



# **Social Marketing Assessment in the Red Sea and Gulf of Aden Region**

**2002**

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**PERSGA – “The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden” is an intergovernmental organization dedicated to the conservation of the coastal and marine environments in the region.**

**The Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah Convention), 1982 provides the legal foundation for PERSGA. The Secretariat of the Organization was formally established in Jeddah following the Cairo Declaration of September 1995. The PERSGA member states are: Djibouti, Egypt, Jordan, Palestine, Saudi Arabia, Somalia, Sudan, and Yemen.**

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## List of Abbreviations

CBO	Community Based Organization
EAI	Environmental Impact Assessment
EPC	Environmental Protection Council
MSY	Maximum Sustainable Yield
NEAP	National Environmental Action Plan
NGO	Non Governmental Organization
NPC	National Programme Coordinator
PA	Public Awareness
PERSGA	Programme for the Environment of the Red Sea and Gulf of Aden
RSGA	Red Sea and Gulf of Aden Area
SAP	Strategic Action Programme for the Red Sea and Gulf of Aden
UNEP	United Nations Environment Programme
USD	US Dollars
WG	Working Groups

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## Forward

The social marketing assessment of the Red Sea and Gulf of Aden (RSGA) Region countries was undertaken in a fieldwork mission from the 30<sup>th</sup> of July to the 27<sup>th</sup> of September 2001. The research team composed of the social marketing consultant and the micro grant expert travelled to three of the seven member countries together (Yemen, Sudan, Somaliland) where they were joined by the national programme coordinator (NPC) for that country. The social marketing assessment was then continued in the remaining four PERSGA countries (Saudi Arabia, Jordan, Egypt and Djibouti) to complete the fieldwork. Detailed interview meetings were held with high environment public officials, middle management, NGOs, private business representatives and key media actors. These groups were identified beforehand as the likely actors in three essential social target audiences: the decision makers, the stakeholders, and the media motivators.

Throughout the entire social marketing assessment mission, the team leader held 20 focus group meetings, met with 8 environment-related ministers, 4 governors, 1 wali (in Sudan), visited three Marine Protectorates, and conducted more than 70 individual interviews. This extensive fieldwork provided many valuable insights about the general state of environmental awareness and education in the PERSGA member countries.

A preview of the findings and related discussions took place in meetings in Jeddah between 1 and 8 October 2001, Lead Specialists, NPCs, and several concerned Working Group (WG) members participated in these meetings. During the workshop, the Social Marketing consultant conducted social marketing training. He subsequently facilitated the development of country social marketing plans and projects with the country teams.

This first draft report outlines the main findings and conclusions of the mission, taking into account the feedback provided by the workshop participants and the PA Lead Specialist.

This study could not have taken place without the outstanding cooperation and support of the Public Awareness staff of SAP at the Headquarters and in the countries that efficiently provided guidance and logistical facilitation during the preparation and implementation of the fieldwork. We would like to thank them for their patience and continuous guidance through the complex organizational, legal set up of the formal and informal groups and coastal human settlements.

We also would like to thank the members of the Working Groups and all the governmental, non-governmental and private sector representatives for generously making time for the team in spite of their busy schedules.

The content of this document reflects the consultant 's understanding of the perception of the environmental issues of the decision makers, stakeholders and motivators. Findings and analysis were based on data obtained from review of the literature, meetings and focus groups. The timeframe of the study did not allow any extensive field research or verification with a more representative sample. Our findings and recommendations may apply more specifically to the situation related to the pilot areas.

March, 2002

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# 1. INTRODUCTION

## 1.1 Background

Traditional ways of life have all but disappeared along the Red Sea and Gulf of Aden coastlines. Livelihoods no longer depend solely on fishing and trade in coffee and spices. Instead, the economic focus today centers largely on the exploitation of petroleum resources, maritime shipping and tourism.

The price of progress, however, is the increased possibility of environmental degradation. The Red Sea is a narrow waterway with limited water exchange; it is also riddled with reefs which makes for precarious navigation conditions. Nevertheless, the Red Sea and the Gulf of Aden play host to several important ports, countless offshore oilrigs, and a plethora of seafaring vessels sailing to and from the man-made channel at Suez. Pollution by discharge and chemical effluents is an increasing concern. And while oil spills are an uncommon occurrence, they do pose an ever-present threat.

Tourism is a relatively recent phenomenon that also brings with it immense economic potential. Vacationers flock in increasing numbers to see at first-hand the splendor that is the Red Sea and its coastline. However, accelerated development along the pristine shorelines is itself a contributing factor in coastal pollution. The region still lacks the necessary infrastructure to complement the developmental expansion. And without an adequate level of knowledge, even harmless tourist activities such as boating and diving excursions can prove to be problematic. Reef collisions, improper anchoring, and excessive human interaction with the marine life could also negatively impact ocean habitats.

The Red Sea and Gulf of Aden have immeasurable economic potential. And while much of the region remains untouched, the pervasiveness of economic possibilities promises a fuller utilisation of the region's resources. Expansion, however, must be conducted in a manner commensurate with sustainability and preservation. In other words, steps need to be taken to ensure that the Red Sea and the Gulf of Aden are able to regenerate their wealth. In essence, environmental conservation and the sustainable development paradigm must permeate the socio-economic logic of the region's stakeholders.

## 1.2 The Jeddah Convention and PERSGA

The "Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment" — also known as the Jeddah Convention (1982) — was the product of a Regional Intergovernmental Conference held by the United Nations Environment Programme (UNEP). The convention was designed to address the region's growing environmental concerns as well as to provide an institutionalised basis for environmental co-operation among the affected countries.

The conference produced an "Action Plan for the Conservation of the Marine Environment and Coastal Areas in the Red Sea and Gulf of Aden", as well as a "Protocol Concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency". The convention also adopted the Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA). And with the signing of the Cairo Declaration in 1996, the "Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden" was established to oversee the implementation of the terms of the Jeddah Convention.<sup>1</sup> Based in Saudi Arabia, this body is responsible for the development and application of environmental protection and conservation programmes in the region.

Djibouti, Egypt, Jordan, Palestine, Saudi Arabia, Somalia, Sudan and Yemen are parties to the Jeddah Convention

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<sup>1</sup> The acronym PERSGA has eventually come to apply both to the programme and the organization established to oversee its implementation. Thus, the Regional Organisation for the Conservation of the Environment of the Red Sea and Gulf of Aden is also referred to as PERSGA.

### **1.3 The Strategic Action Programme for the Red Sea and Gulf of Aden (SAP)**

In October 1996, PERSGA approved the Strategic Action Programme for the Red Sea and Gulf of Aden (SAP). As mandated by the Jeddah Convention, the SAP provides a cooperatively developed framework for the long-term conservation and management of the coastal and marine resources of the region.<sup>2</sup>

The multi-faceted programme is subdivided into eight interconnected objectives:

1. Institutional strengthening to facilitate regional co-operation
2. The reduction of navigational risks and maritime pollution
3. The sustainable use and management of living marine resources
4. Habitat and biodiversity conservation
5. The development of a regional network of marine protected areas
6. Support for integrated coastal zone management
7. Public awareness and participation (PAP)
8. Programme monitoring and evaluation

### **1.4 Strategic Social Marketing Plan of the SAP**

To ensure the successful implementation of the SAP, stakeholders must first understand the gravity of environmental perils. In this respect, the PAP component of the above objectives plays a pivotal role within the programme. A comprehensive campaign to inform the public must necessarily complement the implementation of the more technical recommendations. Indeed, if stakeholders are to fully appreciate environmental protection and nature conservation proposals, they must first come to comprehend the character of the menace and the scope of its consequences. Thus, the development of a strategic plan to market the SAP is fundamental to ensure the efficacy of the programme and the sustainability of its achievements beyond the duration of the project.

### **1.5 Purpose of the Report**

The PAP component of the programme's objectives aims to enhance public awareness of the importance of coastal and marine resources and to promote the active role of the public in the implementation of conservation programmes. In order to meet these objectives, PERSGA must first consider the social and human contexts within which the PAP campaign will be launched.

The purpose of this report, therefore, is two fold: The first objective is to carry out a region wide social assessment survey. Based on this appraisal, the second dimension of this work will develop an appropriate social marketing strategy for the SAP — an action plan that is well-aligned with the needs of the affected communities.

### **1.6 Marketing Assessment: Constraining Factors**

In reference to the fieldwork to collect information to prepare the Market-Assessment carried out during the summer of 2001, attention must be given to the constraints that affected the scope of the evaluation. The following factors have influenced some of aspects of the assessment:

---

<sup>2</sup> The SAP was developed by PERSGA in cooperation with the Global Environment Facility (GEF) — the UNEP, United Nations Development Programme (UNDP), the World Bank, as well as countries signatory to the Cairo Declaration.

- Due to financial constraints at the beginning of the fieldwork, the time allocated to each country was restricted to a few days, thus minimizing the possibilities for further on site research and verification.
- Further to the restricting time factor, the consultants had to rely on prescheduled meetings with stakeholders that were set by the NPCs of PERSGA. Accordingly, there was no chance to arrange for other potentially useful meetings.
- In an attempt to gather more focused information, the research methodology accentuated meetings with decision makers and practitioners, as well as high-level stakeholders, in preference to community members. As a result, the information obtained was not always comprehensive.

As a result, information concerning the general public's views, in particular those of local motivators, needs to be further refined in certain cases.

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## 2. The Social Marketing Assessment

Experience shows that the design and implementation of an integrated marketing approach — one that merges communication, education and training — will have a gradual but sustainable impact on the perception of target audiences. The process is best understood as being one of knowledge dissemination or information disclosure. However, in order to ensure that this knowledge is well-received, preliminary groundwork is imperative. The cornerstone of this groundwork is the social assessment survey from which the administrators of a marketing plan acquire a better understanding of the target communities and determine how the promotion of environment-oriented values would be perceived by the different stakeholders.

In the case of PERSGA, the social marketing assessment was conducted to identify the ways and means to:

- Convince local communities that belief, attitude, and conviction towards positive environmental changes are not only possible but can also be beneficial both in the present and future
- Motivate people, rally their support, and provide them with the necessary participation channels

### 2.1 Methodology

The social assessment survey was conducted in four stages. The first phase was essentially preparatory and included orientation briefings with PERSGA lead specialists, formulating the overall design of the research, and questionnaire development. The second stage consisted primarily of fieldwork: conducting interviews with the representatives of target groups in each of the seven PERSGA member countries. The third stage involved data processing and analysis. The final stage was dedicated to the preparation of the report.

Fieldwork focused on gathering data from three broad target groups or sampling units:

1. Decision makers: government officials and local authority representatives (village heads, community representatives, and community leaders)
2. The general public: private sector, NGOs, community associations, co-operatives, and the general users of the Red Sea and Gulf of Aden resources.
3. Public Awareness Motivators: educators, religious figures and leaders, and media representatives.

The data collection process began by emailing questionnaires to the focal co-ordinators in each of the seven PERSGA member states. These served to gather basic information regarding environmental issues as well as to identify potential interviewees from the predetermined target audience. Each focal co-ordinator was then delegated the task of scheduling meetings with the members of the target groups.

Other data collection methods included focus group meetings, semi-structured questionnaires, and participant observation.

This report outlines the main findings of the assessment, including the feedback provided by the workshop participants and the PAP lead specialist in Jeddah.

The social assessment is subdivided into seven sections each of which deals with a specific PERSGA country. Each section is divided into three parts. The first part provides an introductory overview of the country (the information is derived from the PERSGA Country Reports). In table format, the second section lists the environmental issues identified by the Country Reports and the level of awareness demonstrated by each of the target groups — what they know, their source of knowledge and how might they assess the severity of the concern. The final section provides a

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more general assessment of the sampling units' appreciation of environmental conservation efforts. An attempt is also made to identify the causal factors behind awareness deficits, if such a deficiency exists.

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### **3. Social Marketing Assessment, By Country**

#### **3.1 Djibouti**

##### **3.1.1 Overview of the PERSGA Country Report**

Djibouti lies at the junction of the Red Sea and the Gulf of Aden. It has an area of 23,000 km<sup>2</sup> and a coastline approximately 370 kilometres in length. The northern coastline between the Eritrean border and Ras Bir faces the narrow strait of Bab il Mandab. Most of Djibouti's coastline lies along the narrow Gulf of Tadjourah — an east-west oriented trench that has a maximum depth of 883 meters.

The primary economic sectors in the coastal zone are maritime transport and port-related activities. The expatriate community, comprised of French army personnel, and their families, constitute a significant tourism sector.

There are no large-scale fisheries in Djibouti. Much of the fishing is carried out at the subsistence level, using hook and line. To a lesser extent, gill and throwing nets are also used. Lobsters are of minor importance, and are collected by local divers. Landed catches consist almost entirely of large fish that fetch higher prices in the market. Fish are marketed fresh and there is no processing that can be considered of much relevance.

A new fishing collecting system was set up in the 1980s. While the system was in operation, 90 percent of the fishermen landed their catches on the premises of the Association Coopérative des Pêches Maritime (ACPM). The primary tasks of the ACPM included marketing and the provision of ice and fuel to the fishermen. The organization itself no longer exists; the landing sites and marketing activities are now controlled by a private operator.

The introduction of the Programme for the Development of Artisanal Fisheries, initiated in 1980, resulted in substantial growth of the fisheries sector. The programme supplied fishing gear, outboard engines and boats. Ten years after completion of the programme, the number of fishermen had increased significantly. However, the average age of the fishermen ranged from 40 to 55, and a rejuvenation of the crew became imperative for the continued development of this sector. A revitalisation programme is currently underway. Despite these efforts, the majority of fishermen ply the same fishing area. Their range is restricted by equipment and the size of their boats. Furthermore, a weak marketing structure for fisheries products creates a bottleneck for the entire sector.

A study was conducted to explore the potential of exploiting tropical marine fish for the aquarium trade. It was concluded that a substantial market for quality Red Sea fish does exist. An operational license was granted to a private company despite the absence of a legal framework to regulate this type of activity. Approximately 150 to 300 aquarium fish are collected weekly. However, it is difficult to assess the full impact of ornamental fish collection on the coral reef ecosystems.

Maritime transport is the largest commercial sector in Djibouti. Since the opening of the Suez Canal, activities at Djibouti Port have developed quite rapidly, and the port authority continues to invest in upgrading programmes. Besides container handling, the port offers merchandise import and export, oil tanker traffic and transshipment. A 780-kilometer railway links Djibouti and Addis Ababa. This became a significant line when Ethiopian infrastructure collapsed as hostilities with Eritrea broke out. Goods are shipped back and forth along the railway, and Djibouti now acts as the major port for Ethiopia. Revenue generated by the International Autonomous Port of Djibouti is a sizeable portion of the national economy.

There are no oil or gas exploration activities in the national maritime area of Djibouti, and marine tourism is still in the embryonic stage with a negligible contribution to the national economy. The reefs near the capital, however, are frequently visited by local tourists — primarily the expatriate community. There is no monitoring of this activity and the resulting pressure on the reefs is high.

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Djibouti has suffered from the Ogaden war and the resultant influx of Somali refugees. Its own civil war and droughts have severely impacted the economy. In 1989, a flood destroyed part of the capital and much of its infrastructure. Poverty is rampant and unemployment in 1999 was over 50%.

Djibouti is heavily dependent on foreign assistance but since 1986 there has been a reduction in foreign aid. The multilateral agencies operating in the country have contributed about one-third of the total development assistance. The issue of external aid has become rather complex. There are 50 donors, of whom 28 are bilateral agencies, currently providing technical aid. The most important is the World Bank. The main entities within the government that deal with foreign aid are the Planning Commission, the External Resource Division, the Ministry of Finance, sector ministries and the National Bank.

