,000
<b>Subtotal:</b>	<b>18,000</b>	<b>125,000</b>	<b>0</b>	<b>0</b>		<b>143,000</b>
<b>E) Oil Spill Prevention and Management</b>						
Contingency Plan/Djibouti Study	0	39,000	0	0		39,000
Contingency	0	3,000	0	0		3,000
<b>Subtotal:</b>	<b>0</b>	<b>42,000</b>	<b>0</b>	<b>0</b>		<b>42,000</b>
<b>TOTAL:</b>	<b>269,500</b>	<b>1,641,500</b>	<b>1,197,500</b>	<b>311,500</b>	<b>80,000</b>	<b>3,500,000</b>

## Regional Project for the Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden

Table B. Itemized budget by fiscal year for Component number 6, Integrated Coastal Zone Management

Budget Item	1999	2000	2001	2002	2003	TOTAL
<b>Component Management</b>						
ICZM Coordinator	25,000	52,000	54,000	57,000	28,000	216,000
Coordinator Travel	5,000	8,000	8,000	8,000	4,000	33,000
Administrative Support	7,500	15,000	15,000	15,000	7,500	60,000
<b>Subtotal:</b>	<b>37,500</b>	<b>75,000</b>	<b>77,000</b>	<b>80,000</b>	<b>39,500</b>	<b>309,000</b>
<b>A) Regional Network and Training</b>						
ICZM Working Group	15,000	45,000	30,000	30,000	15,000	135,000
Regional Training	35,000	80,000	80,000	75,000	40,000	310,000
Contingencies	5,000	6,000	6,000	5,000	3,000	25,000
<b>Subtotal:</b>	<b>55,000</b>	<b>131,000</b>	<b>116,000</b>	<b>110,000</b>	<b>58,000</b>	<b>470,000</b>
<b>B) Geographic Information Systems</b>						
GIS Working Group	15,000	25,000	25,000	25,000		90,000
Regional GIS Review	15,000	15,000	0	0		30,000
Harmonization of Systems (TA)	10,000	30,000	10,000	5,000		55,000
Model GIS Applications & Equip	40,000	80,000	50,000	50,000		220,000
Contingencies	5,000	20,000	10,000	5,000		40,000
<b>Subtotal:</b>	<b>85,000</b>	<b>170,000</b>	<b>95,000</b>	<b>85,000</b>		<b>435,000</b>
<b>C) Model ICZM Plans</b>						
Planning and Adv. Support	15,000	70,000	46,000	26,000		157,000
Contingencies	5,000	10,000	10,000	5,000		30,000
<b>Subtotal:</b>	<b>20,000</b>	<b>80,000</b>	<b>56,000</b>	<b>31,000</b>		<b>187,000</b>
<b>D) ICZM Activities in Four Countries</b>						
<b>Djibouti</b>						
National Specialist Working Groups	5,000	10,000	10,000	10,000		35,000
ICZM and GIS Training	5,000	10,000	10,000	8,000		33,000
Model Activity	10,000	20,000	20,000	15,000		65,000
<b>Subtotal:</b>	<b>20,000</b>	<b>40,000</b>	<b>40,000</b>	<b>33,000</b>		<b>133,000</b>
<b>Northern Somalia Coast</b>						
National Specialist Working Groups	5,000	10,000	10,000	10,000		35,000
ICZM and GIS Training	5,000	10,000	10,000	8,000		33,000
Model Activity	10,000	20,000	20,000	15,000		65,000
<b>Subtotal:</b>	<b>20,000</b>	<b>40,000</b>	<b>40,000</b>	<b>33,000</b>		<b>133,000</b>
<b>Sudan</b>						
National Specialist Working Groups	5,000	10,000	10,000	10,000		35,000
ICZM and GIS Training	5,000	12,000	12,000	10,000		39,000
Model Activity	15,000	30,000	35,000	20,000		100,000
<b>Subtotal:</b>	<b>25,000</b>	<b>52,000</b>	<b>57,000</b>	<b>40,000</b>		<b>174,000</b>
<b>Yemen</b>						
National Specialist Working Groups	5,000	10,000	10,000	10,000		35,000
ICZM and GIS Training	5,000	12,000	12,000	10,000		39,000
Model Activity	15,000	30,000	35,000	20,000		100,000
<b>Subtotal:</b>	<b>25,000</b>	<b>52,000</b>	<b>57,000</b>	<b>40,000</b>		<b>174,000</b>
Component D Contingencies	15,000	30,000	30,000	20,000		95,000
<b>Component D Subtotal</b>	<b>105,000</b>	<b>214,000</b>	<b>224,000</b>	<b>166,000</b>		<b>709,000</b>
<b>TOTAL:</b>	<b>302,500</b>	<b>670,000</b>	<b>568,000</b>	<b>472,000</b>	<b>97,500</b>	<b>2,110,000</b>

**Table C. Regional Project for the Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden**

No.	Components/Activities	<b>1999</b>				<b>2000</b>				<b>2001</b>				<b>2002</b>				<b>2003</b>			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	<b>Navigation Risk and Maritime Pollution</b>																				
1.1	Establish Navigation WG & Meetings	X			X		X		X		X		X		X		X		X		
1.2	Baseline study for Maritime Conventions		X	X																	
1.3	Reporting and consultation on MC				X																
1.4	Ratification of IMO + ILO conventions							X	X	X	X	X	X								
1.5	Review developments on PSC	X	X																		
1.6	Decide required measures			X																	
1.7	Draft & implement MoU on PSC				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.8	Review proposals for TSS		X																		
1.9	Discuss with IMO and report to the WG			X	X																
1.10	Define provisions				X	X	X	X	X												
1.11	Implement TSS									X	X	X	X	X	X	X	X	X	X	X	X
1.12	Define 2 areas for hydrographic surveys	X																			
1.13	Study costs and report to the WG		X																		
1.14	Contract and execute			X		X	X	X	X	X	X	X	X								
1.15	Define and implement the programme										X	X	X	X	X	X	X	X	X	X	X
1.16	Prepare TOR for study of VTMS	X																			
1.17	Consult authorities/Report to WG		X	X																	
1.18	Execute feasibility study					X															
1.19	Evaluate study and its financing						X	X													
1.20	Contract and execute									X		X	X	X	X	X	X	X	X	X	X
1.21	Prepare TOR for study of Regional OSCP	X																			
1.22	Carry out study and report		X	X																	
1.23	Implement the strategy				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.24	Prepare TOR for MEMAC	X																			
1.25	Update its contingency plan		X																		
1.26	Decide on its future actions			X	X	X															
1.27	Provide training						X	X	X	X	X	X	X	X	X	X	X				

## Regional Project for the Implementation of the Strategic Action Program for the Red Sea &amp; Gulf of Aden

## **Component 6 - Support for Integrated Coastal Zone Management**

No. Components/Activities		1999				2000				2001				2002				2003			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Integrated Coastal Zone Management</b>																					
2.1	Establishment of WG and meetings				X		X		X		X		X		X		X			X	
2.2	Regional training workshops																			X	
2.3	Establishment of national working groups																				
2.4	Design model ICZM studies																				
2.5	Prepare model ICZM studies																				
2.6	Review GIS at regional level																				
2.7	Design regional GIS network																				
2.8	Prepare national GIS information																				
2.9	Prepare regional GIS information																				



**Table D. Regional Project for the Implementation of the Strategic Action Program (SAP) for the Red Sea and Gulf of Aden**  
**Component 5 – Support for Integrated Coastal Zone Management (ICZM)**  
**Status of ICZM Related Legislation and Institutional Arrangements**

Country	ICZM Related Legislation Law or Decree #/Date/Agency			Plans	Institutional Capacity	ICZM Agency
<b>Egypt</b>	Unified Environment Protection - No. 4	1994	Egyptian Environmental Affairs Authority (EEAA)	ICZM plans developed for the Red Sea Coast and Sinai. Ongoing cooperation with GEF, European Union, Denmark, Netherlands and United States in ICZM.	Some local and national capacity established, but some jurisdictional and coordination issues remain to be resolved. Issues exist with implementation of ICZM plans.	National Committee for Integrated Coastal Zone Management (EEAA).
	Oil Pollution at Sea - No. 72	1968				
	Conservation Law - No. 102	1983				
	Ports Water Quality - No.56	1962				
	Port Territory Regulation - No. 280	1960				
	Oil Pollution - No. 478	1988				
	Oil Pollution - No.1948 (amended by No. 691)	1972, 1965				
<b>Jordan</b>	Environment Law No. 12	1995	High Council	ICZM plan has been developed and is being implemented. Ongoing cooperation with GEF under Gulf of Aqaba Environmental Action Plan for ICZM.	Local, national and regional institutions in place.	Aqaba Regional Authority.
	Standard 893	1994	Water Authority			
	Standard 202	1982	Water Authority			
	ARA No. 7	1987	Aqaba Region Authority			
	Port Law No. 49	1976	Port Corporation			
	Port Law No. 20	1987	Port Corporation			
	Agriculture Law No. 20	1973	Ministry of Agriculture			
	Aqaba Law No. 32	1972	Port Corporation			
	Shipping Law No. 51	1961	Port Corporation			
<b>Saudi Arabia</b>	Territorial Sea - No. 33	1377	Coast Guard	ICZM plans developed for the Red Sea coast by MEPA. This includes "Assessment of Coastal Zone Requirements" in 7 volumes.	Some local and national capacity established, but some jurisdictional and coordination issues remain to be resolved. Issues exist with implementation of ICZM plans.	Meteorology and Environmental Protection Agency (MEPA)
	Oil Spill Response - 7B13307	1411	MEPA			
	Fishery and Ports Jurisdiction - 7505M & M9	1406	Ministry of Agriculture & Ministry of Petroleum			
	Environmental Impact Standards - 7M8903	1401	MEPA (EIA)			
<b>Sudan</b>	Marine Fisheries & Fisheries Amendments	1937 1975,1978	Marine Fisheries Administration	Development of ICZM identified as a high priority in SAP Country Report. No ICZM plan per se, although there is development of Marine Conservation Law and Regulations. Also, Management Plan for Sanganeb developed.	Limited development of ICZM institutional capacity at national and local levels.	No agency has been given responsibility for ICZM.
	Marine Conservation Regulations	1975,1995	Ministry of Environ. & Tourism			
	Environmental Health Act	1975	Ministry of Health & Local Councils			
	Sudan Maritime Law	Draft,1996	Maritime Administration			
	Environmental Policy Act	Draft,1996	HCENR & Atty. Gen.			
<b>Yemen</b>	EEZ & Shelf Law – No. 37	1991	Defense Ministry	Development of ICZM identified as a high priority in National Environmental Action Plan and SAP Country Report. Limited activities conducted under GEF and bilateral activities. Ongoing management plan for Socotra.	Limited development of ICZM institutional capacity at national and local levels. A number of ministries and organizations have responsibilities; however, jurisdictional and coordination issues remain to be resolved.	None
	Living Aquatic Resources – No. 42	1991	Ministry. of Fish Wealth			
	Free Zone Law – No. 4	1993	Free Zone Authority			
	Marine Pollution – No. 11	1993	Public Corporation of Maritime Affairs (PCMA)			
	Maritime Law – No. 5	1995	PCMA			

Country	ICZM Related Legislation			Plans	Institutional Capacity	ICZM Agency
	Law or Decree #/Date/Agency					
	Environmental Protection	1995	Environment Protection Council			
	Fishing Vessels & Gear – No. 101	1995	Ministry. of Fish Wealth			
	Socotra Protected Area - No. 4	1996	Ministry of Planning & Development			
Djibouti	Musha Territorial Park - Order 72-1363/SG/CG	1972	DAM	Development of ICZM identified as a high priority in SAP Country Report. No ICZM plan has been prepared at national or local level.	Limited development of ICZM institutional capacity at national and local levels.	Directorate of Land-Use Planning and Environment (DATE) responsible for NEAP, but no agency listed as responsible for ICZM.
	Ship Pollution – Law 76-599	1976	DAM			
	Fisheries Regulations - Law 52/AN/78	1979	DAM			
	Maskali Islands Reserve, LMR - Decree 80-062/PR/MCTT	1980	MCTT			
	Fisheries - Law 212/AN/82	1982	DAM			
	MPAs- Decree 85/103/PR/AG	1985	DAM			
	Coordination of maritime actions - Decree 88/013/PR/PM	1988	DAM			
	Pollution Contingency Plan - Decree 90-0105/PR/AE	1990	DAM			
Northern Coast of Somalia	Sanitary Code	1936	Ministry of Health	Development of ICZM identified as a high priority in SAP Country Report. No ICZM plan has been prepared at national or local level.	Some personnel have been trained in physical planning, marine sciences and environment; however, no institutional capacity exists for ICZM.	None
	Maritime Code	1959	Ministry of Marine Transport and Ports			
	Water Development Agency Law No. 28	1971	Ministry of Minerals and Water Resources			
	Territorial Sea and Ports, No. 37	1972	Ministry of Marine Transport and Ports			
	Water Law No. 77	1972	Ministry of Minerals and Water Resources			
	Port Regulations, decree No. 67	1978	Somali Ports Authority			
	Sewage and Drainage Law No. 3	1983	Water Development Agency			
	Joint Venture Guidelines	1983	Ministry of Fisheries and Marine Resources			
	Tourism Development Act	1984	Ministry of Tourism			
	Fisheries Law No. 13	1985	Ministry of Fisheries and Marine Resources			

## Annex 3

**REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC  
ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN**

**Estimated Project Costs**

<b><u>Project Output</u></b>	<b>Local</b>	<b>Foreign</b>	<b>Total</b>
	-----	US \$ million-----	
Component 2: Reduction of Navigation Risks and Maritime Pollution	1.051	2.161	3.212
Component 6: Support for Integrated Coastal Zone Management	1.283	.637	1.920
<b>Total Baseline Cost</b>	<b>2.334</b>	<b>2.798</b>	<b>5.132</b>
Physical Contingencies			0.223
Price Contingencies			<u>0.255</u>
<b><u>Total Project Cost</u></b>			<b>5.610</b>

Detailed cost estimates have been prepared for each component and are available from the project files.

## Annex 4

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

## Incremental Cost Analysis<sup>1</sup>

### Regional Context and Broad Development Goals

1. In the last three decades, many countries in the Red Sea and Gulf of Aden Region have had to address the consequences of war, civil strife, drought and famine, as well as the challenges of environmentally and socially sustainable development. In addition, demographic changes and pressures have remained major constraints. During this same period, the countries of the Region have included among the lowest in per capita income, while some have had good rates of economic growth, and one has a very high record of providing donor assistance. In spite of these significant economic, social and political differences, the countries of the Region share several environmental problems and threats. These shared concerns have provided a firm justification for regional collaborative efforts.
  
2. The Red Sea and Gulf of Aden Region, with its characteristic arid coastal zone, contains some of the world's most unique and diversified coastal and marine environments and resources. The topography ranges from nearshore, protected shallows, to exposed sandy and rocky shorelines, to depths of over 2,000 meters, giving rise to complex ecosystems and high biological diversity. Extensive mangroves, seagrass and macro-algal beds occur in the Region, forming highly productive habitats for unique species assemblages. The great variety of reef types in the Red Sea is astounding. The diversity of corals, with many species found only in the Red Sea, is greater than anywhere else in the Indian Ocean. Endemism at generic, species and sub-species levels in the Red Sea is extremely high, especially among reef fishes and reef associated invertebrates. Over 1,300 species of fishes have been recorded from the Red Sea, which is more than any other enclosed sea. The Gulf of Aden, one of the biologically least known branches of the Indian Ocean, is heavily influenced by seasonal upwelling and contains fishery resources of global importance.
  
3. Development activities in the Region are heavily concentrated in coastal areas and depend on a combination of fragile terrestrial and marine resources. While the coastal and marine environments of the Region are globally among the least disturbed, it's living and non-living resources are under increasing jeopardy. The Red Sea is one of the busiest marine transport regions of the world—estimated at 60 tankers daily. The risk of maritime pollution and environmental degradation is paramount and increasing due to the rapidly expanding energy development and maritime activities. Throughout the Region, fisheries are under pressure from over-exploitation, and in some areas, illegal fishing is causing serious impacts. Coastal habitat is being converted to urban and industrial development and limited freshwater resources are under intense pressure. Tourism and recreational use are expanding quickly in the coastal areas of some countries, especially

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<sup>1</sup> This incremental cost analysis has been previously reviewed by the GEF Secretariat and GEF Council. It was provided as Annex 1 of the GEF Project Proposal – “Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden.”

adjacent to coral reef areas. The basic social needs of many coastal communities are yet to be met.

4. These shared concerns and threats have provided a firm justification for regional collaborative efforts and integrated approaches. The key institutional framework for regional environmental cooperation consists of the Jeddah Convention and the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA). The Jeddah Convention of 1982 was the result of a UNEP supported regional inter-governmental conference, which also adopted a Program for the Environment of the Red Sea and Gulf of Aden. PERSGA serves as the official regional organization responsible for the development and implementation of regional programs for the protection and conservation of the marine environment of the Red Sea and Gulf of Aden.
5. PERSGA has been the main driving force for the development of the Strategic Action Program for the Red Sea and Gulf of Aden (SAP), supported by the PDF mechanism of the GEF and other contributions. The SAP presents an overview of the environmental trends and threats on a regional basis and recommends a program of complementary “preventive” and “curative” actions to address current and emerging issues. It delineates key measures for institutional strengthening, human resource development and expansion of public awareness at the regional, national and local levels. The SAP also reviews opportunities for the mobilization of domestic and international resources, both public and private, to undertake the program. These findings and recommendations, as well as the entire process of the SAP, have been endorsed officially by the ministerial level PERSGA Council. The PERSGA Council has also delegated responsibility to the PERSGA Secretariat to work with donor organizations and countries to develop projects stemming from the SAP.

#### **Baseline**

6. PERSGA and the cooperating countries would continue to work on a limited scale within the framework of the Jeddah Convention to address regional environmental issues and would take a limited number of actions to implement the SAP. PERSGA would provide a forum for periodic meetings to discuss transboundary issues and common problems concerning the coastal and marine environment. Implementation of the SAP would focus on a number of small-scale regional activities and a series of independent national level activities. The majority of support for the management and conservation of coastal and marine environments in the Region would continue to be on a national basis, which significantly limits the ability of PERSGA and the cooperating countries to effectively address major transboundary environmental issues. This is especially the case with regard to the management of navigation risks and their associated maritime pollution, living marine resources, and Marine Protected Areas, all of which require effective cooperation at the regional level. In addition, the adoption and implementation of Integrated Coastal Zone Management would remain a major common problem since coordinated actions to manage this zone are critical to effectively addressing issues related to navigation, living marine resources and Marine Protected Areas. Support for regional activities by international financial institutions and donor organizations would continue to be restricted to conferences and training courses. International support for environment and natural resources activities may continue at current levels and be focused on addressing national and local issues.