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### 3.1.2 Perception of Environmental Problems

Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Habitat Destruction</b>	<ul style="list-style-type: none"> <li>▪ Habitat destruction as a result of coastal development remains localized, concentrated in the capital. Construction and expansion of the port installations resulted in severe pressure on the coral reefs.</li> <li>▪ Mangrove habitats are deteriorating rapidly. In the absence of other sources of energy, mangrove wood is used and fuel and foliage is collected by animal breeders as forage. Grazing by camels is another contributing factor to the decline. Some mangrove stands have been completely destroyed.</li> <li>▪ Physical damage to the coral reefs, resulting in the loss of coral habitat and the decline of reef-associated fauna is very severe near the capital and in the protected areas of Musha and Maskali. Reefs near the port are being rapidly degraded from siltation. In the popular recreational areas coral are severely damaged by visitors. Anchor damage is obvious. And spear guns though illegal, continue to be used on a large scale.</li> </ul>	<p>There is a limited perception that corals represent a possible asset for the potential tourism industry.</p> <p>Decision makers are aware of mangrove destruction; yet they do not recognize the long-term effect of mangrove depletion, as no real value is attributed to them.</p>	<p>The private sector is aware of habitat degradation and destruction. In particular the tourism sector views the rich resources of the country as a valuable asset. They have stated that they would be willing to participate in conservation efforts. However, no initiative was taken as they did not feel that there was support from the state.</p>	<p>See Attachment 1: NGO/CSA assessment</p>

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		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>▪ In Doralé, Khor Ambado, Arta Plage and the Island of Musha a combination of extensive artisanal and sport fishing have placed tremendous pressure on living marine resources.</li> <li>▪ Shark resources are being depleted because of illegal fishing by foreign vessels. Fins are often removed while the shark is still alive. The sharks are caught by hook and line or by nets, all of which damage the reef. By-Catch, including turtle, dolphins and finfish, are discarded, almost invariably dead.</li> <li>▪ Illegal capture of marine turtles and the collection of turtle eggs is widespread. Turtle meat, oil and eggs are important sources of subsidiary food for artisanal fishermen. The shells are sold to tourists</li> </ul>	<p>The problem of marine turtles was acknowledged by some of the decision makers. However, turtle meat and shells, as well as other protect marine species can easily be found in the streets and in restaurants of the capital. There seems to be no active control.</p>	<p>There is a high awareness of the depletion of shark stocks among fishermen. Sharks are no longer found in abundance as they once were. Fishermen generally point to illegal fishing by foreign vessels and are resentful that the government and coastal police cannot address the problem.</p> <p>Nevertheless, the fishermen do acknowledge that their own fishing activities are another contributing factor.</p> <p>Poverty, however, is widespread and the revenue that one shark will generate can be quite high. Alternatives are still not available as Djibouti continues to suffer in the aftermath of the civil war.</p> <p>Fishermen are also well aware of the declining turtle population. Again, the shells are in constant demand by foreign residents and tourists. The meat is consumed by the local population.</p>	

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Navigation &amp; Maritime Risks</b>	<ul style="list-style-type: none"> <li>Extensive coral reef formations at the entrance to the port pose navigation hazards.</li> <li>Reefs, when combined with heavy traffic and limited navigational devices, result in an increased probability of collisions and grounding.</li> <li>Marine vessels sewage and discharge of solid waste pose additional threats. Because of the limited waste reception facilities at the port, ships discharge waste offshore.</li> </ul>	Decision makers tend to overlook vessel discharge of sewage and waste as fines and enforcement of regulations may not be in line with commercial interests.	The problem itself is very visible to the general public. However, maritime risks is an issue they feel is out of their control. They view the port authority as being both poorly equipped and lacking the capacity to enforce controls.	.

		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Petroleum Development &amp; Transport</b>	<ul style="list-style-type: none"> <li>There is a constant threat of oil spills along the entire coastline. Oil leaks from tankers and terminals cause a chronic state of pollution in the intertidal zone. Tar balls originating from the passing ships are often found on the beaches.</li> <li>The construction of a refinery is planned at Doralé/Saline-Ouest. If implemented, this project will pose a major threat to the rich coastal and marine habitats and biota of the area. A conflict of interest with fisheries' development in the area will also occur.</li> </ul>	A trade-off still exists between environmental and economic interests. Decision makers, favours the latter. The environment is clearly not viewed as an economic asset.	The problem of oil pollution around the town of Djibouti is very visible to the population of the capital. People feel that the oil is affecting the environment of the capital in a bad way. However, they feel the issue is out of their control. People view the responsible authorities (port authorities) as being both poorly equipped and lacking the capacity to enforce controls.	

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		Perception of Environmental Problems		
	<b>Descriptions/ Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Industrial Activities &amp; Urban Development</b>	<ul style="list-style-type: none"> <li>▪ Industrial activities are concentrated in the capital. The chronic release of pollutants, most of which reach the sea untreated, has resulted in a decline of water quality. Outdated equipment, inadequate technology and the lack of enforcement of existing regulations are the primary factors.</li> <li>▪ The discharge of untreated or insufficiently treated sewage from households, industry, slaughterhouses and hospitals, has also resulted in higher levels of pollution.</li> <li>▪ Pollution is also caused by discharge from rainwater collectors, effluents from the power plant, an oil industry, and the pumping of sewage from septic tanks directly into the sea.</li> <li>▪ Solid waste is dumped onto the shore causing damage to coastal marine life and deteriorating natural beauty and attractiveness.</li> </ul>		Poor waste management is visible to the local population especially in poverty-stricken areas and refugee camps on the beach.	

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### 3.1.3 Conclusion

#### Decision Makers

Djibouti suffers from diminished infrastructure, poverty, poor health of the population and illiteracy. These were the primary concerns emphasized by Ministry of Environment. In such an impoverished country, that has yet to recover from war, environmental concerns are given little importance in national and regional legislation, and development planning.

Moreover, the country does not have enough qualified professionals and managers to deal with environmental problems and opportunities. In addition, there is a lack of reliable environmental information which would provide planners with the necessary data to enable consideration of the environmental dimension at the national level.

#### General Public

The general public of Djibouti is concerned with the marine environment when directly concerned – fishermen care about the availability of fish, people living in Djibouti city enjoy the beach as a place for recreation. But, like decision makers, the public readily points to poverty alleviation and social development as prime priority.

NGOs present in Djibouti generally focus on poverty alleviation, education, health, nutrition rural development and vocational training. Little NGO effort is geared to the environment. NGOs have not yet come to understand the economic potential of the marine environment and conservation efforts.

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## **3.2 Jordan**

### **3.2.1 Overview of the PERSGA Country Report**

Jordan's Gulf of Aqaba coastline is 26.5 kilometers long. Within this short distance lies the country's only port, industrial facilities vital to the national economy, a growing tourism industry, and a delicate marine ecosystem which has become increasingly threatened.

Nevertheless, the situation in Jordan differs somewhat from that of other PERSGA member countries. Geographically, Jordan is a relatively small country which tapers into a very narrow coast in the south. This fact makes the coast considerably easier to monitor and manage. Historically, Jordanians stem from a Bedouin background who have not traditionally exploited the sea for sustenance. At the same time, Jordanians enjoy a relatively higher standard of living and development. The country also has a strong institutional structure which makes for easier and more efficient policy implementation. All these factors favourably impact all economic, environmental and awareness initiatives.

The three important economic sectors in Jordan's Aqaba region are manufacturing and power generation, port-related activities (including maritime shipping and the correlate land transportation facilities), and tourism.

The South Coast Industrial Zone is home to Jordan's main manufacturing facility, two power stations, and the Port of Aqaba. The fertiliser factory of the Jordan Phosphate Mines Company (JPMC) is made up of six separate processing plants, and the Jordan Electricity Authority (JEA) currently operates three power stations in the coastal industrial zone. The port of Aqaba, Jordan's only access to the sea, has become an important regional shipping centre. Plans are now being made to double the port's capacity. The industrial zone also houses a storage facility and loading terminal for potash from the Arab Potash Corporation, and the Solvochem tank farm for chemicals, oils and solvents.

Tourism is another growing sector with tremendous economic potential. Tourism has proven to be a substantial component of the Aqaba economy as the coast attracts 66 per cent of all tourists entering Jordan. Extensive development projects are planned to accommodate the growing tourism industry. The proposed South Coast Tourism Zone is expected to include two 18-hole golf courses, a Disney-style amusement park, 11 resort hotels, as well as a residential resort villa complex. Just inland of the tourism zone, a planned town named Teeba is under construction. Teeba is expected to house 100,000 people by the year 2020.

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### 3.2.2 Perception of Environmental Problems

Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Habitat Destruction</b>	<ul style="list-style-type: none"> <li>▪ Small and minor spills have occurred frequently in the Gulf of Aqaba (including Israeli waters) causing localized damage and marring popular beach areas.</li> <li>▪ The Port of Aqaba has no reception facility for oil-contaminated bilge or ballast water.</li> <li>▪ Despite the relatively low levels of aquatic tourism, reefs, at prime diving locations, are beginning to show signs of physical deterioration. Direct destruction is caused by tourists walking along the fragile reef structures, breaking off the coral for souvenirs, the collection of aquarium fish, and general misuse of the coral.</li> <li>▪ Near-shore reef and seagrass areas are heavily impacted by the discharge of waste from ships, and discarded plastic bags of refuse from beach vacationers.</li> </ul>	<p>The Aqaba port authority is currently undertaking several initiatives that would reduce navigational and maritime hazards, such as the establishment of pilotage standards and speeding up the implementation of the Electronic Navigation System. Local contingency plans to contain spills are also being looked into as well as the creation of a waste reception facility.</p> <p>It has also been suggested that only double-hulled boats enter the Gulf of Aden. However, it was decided that this would be too costly an endeavour that would lead to loss of business.</p> <p>Awareness is generally high among decision makers, however the lack of funds makes implementation of counter measures difficult.</p>		

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		Perception of Environmental Problems		
	<b>Descriptions/ Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>There is a marked reduction in the abundance of and diversity of coral-dwelling fish observed in recent years.</li> <li>Fishing is concentrated in or immediately adjacent to the reef. Damage to the reef generally occurs from short-line anchoring, snagged nets and lines, and abandoned bait traps.</li> </ul>	<p>Fishing is artisanal and not too lucrative. Damage to the coral is acknowledged, however, it is considered to be negligible. The Royal Jordanian Agency for the Protection of the Environment and UNESCO are undertaking a socio-economic survey of the living conditions of the Aqaba fishermen. The assessment will determine how their needs are currently being met and how to develop alternative means of income.</p>	<p>Fishing is very limited in Jordan. Jordanian waters extend three or four kilometres into the Gulf beyond which one enters Saudi and Egyptian territory. As such have no choice but to fish close to the coast where most of the coral habitats lie.</p>	

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Industrial Activity</b>	<ul style="list-style-type: none"> <li>▪ There is the possibility of reef-damaging runoff during the occasional flash floods from the gypsum mountain pertaining the JPMC — 2 million metric tons of fluorine-containing gypsum waste are deposited annually in an unconfined setting due east of the factory.</li> <li>▪ The JPMC factory discharges chlorinated cooling water into the Gulf of Aqaba at a rate of 20,000 cubic metres per hour.</li> <li>▪ Raw sulphur used at the JPMC facility is routinely spilled as it is being unloaded from ships.</li> <li>▪ Cooling water discharges from the JEA power plants may have an impact on the coral and marine life along the coastline. Presently, JEA discharges 38,000 cubic metres per hour.</li> </ul>	<p>With respect to seepage and the discharge of effluents, decision makers feeling that there is nothing that they can do to rectify the situation short of altogether stopping the industrial activity. This, of course, is not considered to be a viable option.</p> <p>The Free Zone Authority, however, does pose strict penalties and fines for pollution due to leakages. The authority is also working directly with the Port of Aqaba and the Marine Science Research Centre to analyse impact of harmful substances on marine habitats. The Royal Agency for the Protection of the Environment also monitors pollution levels and provides lab analyses to the Free Zone Authority.</p>		

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Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Urban Development</b>	<ul style="list-style-type: none"> <li>Construction activity with regards to the South Coast Tourism Zone may cause increased siltation during the construction phase, chemical pollution from servicing building machinery and equipment, and the alteration of hydrologic conditions including runoff rates and flow patterns.</li> </ul>	Coastal zone management guidelines and other planning measures have been developed by the Aqaba Region Authority to minimise the adverse environmental impacts associated with urban development. The authorities have become careful with the available coastal space due to limited availability. The value given to the coast is high.		

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### 3.2.3 Conclusion

#### Decision Maker

Decision makers generally demonstrate a keen awareness of environmental concerns raised by the country reports. The Aqaba Free Zone Authority and the Royal Agency for Protection of the Environment have worked with government bodies, such as the Marine Science Research Station, and NGOs, such as UNESCO, Friends of the Earth and PERSGA, to research numerous environmental projects. However, due to the lack of funds and technical know-how, their knowledge and awareness does not always translate into environmentally sustainable action.

It is important to note that within the 26.5 kilometre stretch exist a port facility (the capacity of which is being doubled), a fertiliser factory operating six processing plants, three power stations, and an expanding tourism industry. These sectors do not necessarily complement one another. However, there is little friction along the coastal belt. Industry, tourism and the port all operate under the umbrella of the Free Zone Authority which has synthesised the seemingly divergent goals. In other words, there is a strong understanding that the Red Sea and Aqaba coastline are both multifaceted economic assets. It is generally understood that for all sectors to co-exist, conservation efforts and environmentally sound practices must be implemented.

Jordanian decision makers have also worked with PERSGA in the past. The Free Zone Authority has provided maritime information and studies regarding the propagation and status of coral reefs to the organisation. There is also a genuine interest on the part of the Aqaba Port Authority to establish contact with other PERSGA members to benefit from their ports' environmental management experiences. PERSGA is seen as an effective institutional channel for environmental co-operation among the affected countries.

#### General Public & Motivators

In general, the coastal population, though poor, is educated. The high rate of literacy is an important factor to consider when implementing an environmental awareness program in the Aqaba region. The Friends of the Earth, an environmental NGO present in Jordan since 1994, has taken full advantage of this fact in its role as. The organisation has held summer camps to promote awareness for youth. It has also launched environmental programs in schools — distributing an electronic environment encyclopaedia (in compact disk format). Friends of the Earth has not, however, limited its campaign to the Jordanian Youth. On the contrary, it has worked with various international NGOs on other environmental projects. It has also promoted eco-diving along the Aqaba coast. And, 82 of Jordan's factories, most of which are located on the coast, are registered with Friends of the Earth.

Furthermore, Jordan has a well-developed network of local and international NGOs. Some, similar to Friends of the Earth, are engaged in educational projects and promoting awareness; others have a more specific orientation such as coral reef preservation, healthcare, hydrology or eco-diving, to name few. NGOs' perceptions of environmental concerns are dependent on their respective area of focus. In other words, not all NGOs demonstrated a thorough understanding of the issues raised in the PERSGA Country Reports.

As a result of the NGOs' work, educators were in fact sensitised to environmental issues pertaining to Red Sea conservation efforts. However, other motivator groups such as community leaders and media representatives lacked this background. However, both groups showed a sincere interest in acquiring the necessary knowledge to aid in PERSGA's awareness campaign. Furthermore, both groups represent effective channels through which information may be disseminated. Religious figures command credibility within the Jordanian communities, and they have also participated in similar promotional campaigns. For example, the Waqf (or Endowment) Ministry has often turned to religious leaders as moderators between officials and the local population. Similarly, mainstream media, despite

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the lack of knowledge on the part of its representatives, is another persuasive channel. Indeed, the Royal Jordanian News Agency does have exclusive control over media tools. Nevertheless, the environmental topics are considered politically neutral and even somewhat fashionable.

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### **3.3 Saudi Arabia**

#### **3.3.1 Overview of the PERSGA Country Report**

In the past three decades, Saudi Arabia has undergone a rapid transformation from a state of underdevelopment, with severe constraints to development and public welfare, to a modern industrial country.

Much of Saudi Arabia's development has taken place on coastal lands and waters. By 1987, 8 per cent of the Red Sea coast had been subject to extensive development much of which involved land-filling and dredging, affecting substantial areas of the inter-tidal and near-shore sub-tidal habitats. Urban expansion and corniche development are continuing this trend towards the deterioration of habitats and natural resources.

There are 194 species of corals recorded along the Saudi Arabian coast. Mangroves are found scattered along much of the Red Sea Coast, however a greater concentration exists in the south. Seagrasses are widespread, but they are also more common in the southern area. Bays, sharms and marsas provide an important environment for mangroves and seagrasses. These ecosystems also support a large variety of marine life including fish, shrimp, turtles, dugong and birds.