## Global Environmental Objective

7. The global environmental objective of the proposed Project is to support the conservation of the unique coastal and marine environment of the Red Sea and Gulf of Aden. This would be accomplished by GEF provision of catalytic support for incremental costs associated with implementation of the SAP. Consistent with the guidance for GEF Operational Program Number 9, "Integrated Land and Water Multiple Focal Area Operational Program," the SAP provides a sound technical basis for a prevention oriented project to address priority activities. The objective of this Operational Program is to support "better use of land and water resource management practices on an area wide basis." Under this Operational Program, activities are supported which have an "area wide focus, and with biodiversity considerations often included in project objectives, more proactive interventions aimed at the protection of international waters with important biodiversity are common." A major focus of this Operational Program is support of measures for "prevention of damage to threatened waters..." and these focus on "preventive measures to address threats rather than remedial, highly capital intensive measures."

## GEF Alternative

8. The GEF alternative would support a proposed Project to "operationalize [a] sustainable development strategy" for the Red Sea and Gulf of Aden. This would be accomplished through GEF support to facilitate key measures for implementation of the SAP, combined with additional resources from a large number of domestic and international sources. The participation of GEF would provide support for incremental costs needed to remove barriers to implementation of the SAP, including additional transaction costs for joint planning activities, development of common approaches to sectoral policies, data collection and analyses, and coordination of efforts among the participating countries. Consistent with the objectives of the GEF, the proposed Project supports complementary policy and technical measures on a regional basis for reduction of navigation risks and associated maritime pollution; management of important living marine resources shared by the cooperating countries; development of a network of representative Marine Protected Areas to conserve unique biodiversity; and support for Integrated Coastal Zone Management to protect the critical interface between the terrestrial and marine environments.
9. The proposed Project, consistent with GEF guidance, would contribute significantly to the "reduction of stress to the international waters environment" in this region and support PERSGA and the cooperating countries in "making changes in their sectoral policies, making critical investments, [and] developing necessary programs" to achieve these objectives. The long-term commitment on the part of the concerned governments is demonstrated by the Jeddah Convention, support for PERSGA, participation in the SAP Task Force, and a direct role in the Country Reports and Regional Studies, which cooperatively identified priority actions. The support of GEF will play an important catalytic role in the Project, and the participation of the European Community, international financial institutions, donors and the private sector will also contribute to this multi-country and multi-stakeholder effort. The emphasis in the individual Project components on the evaluation of sustainable mechanisms for self-financing of a number of activities would contribute to the long-term financial sustainability of Project initiated actions.

10. The GEF alternative would support a regionally led initiative to promote the management and conservation of the coastal and marine resources of the Red Sea and Gulf of Aden. It would greatly facilitate the ability of PERSGA and the cooperating countries to address transboundary environmental issues and common natural resources management concerns at the regional level. The GEF alternative would allow for the realization of a dynamic action oriented work program for implementation of the SAP, to be undertaken on an accelerated basis with support from a variety of sources. These goals would be realized through support for the following specific Project objectives:
  - (a) *Institutional strengthening to facilitate regional cooperation.* This Project component will strengthen PERSGA's capacity in policy planning, program management and regional coordination, which are essential for the effective implementation of the SAP. It will make use of active participation of national and regional expert groups in fulfilling PERSGA's responsibilities in the SAP, hence further enhancing regional cooperation and technical transfer among the countries involved. The component will also provide technical support to the national PERSGA focal points, facilitating the effective implementation and coordination of program activities at the national level.
  - (b) *Reduction of navigation risks and maritime pollution.* This component places emphasis on cost-effective preventive measures to reduce navigation risks in the Region, including Port State Control, Traffic Separation Schemes, Vessel Traffic Systems, navigation aids, and supportive training and awareness promotion. The Project will capitalize on the PERSGA Navigation Working Group, which supported the preparation of the Navigation Risk Assessment and Management Plan for the Region.
  - (c) *Sustainable use and management of living marine resources.* This component is designed to develop strategies for the management of transboundary living marine resources, including threatened or endangered migratory species. The component will strengthen the capacity for management and monitoring of the resources through technical assistance and training. Special effort will be made to promote the participation of fishermen in these activities. Support will be provided to develop the legal and institutional framework for regional cooperation in the management of transboundary resources.
  - (d) *Development of a Regional Network of Marine Protected Areas (MPAs).* During the SAP process, twelve declared and proposed/suggested MPAs, representing different ecosystem types and biodiversity richness and uniqueness, have been identified as regionally or globally important. The proposed component will emphasize institutional and capacity building, including resource mobilization, for effective management of these MPAs. It will focus on these priority sites while at the same time retaining a regional approach in planning, management and provision of training.
  - (e) *Support for Integrated Coastal Zone Management (ICZM).* This component will enhance the exchange of lessons learnt between countries at different stages of practicing ICZM, and provide cost-effective regional training in related fields, including environmental assessment, monitoring and evaluation. It will also aim at reinforcing the capacity of national and local governments, including environmental and other sectoral ministries, in developing and implementing ICZM. Effective national ICZM will contribute to the management of the globally significant coastal environments and biodiversity of the Region.

- (f) *Enhancement of public awareness and participation.* This component will promote broad-based public awareness initiatives, facilitate dialogues among local environmental NGOs, community groups, private sector and the Governments. The activities of this component will be developed in line with the thematic areas of maritime pollution, sustainable use of living resources and coastal zone management, and will provide support for other components of the Project.
- (g) *Monitoring and evaluation of program impacts.* This component will develop regional, standardized procedures with specified indicators to monitor and evaluate progress and impacts of the different components of the program in line with the evolving GEF monitoring and evaluation guidance. This is essential for the insurance of effective Project implementation and provides timely warning for needed adjustments and improvements.

### **System Boundary**

- 11. The time boundaries for this Project are the five-year Project period during which it will be implemented. Some of the benefits will clearly continue to accrue beyond this time boundary. However, all the listed benefits will be achieved during the five-year implementation period.
- 12. The area of the Jeddah Convention, which includes the Red Sea and the Gulf of Aden, defines the geographic boundary of the Project.
- 13. The issues to be dealt with within the boundary of the Project are:
  - (a) inadequate institutional capacity for the management of transboundary environmental issues;
  - (b) navigation risks and maritime pollution;
  - (c) exploitation of living marine resources;
  - (d) lack of management capacity for Marine Protected Areas of regional/global importance;
  - (e) coastal habitat destruction and environmental degradation;
  - (f) low public awareness and participation in environmental and resource management; and
  - (g) lack of recognized methodology for Project monitoring and evaluation.
- 14. The design of the proposed Project has taken into full consideration its complementarity with other existing projects in the Region and is developed to maximize regionality and holistic management by ecosystems and issues.

### **Incidental Domestic Benefits**

- 15. While PERSGA has made a good start in regional cooperation, significant support over the short and medium-term is required to overcome institutional, human resource and information barriers to successful management of transboundary and common environmental issues in the Red Sea and Gulf of Aden. Over the long-term, a variety of domestic benefits would occur through implementation of the proposed Project; however, these benefits would not be realized without critical catalytic transitional support from GEF. The most valuable domestic benefits to be gained from the Project are associated with substantially strengthened institutional and human capacity in environmental planning, natural resources management and regional cooperation. Long-term domestic benefits associated with the proposed Project would include the reduction of navigation risks in international and national waters of the Region. This would result in lower



shipping costs and obviate the need for major expenditures for emergency management and clean-up activities. Potential domestic benefits from measures for the management of living marine resources and Marine Protected Areas would be realized only after Project supported activities are fully adopted and used as the basis for management programs. In the case of coastal zone management, benefits may be realized in the medium-term through implementation of decisions that improve spatial planning and avoid unsustainable development patterns in these fragile areas. These benefits would be significantly greater if, as planned under the Project, there is support for widespread adoption of Integrated Coastal Zone Management throughout the Region.

### **Costs**

16. The incremental costs required to achieve all outputs of the Project amount to US\$ 36,606,000, of which US\$ 19,000,000 is being sought from the GEF. The GEF contribution will be allocated as follows:

	<u>Project Component</u>	<u>US\$</u>
1.	Institutional strengthening for regional cooperation	2,315,000
2.	Reduction of navigation risks and maritime pollution	3,500,000
3.	Sustainable use and management of living marine resources	3,366,000
4.	Development of a Regional Network of MPAs	3,270,000
5.	Support for ICZM	2,110,000
6.	Enhancement of public awareness and participation	2,546,000
7.	Monitoring and evaluation of program impacts	496,000
8.	Support for Project Management Unit	1,397, 000
	<b>TOTAL</b>	<b>19,000,000</b>

### **Agreement**

17. The technical contents of the Project, including the incremental cost analysis, have been negotiated with the Governments of Djibouti, Egypt, Jordan, Saudi Arabia (non-GEF funding), Sudan and Yemen, and the local authorities of the northern Somalia coast.



### Detailed Incremental Cost Matrix and Calculation for World Bank Implemented Outputs

Project Component	Cost Category	Cost (\$million)	Domestic Benefits	Global Environmental Benefits
1. Reduction of Navigation Risks and Maritime Pollution	Baseline	94.895	Few countries have ratified MARPOL and no regional agreement has been developed on Port State Control. Navigation aids have been installed at main traffic lanes and port entrances, but they are few and poorly maintained. Most but not all countries have national oil spill contingency plans. Some training for preparedness and combating of oil spills, and port management at national levels but far from adequate.	Weak implementation of existing protocols and an absence of a Regional Agreement of Port State Control. Reduction of navigation risk at the entry of the Gulf of Suez and Strait of Tiran through installation of planned Vessel Traffic Systems (VTS); however, major risks would occur in the southern Red Sea where a Traffic Separation Scheme (TSS) is needed and in the Bab al Mandab which requires a VTS. Hazardous navigation conditions in the vicinity of some ports due to weak rules, limited training of staff and outdated charts. Regional coordination for oil spill response remains underdeveloped.
	Alternative	98.459	Reduced local navigation risks and maritime pollution. Ratification and implementation of international conventions would support improved navigation and safety standards. Support provided for development and implementation of Port State Control, preparation of updated port rules, and training of specialized personnel. Improved TSS, communications, navigation aids, charts and emergency procedures for major ports in the region would reduce local risks. Working Group would share lessons learnt and disseminate good practices at the national level.	Major reduction in risks of global/regional environmental degradation from maritime traffic and pollution through establishment and implementation of an effective "prevention" oriented program. Technical coordination of the program by a Regional Working Group which can conduct activities beyond the life of the Project. Key benefits would include: expanded ratification of international conventions; development of a Regional Agreement on Port State Control and training of personnel to implement this agreement; establishment of a TSS and VTS to reduce risks in the southern Red Sea and Bab al Mandab; preparation of national and port oil spill contingency plans; strengthened regional and sub-regional cooperation for emergency management; and identification and dissemination of good practices. Provides a model that can be replicated in other areas.
	Increment (GEF)	3.564 (3.500)		

Project Component	Cost Category	Cost (\$million)	Domestic Benefits	Global Environmental Benefits
2. Support for Integrated Coastal Zone Management	Baseline	55.898	Poorly coordinated development of valuable coastal zones predominates in most countries of the Region and institutional capacity to address these issues is weak. This results in unnecessary degradation of important coastal habitats with significant adverse secondary impacts on marine habitats. Inadequate consideration of environmental issues in coastal zone development results in insufficient investment in management of water, wastewater and solid waste. Tourism is often developed without attention to impacts and infrastructure requirements.	None
	Alternative	58.308	Strengthened institutional and human capacity in each country to develop and implement national ICZM.	Adoption of common regional approaches to ICZM results in reduced environmental degradation and loss of coastal habitats for migratory species and global biodiversity; by catalyzing the development and implementation of national ICZM through regional training, exchange of lessons learnt and sustainable financing. Supportive environments provided for components 2, 3 and 4.
	Increment (GEF)	2.410 (2.110)		
<b>Project support services</b>	Increment (GEF)	1.397 (1.397)		
<b>Totals</b>	Baseline	270.994		
	Alternative	307.600		
	<b>Increment (GEF)</b>	<b>\$36.606 (\$19.000)</b>		

#### Footnotes to Incremental Cost Matrix:

Sources of Non-GEF funding that contribute to the baseline costs include the Danish, Dutch, German, Japanese, US and Saudi Arabia Governments, the Governments of the participating countries, and multi-lateral donors and international agencies including the EU, IFAD and World Bank. The list of projects relevant to the different components of the proposal is presented in Annex 7.

Sources of co-financing that contribute to the incremental costs of the program include contributions under negotiation from the participating countries, European Commission, Islamic Development Bank, PERSGA and UNDP.

## Annex 5

**REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC  
ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN**

**Financial Summary**

	Implementation Period					Operational Period			
	99	00	01	02	03	04	05	06	07
<b>Project Costs (US\$ Millions)</b>									
Grant Costs Component 2 (Navigation Risk)	0.295	1.813	1.312	0.342	0.088	0.2	0.2	0.2	0.2
Grant Costs Component 6 (ICZM)	0.336	0.744	0.631	0.524	0.108	0.3	0.3	0.3	0.3
<b>Total*</b>	<b>0.640</b>	<b>2.50</b>	<b>1.96</b>	<b>0.90</b>	<b>0.20</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>
<b>Financing Sources (% of total Project costs)</b>									
GEF	90%	90%	90%	90%	90%				
Co-financiers Governments									
PERSGA						50%	50%	50%	50%
Local (in kind)	10%	10%	10%	10%	10%	50%	50%	50%	50%
User Fees/Beneficiaries									
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* Total includes both the GEF Grant of US\$5.61 million and support from PERSGA and in kind contributions from cooperating countries of US\$0.62 million.

Main assumptions: Upon completion of the GEF Grant Financed Implementation Period, PERSGA—through the support of the member Governments and other Grant support—will cover the operational and management costs of the Aids To Navigation and ICZM Components.

## Annex 6

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

## Procurement and Disbursement Arrangements

### A. Procurement Methods (See Table A)

1. **Procurement Procedures.** Procurement of works and goods financed by the GEF Trust Fund will follow the World Bank's "*Guidelines for Procurement under IBRD Loans and IDA Credits*" dated January 1995, and revised January and August 1996 and September 19, 1997. Procurement of services financed by the GEF Trust Fund will follow the World Bank's "*Guidelines for Selection and Employment of Consultants by World Bank Borrowers*" dated January 1997 and revised September 1997. The World Bank's standard bidding documents and contracts will be used. All procurement will be handled centrally by the Project Management Team (PMT) to be established at the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) in Jeddah, Saudi Arabia. These activities will be coordinated by the Procurement and Finance Specialist of the PMT who will receive training on World Bank procurement procedures.
2. **Goods and Equipment (US\$440,000).** The lighthouse equipment and installation contract estimated to cost US\$80,000 equivalent will be subject to International Competitive bidding (ICB). For goods estimated to cost between US\$20,000 and US\$200,000 and for specialized types of scientific and technical equipment, contracts will be awarded on the basis of the Bank's international shopping procedures (IS), where price quotations will be obtained from at least three qualified suppliers from at least two eligible countries. Contracts below US\$20,000 will be awarded on the basis of national shopping procedures where quotations will be obtained from at least three qualified suppliers. In the case of the northern coast of Somalia some off-the-shelf goods may be obtained from a United Nations Agency.
3. **Services (US\$3,716,000):** Consultants financed under the Project will be selected in accordance with Bank consultant guidelines and by using the Bank's Standard Request for Proposals. Specialized consultant services, technical materials, training, workshops, seminars and miscellaneous will be contracted to professional firms, NGOs, local groups, and individuals using quality based selection (QBS) or selection based on consultants' qualifications (CQ) (for small contracts under US\$50,000) and output based contracts. Since it is vital that these services be of the highest professional quality for the development of the long-term program framework, price will not be a factor in the selection. The firms could, at their prerogative, sub-contract specific parts of the contract to qualified local groups or NGOs. The PMT will enter into a direct contract for a single-source selection to the United Kingdom Hydrographic Office (UKHO) for quality assurance support for hydrographic survey activities to make certain they meet international standards and can be directly used by the UKHO for updating navigational charts. It should be noted that under international agreements the UKHO has responsibility for supervision and production of all official navigation charts of the Red Sea and Gulf of Aden. It is estimated that this contract will be for less than US\$100,000.
4. **Incremental Operating Costs (US\$1,454,000).** The GEF grant will finance incremental operating costs consisting of salaries and operating costs for the Project Management Team (PMT), Navigation

Working Group and the ICZM Working Group. This will include: (a) salaries and per diem paid to staff and working group members engaged under the Project; (b) travel expenses for staff and working group members engaged under the Project to attend meetings; (c) operation and maintenance of equipment used under the Project; (d) consumable office supplies; (e) telecommunications pertaining to the Project; and (f) use of office space for facilities required outside of PERSGA. Evidence of actual expenses will be retained by the PMT and will be reviewed by Bank staff randomly during supervision missions.

5. **Prior Review Thresholds (Table B).** The World Bank will conduct a prior review of the following procurement documentation:

- (a) **Goods and Equipment:** For all ICB contracts and contracts over US\$50,000: the bidding documents (or request for quotations), the technical specifications, evaluation report and draft contract will be submitted to the Bank for “no objection.” The first three goods and equipment contracts below US\$50,000 will also be subject to prior review, including the request for quotations, technical specifications, evaluation request and the draft contract or purchase order.
- (b) **Services:** For contracts above US\$50,000: Terms of Reference, cost estimates request for proposals with selection criteria, evaluation reports and draft contract will be submitted of the Bank for “no objection;” for contracts below US\$50,000 Terms of Reference and cost estimates will be subject to the Bank’s prior review (for contracts concerning training and study tours, where no Terms of Reference are used, the objectives, scope, targeted beneficiaries and estimated cost will be reviewed).

All sole-source selections will be subject to prior review.

- (c) **Processing:** All procurement packages will be prepared by the Procurement and Finance Specialist at the PMT following the procurement plan and procedures agreed with the Bank. The specialist will forward these packages to the Bank for prior review and 'no objection', as required. All procurements which are not subject to prior review will be reviewed on a random basis during supervision missions.

## B. Disbursement

6. **Allocation of GEF Grant Proceeds (see Table C)**

- (a) **Disbursements:** The grant will be disbursed against 100% of eligible foreign expenditures, 100% of local expenditures (ex-factory cost), 85% of local expenditures for goods and equipment procured locally; 75% of local expenditures for works; and 100% of eligible expenditures for consultant services and operating costs.
- (b) **Use of Statements of Expenses (SOEs):** Disbursement will be made on the basis of Statement of Expenditures (SOEs) for: (a) expenditures for goods under contracts below US\$50,000 equivalent; (b) for consultant services and training under contracts for firms below US\$100,000 equivalent; (c) for consultant services and training under contracts for individuals below US\$50,000 equivalent; and (d) travel and subsistence expenditures with respect to Consultants' services and training activities below US\$10,000 equivalent

per person. The appropriate documentation will be retained by the PMT and made available for review by the auditors and for examination by Bank supervision missions.