Slightly more than 50 per cent of Saudi Arabia's economic development currently originates from the oil sector. One aspect of this dependence on oil and petrochemical development is that the country's ports constitute a major centre for maritime activities associated with the export of oil and oil products. In fact a large percentage of the maritime traffic in the Red Sea is associated with the transport of Saudi Arabian crude oil and petrochemical products. The result of all this shipping pressure is that the Red Sea has much more pollution from marine transport and refinery inputs than the global average.

Until the late 1970s, Saudi Arabia's Fishery was exploited almost exclusively by artisanal fishermen using small boats. In 1980, the Saudi Arabian Fisheries began and has grown considerably since. Landings, however, remain dominated by the artisanal sector.

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Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>Increased fishing efforts and landings beyond the maximum sustainable yield have resulted in decreased landings and the decrease in average size of pelagic and demersal fish.</li> <li>Illegal and increased shrimp fishing efforts often in limited areas are also resulting in decreased landings and the potentiality of over-fishing.</li> </ul>	<p>Little awareness was demonstrated by decision makers on the impact of increasing fishing and illegal fishing practices on living and marine resources.</p> <p>Prohibition on the fishing of certain species and seasonal practices are not observed.</p> <p>Monitoring is conducted by the Coast Guard. However there is little communication between them and the ministry responsible for fisheries. Some of the Coast Guard have been trained to check for net size, fish species and seasonal regulations. Officers, however, are rotated and may leave the areas where fishing activities are high.</p>	<p>Fishermen have generally reacted negatively to regulation — such as fishing seasons and prohibition — that would reduce their potential revenue. Sustainable practice is quite simply not necessary as the sea, in their view, will not run out of fish.</p> <p>The Saudi Environment “Association”, an environmental think tank, had a very strong understanding of the environmental problem in the region and their causes and consequences. Representatives complain of trawling and illegal fishing practices. Fishermen pound the surface to scare the fish into the nets. The practice does considerable damage to the coral. According to the Association, the Farasan group of islands, despite being a marine protectorate, are not monitored.</p> <p>The Association also demonstrated a keen understanding of poor fishing practices elsewhere in the Red Sea. Because of fish migration, their stocks are negatively impacted by over-fishing and illegal practices that occur elsewhere.</p>	

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Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Industrial Activities</b>	<ul style="list-style-type: none"> <li>There is a decline in water quality due to the chronic release of industrial pollutants.</li> </ul>	<p>Decision makers point to the fact that there is an industrial effluents treatment plant in Yanbou.</p> <p>The Environmental Control Department of the Saudi Royal Authority of Yanbou periodically measures the levels of pollution in the air, sea and soil. The authority also monitors the temperature of water discharge into the sea.</p> <p>Decision makers also point to the revision of the standards set by the Environmental Protection Agency (EPA). Saudi standards, they argue, are more stringent than those of the EPA.</p> <p>By law, an environmental impact assessment is required prior the commencement of an industrial project. The purpose is to integrate the environmental and economic dimensions to determine the "real" cost. Operation permits are based on expected pollution and are classified according to severity. Classification determines the location. In other words, plants will be positioned where they will do the least damage.</p>		

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	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Urban Development</b>	<ul style="list-style-type: none"> <li>While all of the coastal cities have developed sewage treatment capabilities, many of the plants that process the waste stream are operating in excess of capacity. The result is that untreated sewage is being emitted into the marine environment.</li> </ul>	<p>Wastewater treatment plants are currently being upgraded and expanded and discharge pipes are being extended further into the sea.</p> <p>Landfilling is no longer permitted, and construction is not permissible within a 400 meter buffer from the shore.</p>		

		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Other Concerns</b>	<ul style="list-style-type: none"> <li>Sedimentation from agriculture and grazing has resulted in the destruction of the vegetation cover, mobilisation of the dunes and sand sheets, and the smothering of the coral reef.</li> <li>Use of pesticides and fertilizers in the coastal zone has contaminated water and resulted in the presence of pesticides in marine</li> </ul>			

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### 3.3.3 Conclusion

#### Decision Makers

Environmental programmes in Saudi Arabia are conceived, designed and implemented by the government. The Kingdom's relative economic affluence allows it to act independently from international organisations. It does, however, incorporate the accepted international standards into its own objectives. The environmental authority in Yanbou, for example, has based its environmental monitoring system on that of the American EPA while maintaining its independence and distance from any foreign affiliation.

Decision makers in Saudi generally demonstrated an appreciation for environmental sustainability. This was particularly true of the Environmental Control Department of the Saudi Royal Authority of Yanbou. Yanbou itself is a well planned industrial park that is built and operated to meet very high environmental standards. The authority plays an important planning and monitoring role, and it has also engaged itself a public awareness campaign; it sponsors environmental clubs in schools, publishes an environmental magazine, and works frequently with the local television station. The authority has also created a co-operative for women in order to increase their level of participation.

Generally, the identification and definition of environmental issues were very much tied to local concerns. Decision makers in an industrial area such as Yanbou were primarily concerned with the discharge of effluents and its impact on marine life and biodiversity. In Farasan, the environmental concerns clustered around living marine resources since fishing is the chief economic activity in the area. In Jeddah, decision makers identified the perils that commonly threaten larger cities — namely sewage, waste disposal, urban development.

#### General Public

NGOs are virtually non existent in Saudi Arabia. The kingdom does not encourage the formation of such bodies. International organisations operating in Saudi, such as the UNDP or UNEP, do so under strict government control. While no NGOs exist in Saudi, some "associations" have sprouted and survive because of the clout of their members. Many of these associations, or think tanks, operate as pseudo NGOs. The Saudi Environment Association is one such body. Made up primarily of academics and high officials, members of the association meet on a regular basis to discuss environmental issues.

Off the record, many of the members of such organisations are critical of the country's official stance. In general, they feel that the "public relations" effort exerted by the government and business is not matched by a similar bid at implementation of sustainable programmes. While Yanbou, they argue, might exemplify sustainability, Jeddah suffers from myriad environmental problems. They also complain of the lack of participation on the part of Saudi women, the awareness deficit prevalent amongst the country's youth, and the generally myopic outlook of the people.

#### Motivators

Knowledge and awareness among Saudi motivators was quite low. For example, the Ministry of Education was, at one point, offering an elective course on the environment to students at the secondary level. The course was eventually cancelled due to the lack of trained and knowledgeable instructors.

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## 3.4 Somalia

### 3.4.1 Overview of the PERSGA Country Report

Somalia is one of the poorest countries in Africa. This fact is only made worse by the civil war which broke out in 1988. The conflict resulted in the collapse of the central government and the breakdown of the national economy. In 1991, the former British Somaliland declared itself independent and a new government was installed. However, the Republic of Somaliland which now controls the western part of the coastline — an area of 137,600 kilometres squared stretching 1000 kilometres into the Gulf of Aden — is not recognised internationally. Due to the ongoing war, very little information is available about habitats and biota along the Gulf of Aden coast of Somalia.

Throughout Somalia, animal husbandry and agriculture are the main economic activities. Both fisheries and maritime transport play minor economic roles. There is no oil or gas exploitation, nor is there tourism in the area. Pastoral nomads form the majority of the Somali population, followed by farmers. Coastal population varies seasonally as many nomads, and their flocks, move to the coastal areas after rainfall and retreat to the mountainous hinterland during the dry summer months.

Fish and shellfish resources in the Gulf of Aden do hold commercial potential. However, existing stock assessments are both scarce and unreliable. Fishing for sharks and rays is a traditional activity for the majority of fishing communities along the coast. Shark and ray catches usually account for one third of the total landings in Somalia. This is due to the fact that shark products are easily preserved — the meat only needs to be salted and then sun-dried. This becomes important when one considers the absence of cooling and storage facilities. Much of the commerce that existed prior to the civil war, however, broke down with the onset of civil strife. The shark export market to Kenya and Tanzania, for example, came to a grinding halt.

Traditionally, maritime transport has played an important role in Somalia. Almost all imports and exports come and go via the sea. Berbera is the main port along the western portion of the Somali north coast, and Bosaso is the chief port in the north-east. Both marine facilities are fully operational and are used for the export of livestock and fisheries products.

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### 3.4.2 Perception of Environmental Problems

Perception of Environmental Problems				
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Habitat Destruction</b>	<ul style="list-style-type: none"> <li>Physical damage to coral reefs is currently low. Fisheries have had a minor impact on reef habitat.</li> <li>Most mangrove habitats are still in reasonably good condition. Grazing and the collection of wood occurs at a sustainable level.</li> </ul>	<p>There is a general awareness of mangrove habitat degradation. The coastline was once covered with mangroves; habitats are now patchy.</p> <p>No immediate value is given to coral reefs and mangroves. However, awareness is raising about the potential of the marine and coast in the view of the future development of the country.</p>	<p>For Somalis who live along the coastline, grazing and wood collection from mangrove areas are part of daily life. There is little awareness of the harmful potentialities that may arise from what the local population considers to be a normal activity.</p>	<p>The general public is fighting against poverty, lack of water and not giving priority to the habitat destruction. Only Bedouins are aware of the mangrove destruction caused by their livestock, yet they do not have any alternatives.</p> <p>Several NGOs have distributed free seedlings to provide fodder and an alternative to mangrove grazing.</p>

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>▪ A sharp decrease in shark catches points to the potential of over-fishing (primarily by foreign vessels). Shark stocks are unknown, and since the collapse of the government no fisheries data has been collected. The fact that sharks are often caught in remote areas and that the export process does not always follow established channels poses additional problems.</li> <li>▪ Illegal fishing by foreign vessels has also resulted in decreased catches. In addition to the uncontrolled exploitation of living marine resources, the sea bottom is being damaged by heavy trawls.</li> <li>▪ The collection of turtle eggs by artisanal fishermen has decreased their nesting populations. As a result of the decreasing fish landings, fishermen turn to turtles as a subsidiary source of food. Turtles are hunted directly or as a by-product of fishing activities.</li> </ul>	<p>At the Ministry of Fisheries, officials suggested that the Somali fishing sector is artisanal and too small to have any environmental impact. Any evidence of over-fishing is primarily caused by foreigners.</p> <p>Decision makers acknowledge the over-fishing of sharks. However, because of the lack of gear and equipment, shark over-fishing by Somalis is very much localised.</p> <p>Decision makers see foreign vessels as posing a much greater threat. Somalis, lack the means to over-fish. Trawling and the use of explosives, for example, are practices that are not available to Somali fishermen. The government does, license foreign boats, but it cannot monitor their activities.</p> <p>The collection of turtle eggs is also acknowledged. Again, collection by artisanal fishermen is believed is of negligible impact when compared to turtle hunting by foreigners in Somali waters.</p>	<p>Individuals see firsthand the effect of over-fishing and illegal foreign activity. And, in the absence of stock assessments, much of the information concerning catch size is gathered from the fishermen themselves.</p> <p>However, fishermen do not consider the environmental impact of their own activities. The sustenance needs of the fishermen are more immediate than conservation and preservation efforts.</p> <p>Fishermen have had to turn to collection of turtle eggs because of the lack of alternative sources of food.</p>	<p>Motivators demonstrated a strong awareness of the negative impact of current fishing practices on Somalia's living and marine resources. Much like the decision makers, motivators have identified the potentiality of stock depletion with illegal practices carried out by foreigners.</p>

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		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators
<b>Navigation &amp; Maritime Risks</b>	<ul style="list-style-type: none"> <li>▪ The world's major transport route for hydrocarbon passes through the Gulf of Aden. The frequency of tanker movement poses a constant threat of oil spills. Although the risk of a major spill is low, the consequences would be grave. There is neither a contingency plan to deal with emergencies or a spill response capacity.</li> <li>▪ In the absence of surveillance capabilities, ships routinely discharge oil, waste and sewage. The problem is further compounded by the lack of waste reception facilities at the ports.</li> </ul>	<p>Decision makers also complain of "intentional" grounding and the sinking of vessels. Foreign companies deliberately damage or destroy their vessels in the region for insurance purposes.</p> <p>Decision makers are well aware of the discharge of oil and disposal of waste by foreign vessels. There is also evidence that ships illegally dump toxins in the area — drums have often made their way to the beaches or they have been found floating in Somali waters.</p> <p>Despite the knowledge, decision makers have no means by which to protect their waters and coast. The shortage of funds renders such undertakings impossible. The same applies to the upgrading of port facilities to handle waste reception.</p>		

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		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators
<b>Navigation &amp; Maritime Risks</b>	<ul style="list-style-type: none"> <li>The world's major transport route for hydrocarbon passes through the Gulf of Aden. The frequency of tanker movement poses a constant threat of oil spills. Although the risk of a major spill is low, the consequences would be grave. There is no contingency plan to deal with emergencies or a spill response capacity.</li> <li>In the absence of surveillance capabilities, ships routinely discharge oil, waste and sewage. The problem is further compounded by the lack of waste reception facilities at the ports.</li> </ul>	<p>Decision makers also complain of "intentional" grounding and the sinking of vessels. Foreign companies deliberately damage or destroy their vessels in the region for insurance purposes.</p> <p>Decision makers are well aware of the discharge of oil and disposal of waste by foreign vessels. There is also evidence that ships illegally dump toxic is the area — drums have often made their way to the beaches or they have been found floating in Somali waters.</p> <p>Despite the knowledge, decision makers have no means by which to protect their waters and coast. The shortage of funds renders such undertakings impossible. The same logic applies the upgrading of port facilities to handle waste reception.</p>		

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### 3.4.3 Conclusion

#### Decision Makers

The general incapacity on the part of decision makers can be attributed to the collapse of the government in the wake of civil unrest. The lack of funds has also rendered the government impotent and unable to provide. For this reason, meetings with government officials tended to focus on donors and aid, financial and otherwise. "How much money would be donated for the environment?" was a primary concern among public officials.

Decision makers, however, are not unaware of the environmental problems facing Somalia. But the lack of funds has left the government incapable of rectifying environmental problems. Decision makers are clearly able to identify the source and cause of over-fishing, for example. Nevertheless, they cannot afford to protect and monitor national waters which, in their opinion, is why the problem persists. Projects to install waste reception facilities at ports and to establish the infrastructure necessary to treat sewage are, by all accounts, prohibitively expensive. And funding problems are compounded by the fact that Somaliland is not a recognised country that would be entitled to aid.

Overall, decision makers regard the sea as a "future" economic asset for the country. The traditional pastoral lifestyle of the Somalis has recently come under considerable threat. Free grazing areas are no longer as abundant as they once were. As a result of a deteriorating terrestrial environment, droughts and famine are increasing. Furthermore, water is scarce in Somaliland, and decision makers see the sea as a potential source of water for people and their livestock. Shallow water wells are often found in the coastal areas, and drinking water can also be extracted from the sea through a desalination process. Consequently, decision makers see the marine environment as being the primary asset of the future. For this reason, sustainable development of coastal and marine environment is seen as the only strategy for Somaliland. A Portfolio Committee consisting of six ministers was set up in July for the management and development of coastal zones.

Representatives from the Ministry of Environment, the Ministry of Fisheries, the Ministry of Commerce/Trade, and those of the Ministry of Planning have a strong understanding of the environmental threats facing the region. They also view the sea as a potential source of wealth, and are familiar with PERSGA and its objectives.

#### General Public

For the most part, individuals, unless directly touched by the peril (as is the case with regards to fish stock depletion or the unsanitary disposal of waste), are not conscious of environmental threats. Poverty and the lack of education are the two principal factors contributing to the awareness deficit reflected by this group. Over 70 per cent of the population is illiterate, and one minister suggested that unemployment may be as high as 80 per cent.

The ocean is itself of little concern to the people. The majority of the population continue to lead a pastoral, nomadic lifestyle. The sea is not yet viewed as a resource with economic and employment potential. In fact, Somalis tend to regard fishing as an inferior vocation followed only by those who have lost their livestock and have no land to farm.

This is represented by the fact that the majority of the general public are not familiar with PERSGA and its activities. Furthermore, PERSGA does not have the level of exposure that UNICEF, CARE, UNHCR or Save The Children's Fund share. This, is due to the fact that the organisation's activities at the local level are not as immediate, and one must also take into consideration the relatively short period of time that PERSGA has been active.

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There is a proliferation of NGOs in Somalia, and many of these organisations have taken on much of the responsibilities that the government is no longer able to address. NGOs are given free rein with respect to the development and implementation of their respective projects. Because of the dire need for aid, the government avoids intervention. NGOs could, nonetheless, benefit from the guidance of a supervisory body that would coordinate their efforts and reduce redundancy.

Unfortunately, few of the NGOs are developmental. The majority operate as relief and rehabilitation institutions with most of the large donor funds being directed at schools, water wells, hospitals, re-integration programs, road rehabilitation and capacity building for governmental institutions. And while some NGOs are involved in environmental conservation projects — Candle Light, for example, is overseeing a soil and water conservation project, and CCS is implementing a sanitation programme — the knowledge base of the majority of NGO workers is not marine-related.

The private sector or potential investors, for the most part, has a short-term outlook that is very profit-oriented. Long-term sustainable development is hardly a component in the overall strategy. Unfortunately, the government's capacity to monitor and control investor activity is negligible.

#### Motivators

Poverty and illiteracy rank very high on the motivators' list of concerns. For motivators, the alleviation of both these problems is considered crucial for the successful implementation of an awareness campaign. Likewise, the logic also applies itself to the promotion of participation on the part of the public.

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## 3.5 Sudan

### 3.5.1 Overview of the PERSGA Country Report

The Red Sea Wilaya, one of 26 states in Sudan, borders the entire coastline. It consists of four provinces: Halayib, Red Sea, Sinkat and Tokar. There are five ports along its shores: Suakin, O'Seif, Agig, Bashir and Port Sudan. Most of the Red Sea population lives in Port Sudan, the country's largest port.

The Red Sea is well-endowed with natural resources. Nevertheless, inhabitants remain relatively poor. Long years of civil war have prevented successful economic development of the country, diverted funds into military equipment and kept foreign investors at a distance. The natural wealth of the country is largely under exploited: no offshore oil exploitation exists, and the contribution of fisheries and tourism to GNP is negligible.

The primary economic sector is that of maritime transport. However, oil exploration, fisheries and tourism all have enormous potential. For example, the Fisheries Administration estimates that maximum sustainable yield (MSY) of artisanal fisheries amounts to 10,000 metric tons. Present annual production is approximately 12,000 metric tons. A Sudan Integrated Fisheries Project (SIFP) has been proposed by the German Arab Fisheries Company. This will include the establishment of several industrial facilities, a tuna cannery, a shrimp processing plant, a fish meal plant, and an ice plant. And while tourism in the Red Sea state remains underdeveloped, the possibilities for expansion and growth are endless. The Sudanese coast is marked by pristine beaches, red hills, and the most diverse reefs in the Red Sea. The state is also home to several historical and archaeological sites.

Animal husbandry is the primary economic activity of much of the coastal population. Seasonal movement of livestock, however, is relatively low. Employment opportunities are generally limited to the urban centres, namely ports. The fisheries sector, though potentially important, has not become a significant economic factor. From 1984 to 1994, landings by artisanal fisheries fell 30 per cent. During this period, fisheries development projects (Food and Agriculture Organisation, 1980-1985, and the Office of Development Aid, 1975 – 1990) were phased out. Services provided by these organisations were discontinued. Unfortunately, sustainability had not been built into these projects. Increased production costs, the scarcity of equipment and gear, and the lack of funds were also factors contributing to the decline of artisanal fisheries.

The Supreme Council for the Environment and Natural Resources was established in Sudan in 1992. In 1995 the Ministry of Tourism and Environment was created to, among other duties, oversee environmental affairs. That same year, the Ministry — in collaboration with the Supreme Council for Environment and Natural Resources, the Sudanese Environment Conservation Society, and the Fredrich Ebert Institute — supervised the Sudan's first NEAP which is currently under review. Sudan, however, is undergoing a process of political and economic restructuring. The existing socio-economic and political circumstances hamper the implementation of environmental policies. Due to strong economic pressure and unforeseen political circumstances, many of the policies adopted by Sudan lead to an inefficient, or unsustainable, use of resources.

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### 3.5.2 Perception of Environmental Problems

Perception of Environmental Problems				
	<b>Descriptions/ Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Habitat Destruction</b>	<ul style="list-style-type: none"> <li>▪ Habitat destruction is still rather localised. However, the extension of both the Ports of Sudan and Suakin, and the construction of new port facilities at O'Seif and Agig, involve dredging and filling. This is expected to create severe pressure on the coral reefs. In Suakin, part of the reef is being removed for the extension of the port.</li> <li>▪ The implementation of the Sudan Integrated Fisheries Project is expected to cause major destruction of coastal habitats. At Port Sudan 5-8 hectares of land will be reclaimed from the sea by landfill for the construction of the processing plants. Effluents from these plants are expected to produce additional environmental threats.</li> <li>▪ Pressure is expected to mount as a result of the planned implementation of an economic free zone (EFZ) which will cover 600 square kilometres between the ports of Sudan and Suakin. Fish processing plants, slaughter houses, tanneries, warehouses and heavy industry will be established in the area.</li> <li>▪ The Wingate and Towarit reefs are the main anchorage areas for large vessels. Tourist and fishing boats are also damaging reefs by anchoring and fishing nets.</li> <li>▪ Mangrove habitats are deteriorating rapidly. In the absence of other sources of energy, mangrove wood is used for fuel. Grazing by camels is another contributing factor to the decline. The daming of wadis further exacerbates the problem by diverting the already</li> </ul>	<p>From the decision makers' standpoint there is a trade-off between economic gain and environmental conservation. As a consequence of 20 years of civil strife, large-scale, revenue generating projects (such as port expansion and construction, the Sudan Integrated Fisheries project and the establishment of an economic free zone) take precedence over conservation programmes. The sea is not seen by decision makers as an economic asset.</p> <p>Decision makers are generally passive with respect to habitat destruction that does not stem from large-scale projects. Despite the severity of the problem, mangrove habitat destruction, for example, is not considered to be of high priority among officials.</p>	<p>Individuals are generally unaware of habitat destruction in the region. Widespread poverty and the lack of education are the primary causes of indifference among the local population.</p> <p>It is important to note that the environmental impact of large-scale projects, such as the Sudan Integrated Fisheries, will remain hidden until the project takes effect. Individuals not directly related to the initial phases of planning and construction cannot be expected to demonstrate a thorough understanding of the environmental issues in question.</p> <p>NGOs, though aware of environmental problems, have tended to focus on other issues, namely poverty and the status of women.</p>	<p>Motivators were generally well informed with respect to habitat destruction. However, their concerns reflected those of the general public. In other words, the alleviation of poverty ranked higher than habitat destruction on their list of priorities.</p>

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		Perception of Environmental Problems		
	Descriptions/Causes	Decision Makers	General Public	Motivators
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>▪ The decrease in the average size of najil and sea cucumber catches points up the potentiality of over-fishing.</li> <li>▪ Shark resources are being depleted and catches by the local fishermen are declining rapidly because of large-scale fisheries from neighbouring countries. Sharks are caught largely for their much sought after fins. Fins are often removed while the shark is still alive; carcasses are usually thrown back into the sea.</li> <li>▪ An 80% decline of annual kokian landings points to the potentiality of over-fishing.</li> <li>▪ The decrease in nesting populations of turtles suggests egg collection by artisanal fishermen.</li> <li>▪ Irreversible conversion of coastal habitats is expected due to the planning for fish and shrimp farming.</li> </ul>	<p>The lack of stock assessment has caused widespread confusion among decision makers. On the one hand, there is a general perception that fisheries are under-exploited partly due to the lack of storage and transportation facilities. On the other hand, evidence such as reduced landings and undersized specimens do indicate to over-fishing and the depletion of specific species.</p> <p>Generally, decision makers tend to encourage the expansion of commercial fisheries.</p> <p>Much of the over-fishing, in the opinion of Sudanese officials, is attributed to foreign vessels.</p>	<p>Individuals directly linked to the fishing industry are very much aware of the "depletion" of fish stocks. Reduced finfish catches lead many of the local fishermen to turned to kokian as an alternative source of income. And with the decline in kokian landings many have resorted to the collection of turtle eggs. Many of the negative impacts are felt firsthand by the local population. However, there seems to be a lack of viable alternatives.</p> <p>It is important to note that stock depletion is very localised. The withdrawal of foreign aid (FAO and ODA), the lack of equipment, and prohibitively expensive credit have restricted fishing efforts to a small area leaving the resources targeted by artisanal fisheries underexploited.</p> <p>The activity of foreign vessels is clearly apparent for the locals, and much of what is labelled over-fishing is attributed to foreigners.</p>	

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Perception of Environmental Problems				
	<b>Descriptions/Causes</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Navigation &amp; Maritime Risks</b>	<ul style="list-style-type: none"> <li>The extensive network of coral reef systems pose severe problems to navigation. These navigational hazards, combined with heavy maritime traffic and limited navigational devices, result in constant risks of ship collisions and grounding.</li> <li>Marine vessel sewage and discharge of waste pose additional threats. In the absence of waste reception facilities at the ports, ships dispose of their waste offshore. Ships throw garbage overboard once they reach international waters.</li> </ul>	<p>Risks associated with large-scale revenue generating activities are generally downplayed. As such, navigational hazards are not given the necessary attention.</p> <p>The discharge of waste and sewages very much acknowledged by the decision makers. Blame, however, is also accorded to inadequate onboard treatment and illegal dumping.</p>	<p>Garbage bags and their contents often wash up on the shores. As a result, individuals are generally aware of this problem. This, of course, compounds the general disdain of foreign vessels and their activity in the region.</p>	

Perception of Environmental Problems				
	<b>Descriptions/Causes</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Petroleum Development &amp; Transport</b>	<ul style="list-style-type: none"> <li>There is a constant threat of oil spills. Oil leaks occur regularly from the terminal and tankers in the Port of Sudan.</li> </ul>	<p>Risks associated with large-scale revenue generating activities are generally downplayed. As such, potential hazards are not given the necessary attention.</p>	<p>Individuals are generally unaware of the potential hazards of large oil spills and they lack the knowledge to comprehend the cumulative impact of smaller scale leakages and spills.</p>	

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Perception of Environmental Problems				
	Descriptions/Causes	Decision Makers	General Public	Motivators
<b>Industrial Activity</b>	<ul style="list-style-type: none"> <li>The chronic release of industrial pollutants has resulted in a significant decline in the quality of the water. The Port of Sudan power plant and shipyard for example discharge their waste oil directly into the sea. At present the problem is somewhat localised. However, the establishment of the EFZ will severely exacerbate the situation.</li> </ul>			

Perception of Environmental Problems				
	Descriptions/Causes	Decision Makers	General Public	Motivators
<b>Urban Development</b>	<ul style="list-style-type: none"> <li>The discharge of untreated or insufficiently treated sewage results in groundwater impacts and alteration in the marine environment. Near human habitations, especially the Port of Sudan, solid waste is dumped on the shore and into the sea.</li> </ul>		<p>Individuals are directly affected by the improper disposal of sewage and waste. Sewage and garbage on coastal dumping grounds is visible to the local communities. The refuse is often ingested by the livestock which has resulted in the death of many of the animals.</p>	

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Perception of Environmental Problems				
	Descriptions/Causes	Decision Makers	General Public	Motivators
<b>Other Concerns</b>	<ul style="list-style-type: none"> <li>▪ Overgrazing near the coastal zone results in the destruction of vegetation. Formally stabilised sand sheets and dunes are utilized increasing siltation and smothering the coral reefs.</li> <li>▪ The Locust Control Programme of the Sudanese Red Sea area sprays a substantial amount of insecticide along the coastline. This has resulted in the contamination of both the soil and water.</li> </ul>	<p>Decision makers are unaware of the dune utilization issue. The problem is further compounded by daming and freshwater diversion which redirect needed water away from the coastline vegetation.</p> <p>Decision makers are aware of the effects of pesticide. The Locust Control Programme is the largest in Africa and the Middle East. It is a high profile, government project. Little is being done to rectify the situation. In fact, the problem has been recently aggravated after the discontinuation of foreign (FAO) assistance.</p>	<p>Individuals do not recognise the impact of overgrazing. Alternative sources of food for their livestock are not readily available.</p>	

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### 3.5.3 Conclusion

#### Decision Makers

Decision makers generally tend to favour large-scale, revenue-generating projects regardless of the environmental consequences. The potentiality of negative repercussions is frequently disregarded. Nevertheless, officials are aware of the environmental hazards emanating from such projects. Conversely, mangrove habitat destruction due to overgrazing and damming draws considerably less attention from the same officials. And despite the severity of this problem, little is being done to rectify the situation.

From a broader perspective, the sea, is not viewed by the decision makers as an asset with economic potential. Opportunities for growth in the tourism industry, for example, have yet to be seriously explored. As such, marine life — the principal lure of divers and tourists — is perceived as possessing little, or no commercial, value.

#### General Public

For the most part, individuals, unless directly touched by the peril, are unaware of the looming environmental threats. Of course, widespread poverty and the lack of education, are the chief factors contributing to the awareness deficit reflected by this group. Members of the coastal communities generally complain of the poor living conditions, the lack of health and social services, and increased competition from Southern immigrants. Clearly, coastal populations appear to be preoccupied with more immediate and basic concerns.

The areas within which NGOs function reflect a prioritisation of poverty alleviation over environmental conservation projects. It is generally accepted that education and poverty alleviation are prerequisites for environmental conservation. Nevertheless, NGOs recognise the economic potential of the resolutions to environmental problems. As such, they feel that economic and environmental projects may in fact work to complement one another. NGOs have also expressed a willingness to partake in conservation endeavours. However, NGO workers require training and could benefit from the knowledge of environment experts.

#### Motivators

High on the motivators' priority list was the magnitude of poverty among the local population. Nevertheless, motivators did demonstrate a general appreciation for environmental concerns. Their knowledge, however, was limited; much like the NGOs, motivators also require further environmental training. And, as is the case with NGOs, additional awareness will allow this target group to link economic potential and sustainable development with environmental conservation efforts.

Among the awareness motivators, elders and religious figures were identified as being the most influential in the Red Sea state.

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## 3.6 Yemen

### 3.6.1 Overview of the PERSGA Country Report

The marine environment along the Yemeni coast is best characterised by its richness and diversity. Approximately 130 species of coral reefs have been reported in the southern stretch of the Red Sea and the Gulf of Aden. Mangroves and nine species of seagrass are considered important biological features of Yemen's Red Sea coast. However, only five per cent of the Gulf of Aden coast is lined with fringing reefs. Nevertheless, its sandy beaches, notably Ras Sharma and Dhobbah (Ash Shihr) of Yemen, form important nesting sites for the green turtles of the region.

The Socotra Archipelago, 400 km south of Yemen, also has many unique environmental features. Over one-third of the vegetation is endemic to the group of islands and stems from an ancient flora which has long disappeared from the Africa-Arabian mainland. By virtue of its isolation, the Socotra is, for the most part, untouched by modern development. Unaltered by pollution or over exploitation, marine environments of the Archipelago remain, by and large, in a pristine state.

Over and above port-related activities, fisheries, maritime traffic and oil and gas exploration constitute the important economic resources of the coastal zone. Tourism still plays a very minor role in coastal economies. Fishing is considered a traditionally important profession for thousands of Yemenis. The Red Sea's shallow, nutrient-rich waters above Yemen's wide continental shelf are fertile fishing grounds. Most resource information dates back to the 1970s and tends to focus only on demersal fish and shrimps. Statistics, therefore, are generally unreliable. Found in the Gulf of Aden are sardines, anchovies, spanish mackerels, sharks, jacks and marlins.