- (c) ***Special Account:*** A Special Account denominated in US Dollars will be established by PERSGA in a bank acceptable to the World Bank under terms and conditions satisfactory to the Bank. The authorized allocation of the Special Account is US\$300,000 for the equivalent of 4-5 months disbursements. The Special Account will be administered and replenished in accordance with Bank guidelines, details of the disbursement procedures will be included in the initial Disbursement Letters to be issued by the World Bank.



**Annex 6, Table A: Project Costs by Procurement Arrangements**

(in US\$ thousands equivalent)			
Expenditure Category	Procurement Method		
	ICB	NCB	Other
<b>1. Goods and Equipment</b>			
(a) Computers and Software			360,000
(b) Lighthouse Installation	80,000		
			440,000
<b>2. Services</b>			
(a) Port State Control Training			389,000
(b) Hydrographic Survey			1,546,000
(c) VTS Feasibility Study			100,000
(d) VTS Training			30,000
(e) Other Services and Training			1,651,000
			3,716,000
<b>3. Incremental Operating Costs</b>			
(a) Staff Salaries, Travel, Operating Expenses, etc.			1,454,000
<b>Total</b>	80,000		5,530,000
			5,610,000

Note: Other = The procurement arrangement for the items listed under "Other" are explained in the text.

**Annex 6, Table B: Thresholds for Procurement Methods and Prior Review**

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US \$ thousands		US \$ millions
1. <u>Goods</u>	<200,000*	ICB/IS	Contracts >50,000 and ICB contract
	>20,000		
	<20,000	NS	
2. <u>Services</u>	>50,000		TOR, RFP, evaluation reports, contracts, estimate
	<50,000		TOR, estimate
Total value of contracts subject to prior review:			3,900,000 (62%)

\*Note: All Specialized Scientific Contracts will also be IS.

**Annex 6, Table C: Allocation of Grant Proceeds**

Expenditure Category	Amount in US\$ thousands	Financing Percentage
1. Goods	440,000	100% of foreign expenditures 100% of local expenditures 85% of local expenditures for items procured locally
2. Services (TA, Training and Studies)	3,716,000	100%
3. Incremental Operating Costs	1,454,000	100%
Total	5,610,000	100%

## Annex 7

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

## Project Processing Budget and Schedule

A. Project Budget (US\$000)	<u>Planned</u> (At final PCD stage)	<u>Actual</u>
GEF PDF Block B (UNDP, UNEP, World Bank)	\$340,000	\$340,000
Government of Norway (Trust Fund)	\$100,000	\$100,000
PERSGA	\$70,000	\$70,000
UNDP	\$50,000	\$50,000
World Bank	\$50,000	\$50,000
 B. Project Schedule	 <u>Planned</u> (At final PCD stage)	 <u>Actual</u>
Time taken to prepare the Project (months)	12 months (to date)	12 months
First Bank mission (identification)	January 23, 1998	January 23, 1998
Appraisal mission departure	December 12, 1998	December 12, 1998
Negotiations	December 17, 1998	January 8, 1999
Planned Date of Effectiveness	March 1, 1999	April 1, 1999
Prepared by: Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) with the assistance of UNDP, UNEP and World Bank		
Preparation assistance:		
Global Environment Facility (PDF-B Grant)		
Government of Norway (Trust Fund)		
Government of Saudi Arabia		
Islamic Development Bank		
United Nations Development Program		
United Nations Environment Program		
Bank staff who worked on the Project included:		
Name	Specialty	
Stephen F. Lintner	Environmental Specialist	
Jocelyne Albert	GEF Regional Coordinator	
Mohammed Bekhechi	Legal Advisor	
John Bryant Collier	Environmental Specialist	
Kristin Elliott	GEF Regional Coordinator	
Andrina A. Ambrose-Gardiner	Financial Management Specialist	
Nicole Glineur	Peer Reviewer	
Katherin Golitzen	SAP Production Coordinator/Editor	
Hassan M. Hassan	Peer Reviewer	
Anthony J. Hooten	Environmental Specialist	
Samia Msadek	Financial Management Specialist	
Kristine Schwebach	Project Assistant	
Charles Sterling	Financial Analyst	

## **Annex 8**

### **REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN**

#### **Documents in the Project File\***

##### ***A. Project Implementation Plan***

PERSGA, UNDP, UNEP and World Bank. 1998. Strategic Action Program for the Red Sea and Gulf of Aden. Project Implementation Plan.

##### ***B. Bank Staff Assessments***

###### *Key SAP Documents*

PERSGA, GEF, UNDP, UNEP and World Bank. 1998. Strategic Action Program for the Red Sea and Gulf of Aden (3 Volumes).

PERSGA, UNDP, UNEP and World Bank. 1997. GEF Proposal for Review - Implementation of the Strategic Action Program (SAP) for the Red Sea and Gulf of Aden

UNDP. 1998. Project Brief for Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden - UNDP Components.

UNEP. 1998. Project Brief for Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden – Institutional Strengthening to Facilitate Regional Cooperation - UNEP Component.

###### *Supporting Documents*

Hatzios, Marea, Carl Gustaf Lundin and Anders Alm. 1996. Africa: A Framework for Integrated Coastal Zone Management (Second Edition). World Bank.

Hatzios, Marea (et.al.) 1998. Assessment of Integrated Coastal Area Management Initiatives in the Mediterranean: Experience of METAP and MAP (1988-1996). MNSRE Technical Paper. World Bank (English and French).

Kelleher, Graeme, Chris Bleakley and Sue Wells (eds.). 1995. A Global Representative System of Marine Protected Areas. Great Barrier Marine Park Authority, World Bank and IUCN. (4 Volumes).

Lintner, Stephen F., Sherif Arif and Marea Hatzios. 1996. The Experience of the World Bank in the Legal, Institutional and Financial Aspects of Regional Environmental Programs: Potential Applications of Lessons Learned for the ROPME and PERSGA Programs. World Bank (Arabic and English).

World Bank. 1994. Forging a Partnership for Environmental Action: An Environmental Strategy Towards Sustainable Development in the Middle East and North Africa. (Arabic, English and French).

***C. Other***

Government of Germany and World Bank. 1998. "Petersberg Declaration." Proceedings of the 1<sup>st</sup> Petersberg Round Table - International Dialogue Forum on Global Water Politics - Cooperation for Transboundary Water Management.

Government of Germany and World Bank. 1998. "Berlin Recommendations - Lessons Learned, Challenges and Issues for the Future." Proceedings of the Berlin International Round Table on Transboundary Management – Experience of International River and Lake Commissions.

Hatzios, Marea, Anthony J. Hooten and Martin Fodor (eds.). 1998. Coral Reefs: Challenges and Opportunities for Sustainable Management. Proceedings of an Associated Event of the 5th Annual World Bank Conference on Environmentally and Socially Sustainable Development. October 9-11, 1997. World Bank.

Helsinki Commission. 1998. Baltic Sea Joint Comprehensive Environmental Action Program: Background Document on Recommendations for Updating and Strengthening.

Hooten, Anthony J. and Marea Hatzios (eds.). 1995. Sustainable Financing Mechanisms for Coral Reef Conservation: Proceedings of a Workshop. Environmentally Sustainable Development Proceedings Series No. 9. World Bank.

\*Including electronic files.

## Annex 9

### REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

#### Red Sea and Gulf of Aden at a Glance

	Egypt	Jordan	Saudi Arabia	Sudan	Yemen	Djibouti	Somalia
Area (million km <sup>2</sup> )	1.01	0.09	2.25	2.51	0.53	0.02	0.64
Estimated length of Red Sea/Gulf of Aden Coastline (kms) <sup>a</sup>	1,800	26	1,840	853	2,200	370	1,300 <sup>b</sup>
Total population (millions)	65.9	4.9	19.4	28.0	13.2	0.6	9.2
Population in coastal urban areas on Red Sea and Gulf of Aden (millions) <sup>c</sup>	0.62	0.06	2.50	.70	1.20	0.50	0.27
Projected population growth rate (1993–2000)	2.0	3.8	3.1	2.7	3.7	2.1	2.7
Urban population growth rate	2.6	4.7	3.6	4.6	6.6	7.6	4.3
GDP per capita	3,847	4,187	9,338	1,084	805	1,270	712*
Literacy rate	50.5	85.5	61.8	44.8	41.1	45	24.9*
HDI	.614	.73	.77	.33	.33	.31	.22*
HDI rank	109	84	73	158	148	162	172*

Sources: Except where noted below, Human Development Report 1997, UNDP; World Resources 1994–1995 and 1996–1997, World Resources Institute, and the World Development Indicators 1998, World Bank.

- a Source: Country Reports prepared for the Strategic Action Program for the Red Sea and Gulf of Aden.
- b This is for the North Coast of Somalia, which is included under the Jeddah Convention as part of the PERSGA area.
- c Source: Country Reports prepared for the Strategic Action Program for the Red Sea and Gulf of Aden.

\* = 1994 data (more recent data unavailable).

HDI = Human Development Index.