Apart from the shrimp fisheries, there were no industrial fisheries in the Yemeni Red Sea waters until 1992. This is when the Yemeni Fishing Company and the Fisheries Investment Company were established. In Hadibo, the capital of Socotra, a joint company — the Socotra Fisheries and Sea Foods Company (SOFISCO) — was established in 1991 by the Socotra Fisheries Co-operatives (with contributed 20 per cent of the shares in kind) and private investors (who contributed 75 million USD in cash). The objective was to collect the catches of the Socotran fisherman and process them for marketing. SOFISCO has a complex with a cold storage facility, a freezer, ice plant and a fuel station at Hadibo. During the mid 1990s, the Ministry of Fish Wealth also built two canning plants for sardines, mackerel and tuna. Nevertheless, traditional methods of sun-drying sardines and anchovies on the beach, and of sun-drying, salting and hot smoking shark, tuna and kingfish are still practised in Yemen.

Aden is the largest and most important port in Yemen. And prior to the closure of the Suez Canal in 1967, it was the third largest bunkering port in the world. Historically, the coastal ports of Yemen were famous for transit trade, boat building, ship repairs and bunkering. Many of these ports have since expanded, and efforts are currently underway to further improve the facilities at Aden which has the potential to regain its world-class status.

There are three oil export terminals along the Red Sea coast and two on the Gulf of Aden. Oil companies operating these terminals have produced some baseline biological studies, prepared local contingency plans and documented minor oil spill response capacity.

The Government of Yemen after unification in 1990, decreed the Environmental Protection Council (EPC) to manage the nation's environment. In 2001 the EPC became part of the Ministry of Tourism and Environment. The EPC commissioned the development of a National Environmental Action Plan (NEAP), which was accomplished with the assistance of UNDP, in 1995. The final document was produced in 1997. At present a major revision of this work is

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underway and is expected to be completed in early 2002. Another event of major significance was the promulgation of Law # 26 in 1995 known as the "Environment Protection Law" to help the EPC manage the nation's environment. Moreover, Yemen is party to several international conventions, agreements and treaties concerned with marine environmental issues<sup>3</sup>.

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<sup>3</sup> Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1996); Biological Diversity Convention (1992); Protocol concerning Regional Cooperation (1992); Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1994); United Nations Convention on the Law of the Sea (1995); United Nations Framework Convention on Climate Change (1996); Vienna Convention for the Protection of the Ozone Layer (1996)

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### 3.6.2 Perception of Environmental Problems

Perception of Environmental Problems				
	<b>Descriptions/ Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Habitat Destruction</b>	<ul style="list-style-type: none"> <li>▪ Strong population growth, rural and urban migration are causing coastal cities to expand at accelerating rates. This has resulted in unplanned settlements around main cities that may eventually lead to loss of critical habitats and coral reefs.</li> <li>▪ In Socotra, harbours and airports are planned. Unless appropriate precautions are taken, this is likely to have considerable environmental impacts.</li> <li>▪ Mangrove habitat degradation, due to wood collection and grazing along the coast of Yemen, is still low. However, the matter does require attention.</li> </ul>	Decision makers recognised the destruction of mangrove habitat as being an environmental threat, and diesel was subsidised to act as alternative fuel to mangrove wood.		

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					Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators			
<b>Living Marine Resources</b>	<ul style="list-style-type: none"> <li>▪ The sharp decline in landings indicate the potential of over-fishing of pelagic stocks. There is a lack of management concerning appropriate fishing seasons, allowable catches and the types of gear.</li> <li>▪ There exists an intensive fishing of sharks in the Red Sea. Net fishing of sharks is generally indiscriminate; turtle and dolphins are taken as by-catch and later discarded.</li> <li>▪ A decline in lobster catches also indicates over-fishing. Although its was illegal to sell catches outside of the Coastal Fishing Corporation, unknown quantities were sold in the private market since it offered higher prices. The effect of this was compounded by the illegal use of unlicensed and unregistered boats.</li> <li>▪ Declining landings of shrimps suggests a potential of over-fishing. This has probably been spurred by the sharp increase in the price of shrimp.</li> <li>▪ Over exploitation of cuttlefish resources</li> <li>▪ The recreational use of beach by local tourists may be responsible for the death of nesting turtles. Electric lights along the coastline are known to hamper the ability of hatchlings to enter the sea safely. Feral dogs also prey on eggs and hatchlings.</li> </ul>	<p>The Marine Research Centre has identified poor fishing methods, licensing problems, the lack of monitoring and enforcement as potential causes for the decline in landings and stock depletion. The infrastructure and funds necessary to rectify the situation are absent.</p> <p>Lobsters are illegally fished out of season, trawls are used instead of traps, and size limitations are not observed. The lack of funds for monitoring are cited as the primary reason behind decision makers' inability to rectify the situation.</p>	<p>Fishermen are aware of declining fish resources. However, the fishermen's associations do not see the potential depletion as stemming from local artisanal fisherman who fish using traditional methods. The negative impact on living and marine resources, in their opinion, derives from pollution emanating from the ports and large seafaring vessels. Fishermen generally echo the sentiments of associations.</p>				

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		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators
<b>Navigation &amp; Maritime Risks</b>	<ul style="list-style-type: none"> <li>Due to the lack of navigational devices, there is a high risk of ship collisions and grounding. In addition, there is limited contingency planning and the more sensitive areas have not yet been mapped.</li> <li>Despite the fact that the Red Sea and the Gulf of Aden have been designated as a Special Sea Area (making any kind of dumping illegal under international regulations), ships continue to dump their waste in Yemeni waters. Solid waste often washes up on Yemen's shores.</li> <li>Dirty ballast waters lead to the formation of tar balls that are found throughout the coastline. The main ports also lack reception facilities that would reduce such discharge.</li> </ul>		The general public sees first-hand the impact of waste disposal and discharge. However, they feel unable to address the problem themselves. This is an issue they feel should be addressed by the state.	

		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Reports)	Decision Makers	General Public	Motivators
<b>Petroleum Development &amp; Transport</b>	<ul style="list-style-type: none"> <li>Despite the precautions taken by oil companies, the risks that arise from small operational spills continue to pose threats.</li> <li>The oily water that results from the refining process at the Aden Refinery is discharged into Khor Ghadir.</li> </ul>			

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Industrial Activity &amp; Urban Development</b>	<ul style="list-style-type: none"> <li>▪ Wastewater from the main coastal cities and industries is discharged directly into the sea.</li> <li>▪ In the large coastal cities only a smaller percentage of the population is served by the public sewage networks. As a result raw sewage is discharged directly into the sea.</li> <li>▪ Many of the out-fall pipes are old and corroded.</li> <li>▪ The discharge point in Aden is close to the port, and the smell of sewage is widespread in the area.</li> <li>▪ Power stations at Makha, Ras Katheeb and Aden discharge saline high-temperature water directly into the sea.</li> <li>▪ The expansion of urban areas and unplanned and uncontrolled construction place considerable pressure on coastal and marine environments.</li> <li>▪ Non-biodegradable hospital and industrial wastes including lubricants are often disposed of near the shoreline. Pollutants are liable to reach the sea through underwater seepage.</li> </ul>	<p>Decision makers acknowledge wastewater discharge into the sea. However, there is no alternative as the funds required to develop the infrastructure do not exist.</p> <p>There are plans to extend the sewage network to poorer communities.</p>		

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Reports)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Other Concerns</b>	<ul style="list-style-type: none"> <li>▪ The use of pesticides and fertilisers to increase agricultural production is widespread throughout the country. Run-off containing these substances often finds its way to the sea.</li> <li>▪ Sedimentation from agriculture and overgrazing has resulted in dune and sand sheet mobilisation, both of which threaten to smother the coral reef.</li> </ul>			

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### 3.6.3 Conclusion

#### Decision Makers

Decision makers lacked awareness of the environmental issues. There was also a serious deficiency in the technical knowledge upon which appreciation of the environment and the sea could be based. Several decision makers admitted that they knew very little about environmental threats to Yemen as a whole. The more immediate concern is poverty alleviation. The sea, for decision makers, is not yet considered as an asset that could be an important factor in raising the living standard of the Yemeni population.

The director of the EPC (Environmental Protection Council) emphasized to the necessity that projects and proposals emanate from the local community itself. Yemenis, he suggested, will no longer accept governmental steering. Successful environmental endeavours must be driven by the people.

#### General Public

In Yemen this group is made up of cooperatives, associations and NGOs. Cooperatives prevailed for decades during the socialist phase (prior to 1990). However, due to their record, cooperatives are not well-received nowadays. Instead, one finds a host of associations set up by grass-roots effort which have succeeded in establishing themselves as a viable alternative. Along with the democratisation of Yemen's political orientation, there has been an introduction of collaborative endeavours with international agencies and NGOs. International presence and the prevalence of NGOs is, however, a relatively new phenomenon. Furthermore, the NGO focus is primarily poverty alleviation, education and health. Representatives lacked technical knowledge with respect to the environment.

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## 3.7 Egypt

### 3.7.1 Overview of the PERSGA Country Report

Fishing and trade have historically been the two major activities in the area. Today oil exploration, marine traffic and tourism play the dominant economic role. More than 25 urban centres have sprung up along the coast, and the region has established itself as the focal point of development for commercial, industrial, fishing and tourist activities.

The Red Sea coast of Egypt plays host to a variety of reefs, seagrass and mangroves. Many species of fish are endemic to the region. At the present time, most of the Egyptian Red Sea coast is underfished. This, however, is more a function of low population density than of deliberate conservation efforts. Intensive fishing is only practiced in the northern part of the Red Sea. Fishermen in general do not respect existing legislation and practices are in many cases detrimental. Marine mammals in the Red Sea include the dugong and cetaceans. Marine turtles are also prominent among Red Sea fauna.

The extraction of oil and natural gas is concentrated on both sides of the Gulf of Suez. However, the industry is currently expanding and is now moving further into the Red Sea. The Egyptian General Petroleum Corporation (EGPC) is also in the process of leasing major blocks of the sea for oil and gas exploration.

Tourism is the Egyptian economy's fastest growing sector. After oil and foreign remittances, tourism represents the country's most important source of income. The main attractions, of course, are the national parks, the sandy beaches, and the warm coastal climate. Twenty years ago, the Red Sea began to attract international attention among Scuba divers. The pleasant climate and the rich marine environment make the region a prime destination among divers and vacationers alike.

Rapid and loosely-controlled development, however, has been undertaken with minimum planning. In Sharm El Sheikh, for example, land was subdivided into relatively small, waterfront lots all of which were allocated for tourism. The narrow belt of hotels and resorts along the coast has left the public with no access to the beach. Development has also drastically changed the coastal region from calm and secluded places to semi urban, intensively developed areas. Together with limited knowledge of coastal ecological systems, lack of pollution control, and enforcement procedures, uncontrolled development has lead to the rapid deterioration of coral reefs and the loss of the natural tourist attraction of the area.

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### 3.7.2 Perception of Environmental Problems

		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Living &amp; Marine Resources</b>	<ul style="list-style-type: none"> <li>Uncontrolled fishing of certain species. Intensive efforts have been made to expand and modernise fisheries. Careful management of fisheries will be necessary to ensure that the maximum sustainable yield will not be exceeded</li> </ul>	<p>Unregulated fishing in the Gulf of Suez is identified as a problem. Decision makers acknowledge that existing legislation on fishing offences is too weak — fines, for example, are trivial. Monitoring is also considered too costly.</p> <p>Decision makers have also indicated that seasonal fishing procedures are technically inaccurate. Fishermen are currently fishing certain species out of season.</p>		

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Urban Development</b>	<ul style="list-style-type: none"> <li>▪ Coastal construction work includes land-filling and the building of harbours, jetties, residences and industrial sites on the intertidal and supertidal zones. The results of these activities result can potentially destroy coral communities, sea grass beds, mangrove stands, mud flats and halophyte vegetation. Such damage is not yet extensive, but is occurring with greater frequency.</li> <li>▪ In addition to the municipal and industrial projects, it is becoming increasingly common for individual owners to construct private jetties and to dredge small boat channels through the fringing reef.</li> <li>▪ There is a strong tendency for urban expansion to occur in a strip-like fashion along the coast. There is an expanding need for ports and docking facilities, and waterfront residences are a much sought after luxury. Industries prefer to locate along the coast where cooling water and private docking facilities are readily available. Development of this nature invariably leads to the degradation of the littoral and sub-littoral environment.</li> <li>▪ Road construction is also a problem. A significant portion of the motorway linking Suez to Halaib follows the shoreline. Any</li> </ul>	<p>The economic worth of coastal and marine resources is best demonstrated by the revenue generated by tourism in the region. However, tourism as a viable industry necessitates increased urban development. And many of the undesirable results generated by the latter are by-products of the utilisation of the Red Sea as a revenue-generating asset. While the problems caused by construction are acknowledged, development of infrastructure for tourism is further pushed ahead.</p> <p>Decision makers lack the technical knowledge to synthesise the two concerns and generate an environmentally sustainable alternative. Although Environmental Impact Assessments (EAI) are obligatory for any costal development project and about 1/3 of all submitted projects are rejected, the</p>	<p>Members of the private sector also echoed the concerns of decision makers regarding the lack of knowledge. Planners, they argued, need to be made more aware of the environmental concerns and develop technical knowledge to go beyond the state of pure awareness.</p> <p>The tourism sector has often complained of having to remove waste disposed of on beaches at its own expense.</p>	

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	<p>further construction of this type could seriously harm coastal habitats.</p> <ul style="list-style-type: none"> <li>▪ Sewage, both treated and untreated, is commonly discharged to, or just below, the intertidal zone. Solid waste disposal (plastic bags) is another problem emerging from increased urbanisation.</li> </ul>	<p>responsible state agency lacks the technical capacity to effectively handle the large amount of submitted EIAs and their enforcement has proved inconsistent.</p> <p>Decision makers also complain of a general lack of knowledge. For example, no carrying capacity study has been conducted to determine how growth may continue without negatively impacting the environment.</p>		
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		Perception of Environmental Problems		
	Descriptions/Causes (as per PERSGA Country Report)	Decision Makers	General Public	Motivators
<b>Oil Exploration &amp; Transport</b>	<ul style="list-style-type: none"> <li>▪ The construction of the Trans-Suez pipeline with a terminal at Ain Sukhna contributed significantly to pollution in the northern part of the Gulf of Suez.</li> <li>▪ Largely as a result of ineffective and inefficient operation of equipment, illegal discharge of dirty ballast water from tankers occurs frequently.</li> <li>▪ The expansion of oil exploration increases the possibility of large-scale spills. Currently, small spills occur on a regular basis.</li> <li>▪ Another oil-related threat to the marine environment stems from the seismic explosions conducted during exploration.</li> <li>▪ The number of oil fields in the main production area at the Gulf of Suez has increased. Monitoring for potential leaks and spills is lacking.</li> </ul>	<p>There is high degree of awareness of the impact of oil exploration and, more generally, maritime transport. The risks are acknowledged. However, decision makers feel that the rigorous implementation and enforcement of environmentally-oriented policies may lead to the loss of business. Shipping companies, for example, may choose to re-route their course through the Cape of Good Hope.</p> <p>Oil rigs are also left intact after the cessation of operations. The structures are a navigational hazard and an environmental concern. However, decision makers have not required the dismantling of the rigs for fear that this will discourage further exploration in Egyptian waters.</p>	<p>The private sector representative complained that emergency preparedness to handle spills is minimal.</p> <p>Companies do not comply with existing standards due to insufficient supervision and low fines.</p>	

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		Perception of Environmental Problems		
	<b>Descriptions/Causes (as per PERSGA Country Report)</b>	<b>Decision Makers</b>	<b>General Public</b>	<b>Motivators</b>
<b>Industrial Development</b>	<ul style="list-style-type: none"> <li>▪ While being loaded onto ships phosphate, manganese and bauxite often find their way to the sea. In both Safaga area and at ports in the Gulf of Aqaba, the death of corals was observed to be four time greater from phosphate spillage than in the control area.</li> <li>▪ Among the industrial wastewater can be found desalination and fertilizer plant effluents, as well as refinery and other industrial effluents containing heavy metals. Elevated concentrations of lead, mercury and copper in bivalves and fish have been reported in industrial areas.</li> </ul>			

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### 3.7.3 Conclusion

#### Decision Makers

As previously stated, the economic value of coastal resources is demonstrated by the revenue brought in by the tourism industry. Because of this, large-scale projects, not the sea itself, are viewed as being the primary economic asset of the region. Consequently, decision makers lack the insight necessary to implement a sustainable urban development framework that would incorporate marine life preservation. The same logic applies to other large-scale revenue generators such as oil exploration and maritime transportation.