## Annex 10

### REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

#### Public Participation Summary

1. *Participatory Approach.* Experience from a number of GEF and World Bank supported regional environmental programs has demonstrated the importance of broad-based public support for their successful development and implementation. This is especially important given the long-term time frame under which these programs are implemented and the need to take both “preventive” and “curative” actions to address the various causes of environmental degradation. The sustained support of stakeholders requires specific measures and a UNDP-implemented component of the GEF-funded SAP implementation process will support “Enhancement of Public Awareness and Participation.”
2. *SAP Preparation.* An important element of SAP preparation was the use of a consultation process for development and review of the Country Reports, Navigation Risk Assessment and Management Plan, and the Study on the Status of the Living Marine Resources in the Red Sea and Gulf of Aden and their Management. This process demonstrated that both regional and national level consultations can contribute significantly to the development of a better strategy that is more firmly based on “facts on the ground” and can be more readily implemented due to broad-based support for the recommended interventions. They also showed that effective dialogue can take place between representatives of PERSGA, national and local governments, academic and applied research institutions and nongovernmental organizations in development and implementation of program and project activities in support of the SAP. Expanded use of these approaches will provide widespread information to decision-makers, user groups and the public concerning the fragility of coastal and marine resources and measures needed for their efficient use and protection.
3. *Consultative Process.* The development of the SAP has been a collaborative process whereby national experts have cooperated to produce reports that analyze environmental issues of regional, national and local significance. National reports were prepared by all cooperating countries and field surveys were conducted in countries where baseline data are limited. To widen participation and facilitate consensus building, a series of four regional Task Force meetings were held to support joint preparation and review of the SAP. National workshops were held to support development of Country Reports and to identify priority actions required by each country to promote environmental management of the coastal and marine environment. The activities of the Regional Navigation Working Group benefited from major workshops held in Egypt and Yemen, which brought together maritime experts from throughout the region
4. *Implementation Phase.* During the implementation phase of the SAP, the participatory process will be continued both through the special component designed to address participation and through actions under the other components. The two Bank-managed components of the SAP include the following activities to support the use of participatory processes:
  - (a) *Component 2.* This component will assist national governments and local populations in supporting preventive measures to avoid potential adverse impacts associated with navigation accidents and marine pollution. The component will be implemented by the Navigation Working Group that includes representatives of the major stakeholders in maritime affairs issues in the region. In the policy elements of the component, measures will be taken to conduct a series of outreach activities for government, stakeholders and the public concerning the scope and objectives of these agreements, methods for their

implementation and their benefits to the public and the environment. Input will also be sought from maritime stakeholder groups in decisions concerning the use of Traffic Separation Schemes and Vessel Traffic Systems.

- (b) *Component 6.* Under this component, support will be provided on a regional basis, and on a national basis in the four southern countries, to improve the participation of communities in the management of coastal and marine resources and to improve social welfare by promoting sustainable use of these critical and fragile resources. Special attention will be given to the needs of individuals involved in locally-based commercial and artisanal fishing operations. Field surveys conducted in Djibouti, the northern coast of Somalia, Sudan and Yemen included a range of informal meetings with local authorities and residents of coastal communities. The model ICZM plans to be supported in the four southern countries will expand upon this experience and increase the participation of local communities and stakeholders in planning and management of coastal and marine resources.

5. *Project Monitoring and Evaluation.* The Mid-Term and Final Evaluations for the project will include review of the level and quality of participation by a range of stakeholders in the implementation process, their perceived satisfaction with different types of SAP-supported activities, and evaluation of the quality of the activities undertaken by the project.



## Annex 11

### REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

#### Threats to Coastal and Marine Environments and Resources

Threats to Coastal and Marine Environments and Resources					
Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
<b>Habitat Destruction:</b>					
Coastal development	Extensive dredging and filling; change of currents and coastal processes; destruction of coral reefs, intertidal areas, lagoons, seagrass beds and sabkhas	Large-scale urban and industrial development; port development and maintenance dredging; tourist development	Inadequate environmental planning guidelines for coastal development; lack of enforcement; limited use of environmental assessment; limited awareness	Localized, throughout the Region; concentrated in urban, industrial, tourism areas and free zones	Moderate to severe
Beach mining and quarrying	Disturbance of sandy beaches, increased sedimentation, smothering of seagrass and corals	Sand collecting and quarrying for coral rock	Lack of regulations, and lack of enforcement	Localized	Low to moderate
Mangrove destruction	Deterioration of mangrove habitats; decreased fish and shrimp catches; reduced water quality; coastal erosion	Landfill, camel grazing, wood collection, shrimp farm construction, decreased freshwater supply	Mangroves exist under sub-optimal conditions; lack of regulations and management, lack of awareness, damming of wadis and rivers; increased population pressure	Regional	Moderate to severe
Destruction of seagrass beds and other sub-tidal habitats	Signs of physical disturbance; loss of seagrass-associated species	Trawling, including illegal trawling by foreign vessels; coastal dredging and filling; release of untreated waste waters from municipalities and shrimp/fish farms	Lack of adequate regulations and enforcement; limited awareness; limited knowledge of seagrass distribution	Localized, adjacent to urban and industrial areas; trawling impacts severe in Gulf of Suez, southern Red Sea and Gulf of Aden	Moderate to severe
Physical damage to coral reefs	Loss of coral habitat by collision and removal; indirect impacts through siltation; declining reef-associated fauna	Anchor damage, coral mining, ship groundings	Poor navigational control systems and error; lack of moorings; lack of awareness; inappropriate mining operations; inadequate training	Regional	Moderate to severe

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Damage to coral reefs by visitors	Coral breakage by visitors; decrease in live coral cover; decline in reef-associated fauna; presence of solid waste	Trampling of shallow reef flats, breaking of corals, collecting of marine souvenirs; anchor damage	Lack of education about sensitivity of marine ecosystems; lack of management; lack of enforcement	Northern Red Sea and western Gulf of Aden; problem anticipated to spread Region-wide	Moderate to severe
<b>Exploitation of Living Marine Resources:</b>					
Overfishing of finfish for local and export markets	Decline in landings, decrease in average size	Increased fishing efforts, landing beyond Maximum Sustainable Yield	Lack of stock assessment and reliable statistics hampers fisheries management; mangroves destroyed; lack of surveillance and enforcement of existing regulations	Regional	Moderate to severe
Capture of sharks for shark fin market, frequently in areas beyond territorial waters	Decline in shark stocks; Other impacts include bycatch of turtles, dolphins and finfish	Increased fishing effort, use of nets in shark fisheries, high profits	Lack of surveillance and enforcement of existing regulations; expanding demand outside the Region for shark fins	Regional	Severe
Overfishing of shrimp and lobster for export markets	Decline in catches, decrease in average size	Increased fishing effort, illegal fishing	Lack of monitoring and enforcement of existing regulations; lack of stock assessment hampers resource management; destruction of nursery habitats (mangroves and seagrasses); illegal trawling	Gulf of Aden and southern Red Sea	Severe
Overfishing of cuttlefish for export markets	Decline in catches	Fishing effort beyond Maximum Sustainable Yield, improper fishing practices	Lack of monitoring and enforcement of regulations; lack of trained staff for surveillance	Gulf of Aden	Severe
Overfishing of <i>Strombus</i> for local markets	Decline in landings	Increased fishing efforts	Lack of stock assessment hampers resource management	Southern Red Sea	Severe
Overfishing of sea cucumber for export markets	Decrease in average size	Increased fishing efforts in limited areas	Lack of stock assessment hampers resource management	Southern Red Sea and Gulf of Aden	Low to moderate

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Turtle capture and egg collection by local fishermen and communities; sale of shells to tourists and for export	Decrease in nesting populations	Need for subsidiary food supply in areas of poor fish resources; Economic returns from sales to tourists; Bycatch of turtles in fisheries; Lack of turtle-excluding devices	Lack of public awareness, lack of alternative food sources; lack of enforcement and stock assessment; lack of protection of eggs from stray dogs	Southern Red Sea and Gulf of Aden	Severe
Collection of corals and mollusks for souvenir trade	Breakage of corals and decline of live coral cover; decline in reef-associated fauna	Unregulated collection of corals and mollusks	Expansion of tourism; lack of awareness; lack of regulations and enforcement	Regional, especially the central and southern Red Sea	Moderate to severe
Ornamental fish collection for export	Potential decrease in reef fish populations, damage to the reef	Potential overfishing of individual species, destructive fishing methods	Lack of stock assessment, monitoring and management; lack of collector training	Localized, throughout the Region	Presently low
Conservation of marine mammals (especially dugong)	Potential decline in populations (dugong as an endangered species)	Accidental capture in fisheries	Lack of awareness	Regional	Moderate to severe
Spearfishing	Decline in size and stocks of reef fish; reef fish avoid divers	Indiscriminate spearing of many species of reef fishes, of all sizes; often in dive sites	Lack of enforcement of existing regulations; lack of relevant legislation in some countries	Localized, throughout the Region	Locally severe
Shrimp and fish farming	Irreversible conversion of coastal habitats; mangrove destruction; declining water quality; modification of coastline	Pond construction; mangrove destruction resulting in reduced water quality; use of chemicals, hormones and nutrients	Lack of regulations and poor planning	Currently localized with a growing potential throughout the Region	Severe
<b>Navigation Risks and Maritime Transport:</b>					
Regional navigation risks	Extensive and routine risks of ship collisions and groundings in major international traffic lanes	Limited navigational devices and poorly separated traffic; weak regional coordination on navigation issues; inaccurate navigational charts	Complex navigational hazards combined with heavy maritime traffic, including large-scale movement of oil and other cargoes	Regional, with serious issues in the Gulf of Suez, Gulf of Aqaba and the Bab-al-Mandab	Moderate to severe