Officials were quick to point out that all hotels and development in the Red Sea governorates must complete an EIA prior to beginning construction and a lot of them are rejected. But the enforcement of EIAs, as well as of the environmental laws of Egypt, has proved inconsistent. Overall, a picture emerges of ad hoc enforcement of the environmental law and an institutional capacity that lag behind the fast pace of development of today's Egypt.

#### General Public

Environmentalists cite as major problems over-development of the coastline, lack of proper solid waste disposal, inadequate wastewater treatment, and degradation of coral reefs due to a high volume of divers and waste blown from the land. Many environmentalists do not believe that the Ministry of Tourism understands the value of the unique coastal environment in Egypt and there is real concern that in the next 5 – 10 years Egypt is going to lose these resources.

The general public in Egypt still lacks the technical knowledge to understand the dangers from today's fast development of the Egyptian coastline.

#### Motivators

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## **4. Identified Problems to be Addressed**

### **4.1 Deficiency In Environmental Awareness**

According to the Social Marketing Assessment, the sea remains for most stakeholders in the Red Sea and Gulf of Aden area (RSGA) an undervalued social, environmental and economic asset. Consequently, the logic of sustainability, in developing and exploiting the available resources, has yet to permeate the mindset and practices of the majority of stakeholders in the region. Too often environmental concerns are overshadowed by economic short-sightedness, political instability, and the more immediate needs of the poorer coastal populations.

Decision makers, in the majority of PERSGA member countries, do not fully appreciate the environmental importance of marine and coastal resources. Conservation is not prioritised in developmental planning processes, and governments have yet to communicate a coherent message regarding the sustainability and environmental exigencies. The legal framework is often fragmented, and the laws themselves are not effectively monitored or enforced. This, it should be noted, stems from the general lack of both knowledge and awareness on the part of state officials. Lack of technical knowledge and operational means only worsen the situation.

The general public recognizes environmental degradation only when directly touched by a particular peril. Decreased fish landings, for example, have a discernible impact on local fishermen; the destruction of mangrove forests is another environmental concern visible to the coastal population. However, this public is often unsure as to how and why the predicament came about, and they generally lack the background knowledge to fully comprehend the gravity of the matter. The situation further problematised when one considers that the populations in Somalia and Sudan, for example, have not traditionally identified themselves with the sea — the people have led nomadic, pastoral lifestyles that are historically unaffiliated with the marine environment. The majority of such populations have yet to grasp the environmental complexity of their coastline; they have yet to perceive the sea as the fragile bearer of tremendous wealth — a wealth that, however abundant, remains finite and can be exploited to the point of depletion.

Investors have often turned to the sea and coast for financial gain. Long-term sustainability of the very resources that generate profit is noticeably absent from too many of the business strategies. The prevalent awareness deficiency allows poorly managed projects to escape public scrutiny. Nor is environmental impact kept in check by governmental supervision. Clearly, one is able to discern a vicious circle at the centre of which is a climate of indifference stemming from the overall lack of environmental knowledge and awareness.

### **4.2 Low Level of Public Awareness of PERSGA**

PERSGA has yet to market its presence regionally. At present, only government officials who have interacted with PERSGA representatives are familiar with the organization and its objectives. Among the general public, knowledge of PERSGA is virtually non-existent. Needless to say, the organization and its objectives — not only in terms of its public awareness and participation campaign, but also in implementing the remaining components of its strategic action plan — would benefit considerably from a higher profile. The only exception to this is Djibouti, where due to several successfully implemented awareness campaigns, drawing competitions and media work, PERSGA is a known name among decision makers and the general population.

## **5. Recommended Approach**

### **5.1 Towards creating Greater Awareness**

In politics and economy, lobbying, or more positively expressed advocacy, is a common tool; commercial enterprises, environmental groups and others that want to be heard, increasingly use advocacy as an alternative or combined with public relations techniques, such as press conferences, press releases, and media campaigning.

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PERSGA should initially use lobbying in order to enhance its exposure as an organisation and direct the public's attention to the importance of sustainable usage of marine resources. In a region like the Red Sea and the Gulf of Aden, where a wide array of developmental projects are vying for attention, PERSGA must be placed on an equal footing with its counterparts if its objectives are to receive parallel prioritisation.

Changes in behaviour and attitudes can only be effectuated once concerns have been identified and high level political support and commitment has been secured. In the initial phases, therefore, public awareness activities as well as social marketing should focus on advocacy for decision makers — promoting PERSGA, the components of its action plan, as well as on the importance of implementing sound developmental measures in the coastal areas. High level political support from officials, community leaders and religious figures would empower PERSGA and provide it with exposure as a known, needed and accepted regional body.

So far, there has been very little exploitation of mass media by PERSGA. Nevertheless, this channel represents a highly effective formula for information dissemination. During the country visits, media representatives in all PERSGA member countries expressed their readiness to provide coverage on environmental issues. Coverage of public awareness events by the media could deepen the sense of achievement and worth of the participants. The exposure would also make such events a sought after opportunity by officials and private companies who are always eager to enhance their public image.

Radio is the medium of choice in the southern PERSGA countries, but other media are also effective in the northern areas. Journals, magazines, or even school bulletin boards should be used to disseminate information concerning PERSGA and the environment. The practice of issuing press releases on a regular basis should also be developed. Such communiqués would raise the level of knowledge as well as promote PERSGA's authority in the region.

The marketing plan, in addressing sustainable use and development of marine and coastal resources, will also draw attention to the need for advocacy efforts in promoting PERSGA as an organization. Emphasis will also be placed on linking sustainable use with socio-economic development — effectively demonstrating that sustainable development is not only environmentally sensible, but also socially and economically rewarding. Success stories should be highlighted and frequently used in corroborating PERSGA's ideas and substantiating the direction that it has adopted. The marketing of environmental conservation and protection could only be strengthened by packaging sustainability within the many benefits that derive from its application.

We have divided the Social Marketing Plan into two sections: A first regional section recommending public awareness and advocacy activities on a regional level to address very specific concerns and to try to initiate changes in perception and attitude. The country sections for the Social Marketing plan then follow in a table format and address a specific number of issues that were identified during the Social Marketing Assessment and in the PERSGA Country Report. We included certain recommendations for micro grant use where we believed it to be necessary in order to give people the effective tools to undertake behaviour changes.

## 6. Proposed Social Marketing Plan

### 6.1 Regional Advocacy and Public Awareness Plan

#### Newsletter for Advocacy

Target group: Politicians and Decision Makers/Donor Agencies/International and Regional NGOs/literate and educated public

Objective/Message of the Newsletter: To promote PERSGA as an organisation, and serve as a forum for discussion and information dissemination. The newsletter would cover environmental issues that are of relevance to the Red Sea and the Gulf of Aden.

PERSGA already publishes Al Sanbouk — a magazine whose objective is to provide information on conservation and development activities taking place in the region. The publication is distributed via post, but is also available online, through the PERSGA website.

However, the readership of Al Sanbouk is rather small, and its current mailing list is too restricted. It was observed during the field visits that copies of the magazine were not easily available, and only a few people were familiar with the publication. Furthermore, the online editions were dated — the latest issue being that of September 2000.

To create a visible presence, transmit a message, and actively promote its cause, Al Sanbouk must be issued on a periodic basis and distributed to the largest audience possible. At the same time, PERSGA should not limit the magazine's readership to national focal points, lead specialists, and organisations with whom it has already established contact. Rather, circulation should be expanded to include donor agencies and embassies, international organisations, and NGOs. Interested individuals should also be given the opportunity to subscribe and, perhaps even contribute, to the magazine.

The NPCs could assume the responsibility for marketing Al Sanbouk. This would also include creating and expanding the mailing lists, and ensuring that the database in Jeddah is up to date.

The publication itself should focus on the benefits of sound coastal management. It should address the specific regional concerns and present potential solutions. Reference can always be made to successful examples of best practices that have been adopted and implemented elsewhere in the world. The publication should also emphasise the benefits of sustainable use of natural resources and present the alternatives to existing practices as being both viable and advantageous. A possible strategy would have each issue of Al Sanbouk focus on a particular area of concern. Doing so would not only allow for in-depth analyses and elaboration on the matter from various angles, but would also make each issue a sought after reference for interested parties.

The publication should also include a section on upcoming events that would be of concern to the reader. The information could be compiled by the NPCs in each of the member countries and presented to the editors prior to printing and production.

It is important to note that as a spin-off, the advocacy effect of the newsletter could also draw the attention of the donor communities, thereby attracting much needed funds.

The significance of such a periodical cannot be overstated. No doubt, PERSGA must take into account production expenditures. As an overall strategy for cost reduction, Al Sanbouk could reorient its existing magazine-format into that of a less adorned environmental "newsletter". Focussing to a lesser degree on presentation will not detract from its readability, content or substance. On the contrary, the image of the newsletter would, in all likelihood, be enhanced by the increased level of professionalism and the regularity of publication that such cost reduction measures would make possible.

#### Research to support advocacy efforts

Target group: Politicians and Decision Makers, Donor Agencies, International and Regional NGOs, Scientists and Research Institutes, Universities and High Schools, and the educated public

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Objective: To collect reliable data and baseline information related to the coastal and marine environment

The Social Marketing Assessment has shown that there is a general lack of data related to marine and coastal environment — stock assessments of the various species of fish, being a prime example. Research activities can be used to strengthen advocacy efforts. Reliable findings that would provide accurate data with clear conclusions could be a useful tool in influencing policy makers and public opinion.

Research results could also be summarised and abridged for the lay reader, and made public by using the PERSGA newsletter and other available media channels.

## **Regional Workshops**

Target group: ministers, high ranking officials, general managers, donor holding decision making authority concerning objectives, NGO and press representatives

Objectives: To promote PERSGA as an organisation and to create awareness, spread knowledge on sustainable coastal development, and gain support and commitment of the targeted stakeholders

Workshops should be held for following subjects, covering in an integrated way all areas of SAP:

- **Integrated Marine and Coastal Zone Management:** This workshop would address issues related to sustainable use and management of living marine resources, habitat and biodiversity preservation, and the development of a regional network of marine protected areas.
- **Navigation Risks and Marine Pollution:** The workshop should discuss the feasibility of implementing hydrographic surveys for navigation aids, port state control and port regulations, as well as the preparation of contingency plans, pollution response readiness, reception facilities and electronic vessels tracking.
- **The Role and Importance of Education, Public Awareness and Advocacy:** The workshop would discuss the need for education, information dissemination, lobbying and public relations when promoting a sustainable coastal development. Best practice exchange, etc.

The objective of each of the workshops would be to serve as a platform from which PERSGA will promote its actions plan. More importantly, workshops could act as a forum to collect and exchange ideas on sustainable development as well as formalise the commitment of those involved. Each workshop should consist of several interactive, participatory sessions where attendees discuss their ideas and viewpoints. Interested members of the general public, NGOs involved in other environmental projects as well as government representatives should be encouraged to attend. Workshops must be well-documented, and their findings should be widely publicised.

**Magazine / Website**

Problems to be addressed	Objective	Target Group	PA Tool / Specifications	Remarks
Lack of awareness about PERSGA as an organization and lack of knowledge of importance of regional coastal and marine environment and problems affecting it	<p>To introduce PERSGA/SAP objectives, activities and important events</p> <p>To introduce specific issues relevant to the marine and coastal environment</p>	<p>Politicians, Decision makers,</p> <p>Donors, international and regional NGOs, interested Individuals or Cooperate Subscribers</p>	<p><u>Newsletter</u> that is distributed on a regular basis at least every 2<sup>nd</sup> month</p> <p><u>Website</u> that is updated regularly and contains information on PERSGA, research information and information about ongoing events, links to best practices projects and other educational links</p> <p><u>Posters</u> on PERSGA with a slogan</p>	Newsletter is a high cost PA tool – the magazine could be made on simple recycling paper with 2 colors only (similar to WB IK Notes). Having a regular newsletter with good quality articles is more important than high quality layout

**Workshops**

Problems to be addressed	Objective	Target Group	PA Tool / Specifications and Subjects	Remarks
Lack of awareness about PERSGA as an organization and lack of knowledge of importance of regional coastal and marine environment	To promote PERSGA as an organization, to discuss its different activities and gain commitment from decision makers and important motivators	Politicians, Decision makers, Donors, international and regional NGOs, Selected Media Representatives, Communication Specialists and a selected number of Motivators	<p>1. <u>Regional Workshop</u> focusing on : PERSGA objectives / activities &amp; partners / Education and Environment, Public Awareness and Environment, Advocacy and Environment and Environmental treats in the region</p> <p>2. Regional Workshop focusing on coastal management, natural resource management, habitat and biodiversity conservation and regional marine protected areas</p> <p>3. Regional Workshop on navigation risks and pollution</p>	Professional preparation and moderation, written documentation of workshop and dissemination of results.

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**Desk Calendar / Posters...**

Problems to be addressed	Objective	Target Group	PA Tool / Specifications	Remarks
Lack of awareness about PERSGA as an organization and lack of knowledge of importance of regional coastal and marine environment and problems affecting it	To introduce basic facts on PERSGA/SAP and the costal and marine environment in the PERSGA region	Government officials, NGOs, Companies and Research Institutes, Focal Points, local partners, individuals etc. General Public, Schools, Research Institutes	<p><u>Desk Calendar</u> that contains on each page in a simple form some useful information related to PERSGA</p> <p>The calendar could also highlight all relevant environmental days on a national, regional and global level.</p> <p>Posters</p> <p>Stickers</p>	The material needs to be developed in different languages: Arabic, English, if possible also in French

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### Environment and Islam

Problems to be addressed	Objective	Target Group	PA Tool / Specifications	Remarks
Marine and Coastal Environment is not perceived as an important asset and importance of conservation not recognized. In addition, suitable role models are missing	To show the importance of sustainable use of environmental resources in the Koran and the Sunna, as well as in other important regional historical and mythical figures	(primary): schoolchildren, children that can read or that have somebody to read for them (secondary) parents, teachers, families	Booklet, Radio Program Series	Material needs to be developed in different languages: Arabic, French, Somali and if possible in Afar

### Drawing Competition

Problems to be addressed	Objective	Target Group	PA Tool / Specifications	Remarks
Lack of awareness about PERSGA as an organization and lack of knowledge of importance of regional coastal and marine environment and problems affecting it.	To get young people involved and stimulate them to reflect about marine and coastal development	(primary) Schools, schoolchildren  (secondary) parents and families, teachers,	<u>Drawing competition</u> focusing on a specific subject: for example illustrate the marine and coastal life in one's country.  This competition could be repeated at regular intervals	Pictures which are good could be used to develop posters/stickers, calendars etc.  If possible, the drawing competition should be advertised through the website/magazine and through the environmental school clubs  On a country level, the MGP could be used to organize and manage the entire competition, as well as to actually produce items out of what has been obtained through the competition and complete them with educational background information

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## 6.2 Country Social Marketing Plans