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Local navigation risks	Extensive and routine risks of ship collisions and groundings in approaches to major and minor ports, oil loading facilities and near coral reefs	Limited navigational devices and poorly separated traffic; weak regional and national coordination on navigation issues; inaccurate navigational charts; increasing local traffic by small vessels	Complex navigational hazards due to limited depth of shipping channels and approaches to ports; large volumes of maritime traffic which includes a variety of vessels operating with a wide range of safety standards	Significant problems in areas of major ports and key oil loading facilities; Anticipated to become a concern in areas adjacent to proposed free ports and free zones;	Moderate to severe
<b>Petroleum and Mineral Development and Transport:</b>					
Oil and gas exploration and production	Construction debris; tar balls and slicks on beaches and in water	Capped wells as a navigation hazard; seepage of oil; production emergencies including blow-outs; pipeline breakages	Normal risks associated with oil exploration and production, made worse by poor operator performance and poor field procedures	Gulf of Suez, northern Red Sea and southern Red Sea	Moderate to severe
Small oil spills (< 20 tons)	Beach contamination, damage to coastal and marine biota	Discharge of ballast and bilge water, bunker oil spill	Lack of reception facilities at ports; inadequate control, lack of enforcement	Localized, throughout the Region	Moderate
Medium oil spills (< 100 tons)	Beach contamination, damage to coastal and marine biota	Discharges from pipelines or terminals, small accidents at sea	Inadequate control and monitoring of procedures, equipment and personnel; Inadequate training	Localized, throughout the Region	Moderate to severe
Potential large oil spills and disasters	Destruction of coastal and marine habitats and biota, devastation of beaches	Rupture of oil tanks in collision or wreckage	Insufficient tanker safety specifications; Poor navigation aids	Localized, throughout the Region	Severe
<b>Industrial Activities:</b>					
Surface and groundwater use	Excessive exploitation for industrial use and cooling; re-allocation to industrial uses; draw-down of limited groundwater resources; saltwater intrusion into coastal aquifers	Use of industrial technology often with inadequate concern for water conservation and excessive pumping of groundwater resources	Allocation of limited surface and groundwater sources for industrial use with limited regard for overall usage needs and inadequate pricing; lack of incentives for water conservation; poor regulation of water exploitation	Regional, especially in coastal urban areas	Moderate to severe
Industrial chemical spills	Health risk, potential damage to marine life	Accidental spill during transport, storage or use of chemicals	Inadequate monitoring and control of hazardous substances	Localized, vicinity of chemical industrial installations	Moderate to severe
Cooling water discharges	Increased temperatures, alteration of marine environment	Release of high temperature cooling waters from power plants, industries and desalinization plants	Inadequate thermal pollution control standards	Localized in the vicinity of power plants, industries and desalinization plants	Low

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Hypersaline water discharges	Increased salinity near outfalls, alteration of marine environment	Release of hypersaline water from desalination plants	Inadequate salinity control standards	Localized, in vicinity of seawater desalination plants	Low
Phosphate dust emissions	Decreased coral growth	Release of phosphate dust during port operations	Inadequate pollution control standards, monitoring and enforcement	Local	Low
Industrial pollution	Decline in water quality, marine life affected	Chronic release of pollutants	Lack of regulations and enforcement; inadequate technology	Localized in the vicinity of industrial zones and at individual facilities	Currently moderate
Pollution from cement factories	Consolidation of beach sands; Altered coastal and marine sediments; Hampered turtle nesting	Deposition of cement dust	Lack of controls and inadequate technology	Localized	Severe
Waste oil disposal	Soil and groundwater impacts	Improper disposal of used motor oil, use of oil as dust suppressant	Lack of proper oil disposal or recovery options; lack of effective regulations and enforcement	Localized, throughout the Region	Moderate to severe
<b>Urban and Tourism Development:</b>					
Surface and groundwater	Excessive exploitation of surface and groundwater for municipal use; re-allocation of surface water to municipal uses; draw-down of limited groundwater resources; saltwater intrusion into coastal aquifers	Use of water distribution and household systems often with inadequate concern for water conservation and excessive pumping of groundwater resources	Allocation of limited surface and groundwater sources for municipal use with inadequate regard for conservation measures including maintenance of distribution systems and household plumbing; inadequate pricing of water; lack of incentives for water conservation	Regional, in municipal areas	Moderate to severe
Urban land use	Destruction of coastal areas and adjacent marine habitats	Extensive development of coastal areas often with limited regard to availability of water resources; inadequate infrastructure and development in areas with fragile coastal ecology	Inadequate development planning and coastal zone management; lack of coordination between ministries; limited enforcement of regulations	Regional	Moderate to severe
Discharge of untreated or insufficiently treated sewage (municipal, hospital, slaughter house)	Raised water table, groundwater impacts, eutrophication and alteration of marine environment, threats to public health	Lack of sewage treatment plants or lack of maintenance of existing sewage treatment plants	Inadequate pollution control regulations, monitoring and enforcement	Localized in the vicinity of coastal urban areas and large tourist developments	Severe

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Disposal of solid waste	Deterioration of aesthetics, alteration of coastal habitats, physical damage to coastal and marine life; contamination of groundwater from landfill	Improper garbage disposal, beach litter	Lack of adequate waste disposal regulations and enforcement, inadequate public awareness	Localized in the vicinity of coastal urban areas, coastal villages, tourism developments and adjacent to major shipping lanes	Moderate
Tourism development	Destruction of coastal areas and adjacent marine habitats	Intense tourism development; over-exploitation of available water resources; poor infrastructure linkages; excessive use of marine habitat; landfilling	Limited use of coastal zone planning and infrastructure planning; limited awareness of adverse tourism impacts; unregulated tourism activities and access	Regional; with current problems in the Gulf of Suez, Gulf of Aqaba and northern Red Sea; Problems are developing in the central and southern Red Sea	Low to severe
Degradation of Cultural Heritage	Direct and indirect adverse impacts to archaeological, historical and sacred sites; destruction of unique and non-renewable cultural heritage sites in coastal areas with serious pressure on historic urban areas	Inadequate evaluation of potential impacts to cultural heritage in the planning, design, construction and operation of investments; Limited use of chance find procedures to address the discovery of unknown buried artifacts during construction	Lack of adequate recognition of the importance of cultural heritage, limited application of Antiquities Laws in the cooperating countries and poor integration of these concerns into the planning process	Regional, especially in coastal urban areas and along traditional transportation routes	Moderate to severe
<b>Special Concerns:</b>					
Illegal disposal of harmful substances	Threat to marine biota and human health	Intentional disposal of hazardous waste at sea	Lack of control mechanisms and enforcement	Southern Gulf of Aden	Severe
Sedimentation from agriculture and grazing	Depletion of vegetation cover resulting in mobilization of formerly stabilized sand sheets and dunes; smothering of seagrass and corals	Overgrazing by livestock, especially sheep and goats	Inadequate management of coastal grazing areas; increased, unregulated access to imported feed supplements; use of tankers for supplemental water supplies	Central and southern Red Sea and Gulf of Aden	Low to moderate
Discharge of pesticides and fertilizers	Detection of pesticides in sediments and biota, fish kills, eutrophication	Occasional runoff from agricultural areas after torrential floods; dust storms	Lack of control and management of agrochemicals	Southern Red Sea	Low
Coral die-off	Large areas of dead coral reefs, decrease in coral-associated organisms and fisheries	Unknown	Unknown, but could be natural and related to unusual sea temperatures; no apparent human cause	Southern Red Sea	Severe

### Threats to Coastal and Marine Environments and Resources

Issue	Symptoms / Impacts	Immediate Causes	Root Causes	Scale	Severity
Pollution from shrimp and fish farming	Declining water quality	Mangrove destruction; use of chemicals and nutrients	Lack of planning, regulations and enforcement	Localized	Moderate
Marine vessel sewage	Localized marine and beach pollution	Direct discharge from ships	Inadequate on-board treatment, lack of port reception facilities	Regional	Moderate to severe
Ship discharge of solid waste	Solid waste on shoreline, mangroves, seagrass and coral reefs; aesthetic impacts on recreation and tourism; risks from ingestion to marine animals	Discharge of solid waste from ships	Inadequate disposal facilities; excessive fees for onshore disposal; lack of awareness; inadequate surveillance and enforcement	Regional	Low to severe




## Annex 12

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

## Transboundary Analysis

**Table 1. Transboundary Analysis – Thematic Issues on a Sub-Regional Basis**

THEMATIC ISSUES	Gulf of Suez	Gulf of Aqaba	North and Central Red Sea	South Red Sea & Bab-al-Mandab	Gulf of Aden	Socotra Archipelago
<b>A. Management of Marine Protected Areas (MPAs)</b>	**	***	***	**	***	***
1. Establish a system of MPAs						
2. Strengthen understanding and experience in principles of MPAs						
3. Support stakeholder involvement in planning and implementation						
4. Facilitate the mobilization of resources from international and domestic sources						
<b>B. Sustainable Use of Living Marine Resources</b>	***	**	**	***	***	**
1. Avoid and mitigate coastal impacts from current and proposed shrimp and fish farming						
2. Improve regional data on transboundary stocks						
3. Address regulation of exploitation of high profile species (including sharks & lobster)						
3. Reduce threats to marine turtles, seabirds and marine mammals						
4. Strengthen surveillance and enforcement mechanisms for existing fisheries						
5. Support regional cooperation in management of shared stocks						
<b>C. Reduction of Navigation Risks and Marine Pollution</b>	***	***	**	***	**	*
1. Continuation of PERSGA Navigation Working Group						
2. Implementation of International Conventions and adoption of Port State control measures						
3. Development of improved traffic separation schemes and other routing systems in coordination with IMO						
4. Development and implementation of Sub-Regional Vessel Traffic Systems for Gulf of Suez, Gulf of Aqaba and Bab-al-Mandab						
5. Establishment of a radio communications network to support Global Maritime Distress and Safety Systems (GMDSS)						
6. Upgrading of existing maritime navigation aids in Main Red Sea, Gulf of Aqaba and Bab-al-Mandab						