6.2.1 Djibouti				
Problem	Objective or Product	Target Group	Means / Channels	Methodology for promotion
Missing awareness of the importance of the marine and coastal environment, lack of commitment and law enforcement	Consider the Marine and Coastal Environment as an important social and economic asset of the country and be committed to its sustainable development.	High and Mid Level Government officials, Donor community, NGOs and Media Representatives, General educated Public, Private Sector Representatives (Tourism)	Group, organizational and mass media channel, such as: National Workshop Radio program  In addition, we recommend to use an effective face-to-face channel, such as the Nomination of a good will Ambassador (famous personality) for public awareness work and advocacy	Best practices of sustainable development and income generation possibilities should be presented - show people negative examples of their own and others bad practices and focus very strongly on practical and feasible development by giving concrete examples from other areas of the world.
Donors do not integrate the coastal and marine development and protection in their country activities	Adopt integrated coastal zone development, poverty alleviation and social development of coastal population into the individual national program agenda	Donors	Group channel in form of National Workshop	Stress the currently existing problems at the coastal and marine level and point out the need for sustainable development of Djibouti's coastal zone. (Poverty Alleviation, Social Development, Environment)
Missing funds for environmental projects in general and projects in the area of coastal zone management and sustainable coastal zone development in particular	Be willing to finance and develop projects in the area of coastal management and sustainable development and income generation for coastal areas (priority areas as defined in the social marketing assessment and the social	Donor Community, NGOs, Government, Private Sector Representatives (Tourism Industry and Travel Agents, Oil and Port Companies),	Group and face-to-face channel, such as workshop, interviews and presentations	Highlight the need for sustainable development and the need for funds to support environmental related activities. Point out potential economic and commercial benefits of a sound environment and introduce people to the basics of environmental valuation
Marine and Coastal Environment is not perceived as an important asset of the country due to poverty and lack of diversified income	The coastal and marine environment is an important and very valuable asset of the country and offers possibilities for income	Local residents, CBO/NGOs, foreign tourists	Organizational and mass media delivery, for local population also community channel and if needed face-to-face channel	Show people potential benefit of an integrated environment and related sources of income through the example of tourism. This promotion could be supported by

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sources for local population	generation, recreation, etc.			a MGP grant: MGP Establishment of tourism activities to Mucha and Tadjoura. The project could give people a first hand understanding of the value of an intact coastal environment and the related possibilities of income generation
Missing awareness and consciousness of the importance of the mangrove ecosystem and of the direct economic benefits from mangrove resources.	Consider the mangrove forests as an productive and biodiverse wetland that offers multiple uses and functions and take initiative in make use of them.	Decision Makers Donor Community NGOs and large Community Development Associations Private Sector Representatives from Tourism Sector and Diving Operators	Group, organizational and individual delivery, integrated by mass media channel, such as:  National Workshop on sustainable use of mangroves  Pamphlet on the functions and use of mangrove Forests  Newspaper article series that focuses on functions of mangroves (lobbying)  Sticker	Giving concrete examples of the environmental and economic functions of wetlands, citing similar best practices projects that use mangroves as an economic and environmental resource. It is important to convince the target group that mangroves are an important and beneficial resource.  (Eritrea currently has several mangrove projects, which could eventually be tapped for ideas, examples, assistance etc.)
Mangrove destruction due to overgrazing and collection of fire wood	Use mangroves in a sustainable way without depleting them.	Local Inhabitants, Fisherman that use mangroves as a source of fuel, housing material and camel grazing material or as fishing grounds	Group delivery and community channels, integrated by mass media channels, such as:  Durable Posters  Intensive Extension Work and local workshops (high illiteracy), Folk Theatre or Puppet Show for communities that could show people in a dramatic and funny way the different consequences of mangrove depletion.	The promotion should focus on the possibility of income generating activities and on the presentation of best practices and be integrated by a concrete project: PERSGA Micro Grants could be used to finance a projects aiming at rehabilitation/reforestation of mangroves.
Illegal trading with protected marine species	Be aware that the trade with items deriving from protected species is forbidden and can be punished.	Local foreign residents, tourists, hotels catering foreigners, travel offices at the airport and in Djibouti town, diving operators.	Mass Media channel, integrated by group delivery at hotels, airport, workplace, such as:  Poster (in French and English)	Show the target group the consequences of illegal trade with protected species.

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		motivators (media)	Sticker Articles in the newspapers	Promotion material could be developed with the help or on the basis of the material used by TRAFFIC (IUCN/WWF)
Illegal trading with protected marine species	Reduce the hunting and fishing of marine and coastal species that are protected and present in Djibouti and adopt a positive attitude with regard to their protection.	Fisherman and local residents, motivators such as local sheikhs, teachers and local politicians	Community delivery channel, such as  Extension works through workshops/informal meetings, folk theatre or puppet show to show people the consequences of depletion of certain species	Convince the target group that protecting an animal can produce benefits: The MGP could be used to finance a training for handicraft development and marketing to locals women/men about small scale handicraft production, for example turtles or other endangered species in the form of children's tools or jewelry (out of silver or material embroidery) This handicrafts could satisfy the demand of foreign residents for souvenirs and local handicraft production and could be used as a secondary awareness building tool.
No appreciation of the sea as a source of food	Appreciate fish as a healthy, locally available and nutritious source of food	Primary: Women (rural and urban)  Secondary: Families, Men, Children	Mass media channel such as radio and TV programme, articles in women magazines. Posters and stickers with a catchy slogan could be used to underpin the message. Group and organization channels such as presentations, workshops etc.	Highlight the nutritious benefits of fish for child development, the heart, cholesterol etc.  Present easy and adoptable cooking ideas and recipes with fish
Marine and Coastal Environment is not perceived as an important asset of the country	Adopt a positive attitude toward the coastal and marine environment and know about the variety of benefits and multiple functions it offers	(primary) School Teachers, School Children, Children in general  (secondary) parents, families	Group delivery channel through Environmental School Clubs  Mass Media channel through launching of a drawing Competition  Organization of educational field	Coastal and marine environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animals and a rich fauna that are unique to this part of the world

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			marine and coastal environment	By taking care of the environment, future generations will also be able to benefit from this resource.
Coral Reef destruction	Know some basics about the role corals play in the marine ecosystem and contribute to measures that can protect them.	Diving operators, local foreign residents, hotels, travel offices, port and marine authorities	Mass Media channel and organizational and community channel, such as  Local workshop  Newspaper articles  Brochure or mobile exhibition with photos and posters	As the problem is fairly recognized, it is recommended to create a loan or a matching grant system to finance the installation of floating anchors
International Waters: waste dumping and over fishing by foreign vessels	This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness  For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.			

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<b>6.2.2 Yemen</b>				
<b>Problem</b>	<b>Objective or Product</b>	<b>Target Group</b>	<b>Means / Channels</b>	<b>Methodology for promotion</b>
Sharp decline in fish landings	<p>Be aware of the fact that fish is a valuable economic resource that needs to be used in a sustainable manner and monitored.</p> <p>Give the sustainable development of fishing resources prime importance within national economic development</p>	High level officials, Donors, large NGOs, Representatives from Research Institutes and Private Fishing Companies	Organizational and face-to-face channels, such as Workshop. The workshop should be highly interactive. Participants will agree on existing problems and formulate possible solutions. Thereby, their commitment will be formalized. Individual discussions with small groups of officials etc. In addition we recommend the use of the mass media channel.	<p>Show consequences of fish depletion, as well as good practices and potential benefits of sustainable development of fisheries.</p> <p>MGP could be used to finance a fish stock assessment as basic data and fish assessments are lacking. The fish assessment could serve as an additional tool to convince the target group of the importance and truth of the message.</p>
Donors do not integrate the coastal and marine development and the marine and coastal environmental protection in their country activities	Adopt integrated coastal zone development, poverty alleviation and social development of coastal population into the individual national program agenda	Donors	Group channel in form of National Workshop	Stress the currently existing problems at the coastal and marine level and point out the need for sustainable development of Yemens coastal zone. (Poverty Alleviation, Social Development, Environment)

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Medias do not have good information about coastal and marine environmental issues and the potential of the media as advocacy and awareness motivators is not fully used	Present environmental issues regarding the coastal and marine environment on a regular basis and in different forms (scientific articles, cartoons, columns, short and easy articles, series of articles on certain subjects etc.)	Media Representatives	Group channel, such as a workshop where the state of the coastal and marine environment is discussed and the role of the media explored in a participatory way. The workshop should try to secure the understating of the participants of the coastal and marine environmental priorities and secure their commitment.	
Bad Fishing Practices / Over fishing	Be aware that fish is not available in unlimited quantities and can be used in a sustainable and controlled manner.  Understand that bad fishing practices will destroy the marine environment and damage the fish wealth, thus the fishing industry	Marine Police, Coastal Guard and other entities involved in law enforcement	Organizational channels, supported by mass media channels, such as Informative Workshop ,Booklet on good fishing practices and existing laws and regulations, Posters, Stickers	Show bad examples of fish depletion from other countries, as well as good practices and potential benefits of sustainable development.
Over fishing of sharks	Be aware of the need to protect sharks as they are not available in unlimited quantities and should be used in a sustainable manner, otherwise they will disappear, and with them the livelihood of certain fishermen.  Understand their role within the marine ecosystem and be committed to address the problem.	Officials, educated general public, law enforcement authorities,	Mostly organizational and mass media channel	Sustainable shark fishing and trade represent a source of income and livelihood and present the long-term threats of the current shark fishing practices.  Use should be made of material and expertise of TRAFFIC (WWF/IUCN imitative that developed awareness and information material on shark fishing and trade)
Unavailability of resources for coastal/marine environment	The marine and coastal Environment is an important social and economic asset of the country and needs to be developed in a sustainable way. Focus should be put on	High and Mid Level Government officials, Donor community, NGOs and Media Representatives,	Group delivery, organizational and face-to-face channels supported by mass media channels, such as: National Workshop, Presentations, Nomination of a National Ambassador (famous	Need for comprehensive and sustainable development of the marine and coastal zone.  Discuss current bad practices, low
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	sustainable coastal development  Be willing to finance projects in the area of coastal management and sustainable development and income generation for coastal areas (priority areas as defined in the social marketing assessment)		public awareness	level of existing coastal development and possible solutions. The commitment of the participants to actual projects should be gained.
Over fishing of certain species and bad fishing practices	Adopt good fishing practices.	Local Fishermen and local communities	Community, organizational and group delivery channels, such as intensive extension work (workshops), supported by mass media, such as posters, radio programs, folk Theatre of puppet show for communities that show people in a dramatic and funny way the consequences of bad practices.	Fish will be depleted when not used in a sustainable way, thus income of fisherman will fall.  To create a change in behavior PA is not enough. The MGP should be used to concretely finance a project that offers training in better fishing practices and makes better equipment for the fishermen available, such as lobster traps or other.
Missing awareness and consciousness of the importance of the mangrove ecosystem and of its different uses and functions.	Adopt a clear strategy for the better management of the mangroves and their sustainable use.	Decision Makers, NGOs and large Community Development Associations, Donor Community, Private Sector Representatives	Group, organizational and individual delivery, integrated by mass media channel, such as:  Pamphlet on the functions and use of Mangrove Forests  Newspaper article series that focuses on functions of Mangroves (lobbying) , lectures and face-to-face meetings, Stickers	Giving concrete examples of the environmental and economic functions of wetlands, citing similar best practices projects that use mangroves as an economic and environmental resources. It is important to convince the target group that mangroves are an important and beneficial resource.  (Eritrea currently has several mangrove projects ongoing which could eventually be tapped for ideas, examples, assistance etc.)
Mangrove destruction due to overgrazing and collection of fire wood	Use mangroves in a sustainable way without depleting them	Local Inhabitants, Fisherman that use mangroves as a source of fuel, housing material and camel	Group delivery and community channels, integrated by mass media channels, such as:	The promotion should focus on the possibility of income generating activities and on the presentation of best practices and

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		grounds	Durable Posters  Intensive Extension Work and local workshops (high illiteracy), Folk Theatre or Puppet Show for communities that could show people in a dramatic and funny way the different consequences of mangrove depletion.	be integrated with a concrete project: PERSGA Micro Grants could be used to finance a projects aiming at rehabilitation/reforestation of mangroves and on a project that could provide local communities with alternative sources for fire wood, such as solar ovens.
International Waters: waste dumping and over fishing by foreign vessels	This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness  For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.			
Marine and Coastal Environment is not perceived as an important national asset.	Adopt a positive attitude towards the coastal and marine environment. Know its importance and some of the benefits and functions it offers.	(primary) School Teachers, School Children, Children in general  (secondary) parents, families	Group delivery channel through Environmental School Clubs  Mass Media channel through launching of a drawing Competition  Organization of field trips for school children	Coastal and Marine Environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animals and a rich fauna that are unique to this part of the world  By taking care of the environment, future generations will also be able to benefit from this resource.

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<b>6.2.3 Saudi Arabia</b>				
<b>Problem</b>	<b>Objective or Product</b>	<b>Target Group</b>	<b>Means / Channels</b>	<b>Methodology for promotion</b>
Sharp decline in fish landings	Subject the fishing industry to a proper monitoring and enforce the existing legislation.	High level officials, Representative from Research Institutes and Representatives from Civil Society, Marine Police, Coastal Guard and other entities involved in law enforcement	Group delivery channels, such as Workshops that should be highly interactive. Participants would agree on existing problems and formulate possible solutions. Thereby, their commitment would be formalized.	Fishery is a viable option for diversification of the economy. It provides income and employment opportunities.  Saudi Arabian waters are a unique resource in the future development of the country and risk being depleted if not taken care of.
Bad Fishing Practices	Adopt good fishing practices.	Big Fishing Boats, Fishing Boat Owners, Fishing Industry Representatives, Media Representatives	Group delivery and organizational channels, supported by media channels, such as radio programs  Meetings and workshops with Industry representatives, Booklet on good fishing practices and existing laws and regulations, Posters, Stickers	Only sustainable and good fishing practiced guarantee profit in the long run.
Over fishing and bad practices	Be aware that fish is not available in unlimited quantities and should be used in a sustainable manner.  Adopt good fishing practices – or at least having stopped some of the bad ones	Local Fishermen	Group delivery and organizational delivery channels, such as extension work where alternative fishing practices are introduced.	Only sustainable and good fishing practiced guarantee profit in the long run  As fishermen have in the past shown resistant to PA and extension work, it would be important to show the benefit of a behavioural change by supporting a project that can improve practices and fishing equipment.
Marine and Coastal Environment is not perceived as an important	Adopt a positive attitude towards the coastal and marine	(primary) School Teachers, School Children, Children in general	Group delivery channel through Environmental	Coastal and marine environment is a valuable resource for leisure, social and

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asset of the country	benefits and multiple functions it offers.	(secondary) parents, families	School Clubs  Mass Media channel through launching of a drawing Competition  Organization of educational field trips.	economic activities, food etc.  It hosts many animal and a rich fauna that are unique to this part of the world  By taking care of the environment, future generations will also be able to benefit from this resource.
International Waters: waste dumping and over fishing by foreign vessels	This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness  For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.			
The medias do not have an in-dept knowledge about coastal and marine environmental issues and the potential of the media as advocacy and awareness motivators is not fully used	Present environmental issues regarding the coastal and marine environment on a regular basis and in different forms (scientific articles, cartoons, columns, short and easy articles, series of articles on certain subjects etc.)	Media Representatives	Group channel, such as a workshop where the state of the coastal and marine environment is discussed and the role of the media explored in a participatory way. The workshop should try to secure the understanding of the coastal and marine environmental priorities of the country by the participants and secure their commitment.	
Bad water quality due to industrial effluents	Enforce Environmental Impact Assessments for new project and implement a proper monitoring of industrial activities that release effluents into the sea and shoreline area	High level officials, Representative from Research Institutes and Representatives from Civil Society, Marine Police, Representatives from Environment and Land Planning Authorities	Group Delivery and Organizational Delivery channels, such as workshops, presentations,	The marine environment is subjected to destructive activities. The coast is very valuable for Saudi Arabia in the long run and needs to be taken care of. It could become an important source of income in the future through tourism development etc.
Missing awareness and consciousness of the importance of the mangrove ecosystem for the cost and ignorance about the	Know that there are different ways to cultivate shrimp and be willing to exchange the extensive production methods at the shrimp	Media Representatives, relevant Government Representatives, Private Sector Representatives, Shrimp Cultivators and local	Group, organizational and individual delivery, integrated by mass media channel, such as:	Give concrete examples of the environmental and economic functions of mangrove forests. Show the long-term consequences

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potential negative long-term effects of shrimp farms	farm with more sustainable production methods and lower yield production	fisherman	presentations	of intensive fish farms and present viable best practices alternatives. Present the concept of environmental valuation.
Missing awareness and consciousness of the importance of the mangrove ecosystem and of the direct economic benefits mangrove forests can offer.	Know that mangrove forests are a productive and biodiverse wetland that offers multiple uses and functions	Decision Makers Donor Community NGOs and large Community Development Associations Private Sector Representatives from Tourism Sector and Diving Operators	Group, organizational and individual delivery, integrated by mass media channel, such as:  National Workshop on sustainable use of Mangroves Pamphlet on the functions and use of mangrove forests Newspaper article series that focuses on functions of Mangroves (lobbying)	Giving concrete examples of the environmental and economic functions of wetlands, citing similar best practices project that use mangroves as an economic and environmental resource. It is important to convince the target group that mangroves are an important and beneficial resource
Mangrove destruction due to overgrazing and collection of fire wood	Use mangroves in a sustainable way without depleting them	Local Inhabitants, Fisherman that use mangroves as a source of fuel, housing material and camel grazing material or as fishing grounds	Group delivery and community channels, integrated by mass media channels, such as: Durable Posters Intensive Extension Work and local workshops (high illiteracy), folk Theatre or Puppet Show for communities that could show people in a dramatic and funny way the different consequences of mangrove depletion.	The promotion should focus on the possibility of income generating activities and on the presentation of best practices and be integrated by a concrete project to finance a project aiming at rehabilitation/reforestation of mangroves and on a project that could provide local communities with alternative sources to fire wood, such as solar ovens.