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 =requires action  
 =requires priority action




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Table 1. Transboundary Analysis – Thematic Issues on a Sub-Regional Basis




THEMATIC ISSUES	Gulf of Suez	Gulf of Aqaba	North and Central Red Sea	South Red Sea & Bab-al-Mandab	Gulf of Aden	Socotra Archipelago
<i>D. Emergency Management</i>	***	**	**	***	**	*
1. Development and implementation of a Regional Oil Spill Contingency Plan						
2. Development of a Sub-Regional System for Emergency Mutual Aid Centers						
3. Expand system of Sub-Regional Marine Emergency Mutual Aid Centers by establishing the planned center at Hurghada, in Egypt						
4. Strengthen existing Sub-Regional Marine Emergency Aid Center in Djibouti						
<i>E. Environmental Education Public Awareness and Participation</i>	**	**	***	***	***	***
1. Support for training and public awareness in resource use						
2. Increase awareness and priority within existing government structure						
3. Increase expertise within countries for environmental education						
4. Increase participation of community groups						
5. Increase emphasis on environmental education and awareness in school curriculum						
6. Increase financial resources for community groups concerned with the environment						

 =not applicable  
 =requires action  
 =requires priority action

 =important  
 =very important  
 =extremely important

**Table 2. Transboundary Analysis – Common Concerns on a Sub-Regional Basis**

<b>COMMON CONCERNS</b>	<b>Gulf of Suez</b>	<b>Gulf of Aqaba</b>	<b>North and Central Red Sea</b>	<b>South Red Sea &amp; Bab-al-Mandab</b>	<b>Gulf of Aden</b>	<b>Socotra Archipelago</b>
<b>A. Habitat Destruction</b>	***	***	***	***	*	*
1. Coastal development						
2. Beach mining and quarrying						
3. Mangrove destruction						
4. Destruction of seagrass beds and other sub-tidal habitats						
5. Physical damage to coral reefs						
6. Damage to coral reefs by visitors						
<b>B. Living Marine Resources</b>	***	***	**	***	***	**
1. Current and potential overfishing of finfish for local and export markets						
2. Capture of sharks for shark fin market, frequently in areas beyond territorial waters						
3. Current and potential overfishing of shrimp and lobster for export markets						
4. Current and potential overfishing of sea cucumber for export markets						
5. Turtle capture and egg collection by local fishermen and communities; sale of shells to tourists and for export						
6. Collection of corals and mollusks for souvenir trade						
7. Ornamental fish collection for export						
8. Conservation of marine mammals (especially dugong)						
9. Spearfishing						
10. Shrimp and fish farming						
<b>C. Navigation Risks</b>	***	***	**	***	*	*
1. Review current navigation charts, conduct hydrographic re-surveys and prepare updated charts in vicinity of major ports						
2. Expanded use of emergency anchors						
3. Expanded use of harbor tugs						

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 =requires action  
 =requires priority action










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Table 2. Transboundary Analysis – Common Concerns on a Sub-Regional Basis

COMMON CONCERNS	Gulf of Suez	Gulf of Aqaba	North and Central Red Sea	South Red Sea & Bab-al-Mandab	Gulf of Aden	Socotra Archipelago
<i>D. Emergency Management</i>	**	**	**	**	*	*
1. Update or prepare National and Local Oil Spill Contingency Plans						
<i>E. Oil and Gas Development</i>	***	***	**	***	**	n.a.
1. Use of environmental management practices in oil and gas development, including major pipelines and marine terminals						
<i>F. Industrial Activities</i>	***	***	**	**	*	n.a.
1. Surface and groundwater use						
2. Industrial Pollution						
<i>G. Urban and Tourism Development</i>	***	***	*	*	*	*
1. Surface and groundwater use						
2. Disposal of solid waste						
3. Tourism Development						
<i>H. Special Concerns</i>	*	*	**	**	***	*
1. Illegal disposal of harmful substances						
2. Sedimentation from agriculture and grazing						
3. Discharge of pesticides and fertilizers						

 =not applicable  
 =requires action  
 =requires priority action

 =important  
 =very important  
 =extremely important

**Justification/Rationale for Environmental Category:** (reasons for environmental category selected & explanation of any changes from initial classification)

The proposed Project has been placed in environmental assessment screening category "C" consistent with the provisions of Operational Directive 4.01, "Environmental Assessment." Activities for reduction of marine navigation risks, oil spill management and ICZM are focused on planning, management and training activities that will not have an adverse environmental impact. Project-supported studies for installation of a regional Vessel Traffic System and model ICZM studies will include preparation of environmental reviews to support integration of these concerns into their design. Implementation of the model ICZM plans would not involve construction activities.

**Status of Category A Environmental Assessment:** (presents EA start-up date, EA first draft, and current status)

Not applicable.

**Remarks:** (gives status of any other environmental studies, lists local groups and local NGOs consulted, tells whether borrower has given permission to release EA, etc.)

Preparation of the SAP was supported by a consultation process that included input from a range of stakeholders including nongovernmental organizations at the regional and national level. Development of the navigation risk and maritime pollution component included two regional workshops held in Egypt and Yemen. The SAP is a public document available from PERSGA and the World Bank. ICZM activities under the project would include support for the use of participatory approaches in the development and implementation of plans.

Signed by:



Doris Koehn, Director, MNSRE

date: November 16, 1998

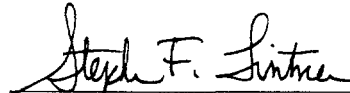
Cleared by:



Marjory-Anne Bromhead, Acting Environmental Coordinator,  
MNSRE

date: November 5, 1998

Signed by:



Stephen F. Lintner, Task Team Leader, ENV

date: November 4, 1998

## Annex 13

# REGIONAL PROJECT FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAM (SAP) FOR THE RED SEA AND GULF OF ADEN

### Environmental Data Sheet

<b>ENVIRONMENTAL DATA SHEET FOR PROJECTS</b> <b>in the IBRD/IDA Lending Program</b>			
Country: Djibouti, Egypt, Jordan, Saudi Arabia, Northern Somali Coast, Sudan, Yemen Project Name: Implementation of the Strategic Action Program for the Red Sea and Gulf of Aden Appraisal Date: November 1998 Board Date: December 1998 Managing Divisions: MNSRE/AFTAE Lending Instruments: GEF Grant Date (est) for receipt of EA by Bank: N/A EA Category (A/B/C): C	Project ID No: GE-63717 Project Cost: US\$ 5.610 million Task Managers: Stephen F. Lintner, ENV Sector: Environment Status: Appraisal  Date Assigned: October 30, 1998		
<b>Date Sheet Prepared/Updated</b> <b>October 30, 1998</b> <small>(Please do not leave any items blank: use "N/A" or "To be developed" when appropriate)</small>			
<b>Major Project Components:</b> (presents description of project components) <p>The proposed project will provide Global Environment Facility (GEF) support for implementation of the Strategic Action Program (SAP) for the Red Sea and Gulf of Aden. The objective of the project is to support the cooperating countries in undertaking a series of complementary measures to support the conservation and management of coastal and marine environments in the Region. The project will be executed by the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) with the support of the three GEF Partners - UNDP, UNEP and World Bank.</p> <p>The GEF Project includes the following components: (a) institutional strengthening to facilitate regional cooperation - UNEP; (b) Reduction of navigation risks and maritime pollution - WB; (c) sustainable use and management of living marine resources - UNDP; (d) Development of a regional network of marine protected areas (MPAs) - UNDP; (e) support for integrated coastal zone management (ICZM) - WB; (f) enhancement of public awareness and participation - UNDP; (g) monitoring and evaluation of program impacts; and UNDP and; (h) support for project management team –UNDP.</p> <p>The World Bank will serve as the implementing agency for two components focused on preventive measures to avoid or reduce potential adverse environmental impacts:</p> <p>(a) Reduction of Navigation Risks and Maritime Pollution. Under this component measures would be taken to: (i) implement maritime conventions and port state control; (ii) establish improved traffic separation schemes; (iii) update hydrographic surveys; (iii) improve vessel traffic systems; (iv) and prepare a regional oil spill contingency strategy.</p> <p>(b) Support for ICZM. This will support activities including: (i) establishment of a regional ICZM network; (ii) expanded use of geographic information systems in ICZM; (iii) development of model ICZM plans; and (iv) institutional development activities in Djibouti, northern coast of Somalia, Sudan and Yemen.</p>			
<b>Major Environmental Issues:</b> (describes major environmental issues identified or suspected in project) None			
<b>Other Environmental Issues:</b> (describes environmental issues of lesser scope associated with project) None			
<b>Proposed Actions:</b> (describes actions proposed to mitigate environmental issues described in project) None			

# RED SEA & GULF OF ADEN



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