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<b>6.2.4 Egypt</b>				
<b>Problem</b>	<b>Objective or Product</b>	<b>Target Group</b>	<b>Means / Channels</b>	<b>Methodology for promotion</b>
Land filling due to heavy construction work, mostly for tourism purposes.	<p>Refuse to give construction permits and permits for tourism development if no qualitative good environmental impact assessment has been carried out.</p> <p>Have zoned areas that can not be used for tourist development all along the Red Sea Coast.</p> <p>Support actively eco-tourism development.</p>	<p>High and Mid-level management officials from Tourism Development authorities, Ministry of Housing and Environment</p> <p>Media and selected NGO representatives. Private Sector Representatives from large Tourism Companies/Hotel Chains.</p>	<p>Group Deliver and Organizational channels, such as National Workshop and presentations</p> <p>Advocacy through articles and radio programs on the consequences of heavy land filling.</p> <p>Select a prominent "ambassador" for lobbying activities.</p>	<p>The coastal zone will be destroyed if the construction development will continue as currently planned.</p> <p>Focus on bad examples from other areas of the world (i.e. dead tourist areas) and stress the benefits that sustainable tourism could bring to the region in the long run.</p>
Donors do not fully integrate the coastal and marine development and the marine and coastal environmental protection in their country activities	Adopt integrated coastal zone development, environmental protection, poverty alleviation and social development of coastal population into the individual national program agenda	Donors. Media Representatives	Group channel in form of National Workshop	Stress the currently existing problems at the coastal and marine level and point out the need for sustainable development of Egypt's coastal zone.
No appreciation of the sea as a source of food of the local Bedouin population in southern Egypt	Appreciate fish as a healthy, locally available and nutritious source of income	<p>Primary: Women (rural and urban)</p> <p>Secondary: Families, Men, Children</p>	Mass media channel such as radio and TV programme, articles in women magazines. Posters and stickers with a catchy slogan could be used to underpin the message. Group and organization channels such as presentations, workshops etc.	<p>Highlight the nutritious benefits of fish for child development, the heart, cholesterol etc.</p> <p>Present easy and adoptable cooking ideas and recipes with fish</p>

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No control of oil spills, Uncontrolled development of oil exploration (oil spills and danger from old oil platforms)	Enforce law in order to avoid oil spills and take steps that can lead to the removal of old oil rigs	Governmental Authorities responsible for Oil exploration and development / Private Petrol Companies, Environment Authorities, Marine Police	Group and Organizational channels, such as workshops	Current practices damage the environment and are not compatible with the status of Egypt as a major tourist destination.  Present and discuss economic valuation and the long-term cost of oil polluted shores.
Over fishing and bad fishing practices due to non enforcement of the law	Fish is not available in unlimited quantities and should be used in a sustainable manner.  Bad practices will destroy marine environment and damage the industry in the long run	High Government Officials, Mid-level Government Officials from the Authorities dealing with Fishing, Coastal Police, Fisherman and Fishing boat owner, Fish traders. Media representatives	Media, Group and organizational channels: Brochure focusing on good and bad fishing practices and explaining the existing legislation  Extension work through focus groups and interviews  Sticker, Poster	Only sustainable and good fishing practiced guarantee profit in the long run.
Marine and coastal environment is not fully perceived as an important asset of the country	Promote the sustainable use and development of the coastal and marine through various messages.	(primary) Media Representatives, NGO and civil society representatives  (secondary) Egyptians at large	Organizational channel by addressing media people in workshops that investigate the role of media in environmental protection, discuss environmental issues and try to gain their commitment in promoting the understanding of the environment and its protection.	Stress that being able to write on subjects related to environment will give them a professional advantage.
Marine and coastal environment is not perceived as an important asset of the country	The coastal and marine environment is one of the most important assets of the country, offering a variety of benefits and having multiple functions		Group delivery and community channels: Environmental School Clubs, Drawing Competitions, Clean ups  Organization of educational field trips	Coastal and marine environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animals and a rich fauna that are unique to this part of the world  By taking care of the environment, future generations will also be able to benefit from this resource.

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Coral Destruction	Stop behaviour and practices that damage the coral reef.	Beach tourists and divers, diving school employees, hotels, tourism operators (also in countries of provenience ) Tourists , travel agents , national tourist,	Mass Media Channels, such as Brochures in different languages, Posters, Stickers,CD rooms, Information boots and events , supported by group deliveries channels	<p>Explain the function of the coral reefs and show them consequences of bad behaviour, while offering guidance in what to do and what not to do.</p> <p>MGP could be used to develop extension material directed towards the identified target group and organize some informative events in the major tourist locations</p>
International Waters: waste dumping and over fishing by foreign vessels	<p>This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness</p> <p>For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.</p>			

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6.2.5 Jordan				
Problem	Objective or Product	Target Group	Means / Channels	Methodology for promotion
Over fishing/damage to reef from fishing activities	Adopt good fishing practices.	Fisherman	Group and Organization channel, such as intensive extension work and small workshops, stickers	Show the long-term consequences of their current practices and offer viable alternatives, plus guidance
Coral Destruction	Explain the importance and functions of the coral reef and show positive and negative behaviour	Beach tourists and divers, diving school employees, hotels, tourism operators (also in countries of provenience )	Mass Media Channels, such as Brochures in different languages, Posters, Stickers, CD rooms, Information boots and events , supported by group deliveries channels	Explain the function of the coral reefs and show them consequences of bad behavior, while offering guidance in what to do and what not to do.  MGP could be used to develop extension material directed towards the identified target group and organize some informative events in the major tourist locations
Medias do not possess an in dept knowledge about coastal and marine environmental issues and the potential of the Media as advocacy and awareness motivators is not fully used	Present environmental issues regarding the coastal and marine environment on a regular basis and in different forms (scientific articles, cartoons, columns, short and easy articles, series of articles on certain subjects etc.)	Media Representatives	Group channel, such as a workshop where the state of the coastal and marine environment is discussed and the role of the media explored in a participatory way. The workshop should try to secure the understating of the coastal and marine environmental priorities of the country by the participants and secure their commitment.	
Marine and Coastal Environment is not perceived as an important asset of the country	Adopt a positive attitude towards the coastal and marine environment. Know some of the benefits and multiple functions it offers.	(primary) School Teachers, School Children, Children in general (secondary) parents, families	Group delivery channel through Environmental School Clubs  Mass Media channel through launching of a drawing	Coastal and marine environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animal and a rich

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			<p>Competition</p> <p>Organization of educational field trips.</p>	<p>fauna that are unique to this part of the world</p> <p>By taking care of the environment, future generations will also be able to benefit from this resource.</p>
<p>International Waters: waste dumping and over fishing by foreign vessels</p>	<p>This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness</p> <p>For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.</p>			

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<b>6.2.6 Sudan</b>				
<b>Problem</b>	<b>Objective or Product</b>	<b>Target Group</b>	<b>Means / Channels</b>	<b>Methodology for promotion</b>
<p>Potential habitat destruction due to large-scale projects such as the Economic Free Zone</p> <p>General unawareness about the potential long-term consequences of extended habitat destruction</p>	<p>Only sustainable development is ensuring long-lasting benefits</p>	<p>High and middle Management Governmental Officials, NGOs and Community Development associations, Media, Private Sector Representatives, Donors,</p>	<p>Organizational channels, such as a workshop where the state of the coastal and marine environment is presented and discussed, basic tools of economic valuations introduced, and the role of the different stakeholders in sustainable development discussed.</p> <p>Mass Media Channel, local, national and international articles on the urgent need to plan the coastal development of Sudan in an environmental sound way</p>	<p>Present the tool of economic valuation. Show potential long-term consequences of current development and discuss their costs! Present unsustainable development examples from other countries, as well as best practices</p> <p>It is important to highlight the economic consequences of environmental degradation and to offer alternatives to the current situation</p>
<p>Media do not possess an in dept knowledge about coastal and marine environmental issues and the potential of the media as advocacy and awareness motivators is not fully used</p>	<p>Present environmental issues regarding the coastal and marine environment on a regular basis and in different forms (scientific articles, cartoons, columns, short and easy articles, series of articles on certain subjects etc.)</p>	<p>Media Representatives</p>	<p>Group channel, such as a workshop where the state of the coastal and marine environment is discussed and the role of the media explored in a participatory way. The workshop should try to secure the understanding of the coastal and marine environmental priorities of the country by the participants and secure their commitment.</p>	
<p>Missing funds for environmental projects in general and projects in the area of costal zone management and sustainable coastal zone development in particular</p>	<p>Be willing to finance projects in the area of coastal management and sustainable development and income generation for coastal areas (priority areas as defined in the social marketing assessment and the social</p>	<p>Donor Community, Governments, Private Sector (Tourism Industry and Travel Agents), NGOs</p>	<p>Group channel and face-to-face channel</p>	<p>Highlight the need for sustainable development and the need for funds to support environmental related activities. Point out potential economic and commercial benefits of a sound environment and introduce people to the basics of</p>

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				environmental valuation
Donors do not integrate the coastal and marine development and the marine and coastal environmental protection in their country activities	Adopt integrated coastal zone development, poverty alleviation and social development of coastal population into the individual national program agenda	Donors	Group channel in form of National Workshop	Stress the currently existing problems at the coastal and marine level and point out the need for sustainable development of Sudan's coastal zone. (Poverty Alleviation, Social Development, Environment)
Missing awareness and consciousness of the importance of the mangrove ecosystem and of its different users and functions.	Adopt a clear strategy for the better management of the mangroves and their sustainable use.	Decision Makers, NGOs and large Community Development Associations, Donor Community, Private Sector Representatives	Group, organizational and individual delivery, integrated by mass media channel, such as:  Pamphlet on the functions and use of mangrove forests  Newspaper article series that focuses on functions of Mangroves (lobbying) , lectures and face-to-face meetings, Stickers	Giving concrete examples of the environmental and economic functions of wetlands and mangrove swamps, citing similar best practices project that use mangroves as an economic and environmental resources. It is important to convince the target group that mangroves are an important and beneficial resource.  (Eritrea currently has several mangrove projects ongoing which could eventually tapped for ideas, examples, assistance etc.)
Mangrove destruction due to overgrazing and collection of fire wood, closing of the wadis to collect freshwater that normally satisfies demand of the mangroves for sweat water	Use mangroves in a sustainable way without depleting them	Local Inhabitants, fisherman that use mangroves as a source of fuel, housing material and camel grazing material or as fishing grounds	Group delivery and community channels, integrated by mass media channels, such as:  Durable Posters  Intensive Extension Work and local workshops (high illiteracy), Folk Theatre or Puppet Show for communities that could show people in a dramatic and funny way the different consequences of mangrove depletion.	The promotion should focus on the possibility of income generating activities and on the presentation of best practices and be integrated by a concrete project: PERSGA Micro Grants could be used to finance a projects aiming at rehabilitation/reforestation of mangroves and on a project that could provide local communities with alternative sources to fire wood, such as solar ovens. Technical expertise and best

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				practices could be obtained through GEF.  (collaboration in the message elaboration with Djibouti and Saudi Arabia)
No appreciation of the sea as a source of food	Appreciate fish as a healthy, locally available and nutritious source of food	Primary: Women (rural and urban) Secondary: Families, Men, Children	Mass media channel such as radio and TV programme, articles in women magazines. Posters and stickers with a catchy slogan could be used to underpin the message. Group and organization channels such as presentations, workshops etc.	Highlight the nutritious benefits of fish for child development, the heart, cholesterol etc.  Present easy and adoptable cooking ideas and recipes with fish
Marine and coastal environment is not perceived as an important asset of the country	Adopt a positive attitude towards the coastal and marine environment. Know some of the benefits and multiple functions it offers.	(primary) School Teachers, School Children, Children in general (secondary) parents, families	Group delivery channel through Environmental School Clubs  Mass Media channel through launching of a drawing Competition  Organization of educational field trips.	Coastal and marine environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animal and a rich fauna that are unique to this part of the world  By taking care of the environment, future generations will also be able to benefit from this resource.
International Waters: waste dumping and over fishing by foreign vessels	This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness  For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.			

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<b>6.2.7 Somalia</b>				
<b>Problem</b>	<b>Objective or Product</b>	<b>Target Group</b>	<b>Means / Channels</b>	<b>Methodology for promotion</b>
No properly planned development of the coastal zone	Properly planned development of the coastal zone development can be beneficial and actually create much needed income	Government officials, private sector investors, NGOs and CBAs, Donors	Group channel, we suggest a National workshop that concentrate on the formulation of an action plan	MGP could be used for proper planning, organization, management and documentation of such a workshop, which should lay a foundation for the coastal zone development
Missing funds for environmental projects in general and projects in the area of coastal zone management and sustainable coastal zone development in particular	Finance projects in the area of coastal management and sustainable development and income generation for coastal areas (priority areas as defined in the social marketing assessment)	Donor Community, Governments, Private Sector, NGOs, Industry Representatives and Media	Group channel and face-to-face channel, supported by media channel	Highlight the need for sustainable development and the need for funds to support environmental related activities. Point out potential economic and commercial benefits of a sound environment and introduce people to the basics of environmental valuation
Donors do not integrate the coastal and marine development and the marine and coastal environmental protection in their country activities	Adopt integrated coastal zone development, poverty alleviation and social development of coastal population into the individual national program agenda	Donors (all)	Group channel in form of National Workshop	Stress the currently existing problems at the coastal and marine level and point out the need for sustainable development of Djibouti's coastal zone. (Poverty Alleviation, Social Development, Water and Sanitation, Environment)
Over fishing by foreign vessels, waste dumping, intentional grounding	Control and international pressure on the countries that fish illegally in Somali waters	Donors, national and international Governments, strong NGOs, international interest groups, such as IUCN and others	Group and organizational channel, face-to-face channel, mass media  Small presentations and workshops, individual presentations, nomination of an internationally famous person as an ambassador that could do lobbying and awareness raising. Look for coverage by international media	Stress the amount of illegal activities inside Somali waters and show impact.  Give concrete examples of waste dumping, over fishing etc. and point out the environmental, social and economic consequences.

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Marine and Coastal Environment is not perceived as an important asset of the country	Adopt a positive attitude towards the coastal and marine environment. Know some of the benefits and multiple functions it offers.	(primary) School Teachers, School Children, Children in general  (secondary) parents, families	Group delivery channel through Environmental School Clubs  Mass Media channel through launching of a drawing Competition  Organization of educational field trips.	Coastal and marine environment is a valuable resource for leisure, social and economic activities, food etc.  It hosts many animal and a rich fauna that are unique to this part of the world  By taking care of the environment, future generations will also be able to benefit from this resource.
Marine and coastal environment is not perceived as an important asset of the country -	Poverty and lack of diversified sources of income sources for local population	Local residents	Community Channel and Group Delivery, such as Extension Work and local workshops, Folk Theatre or Puppet Show that could show people in a funny way the assets of the coast and the sea.	MGP should be used to define a project on sustainable small-scale use of local resources –
Medias do not possess an in-dept knowledge about coastal and marine environmental issues and the potential of the media as advocacy and awareness motivators is not fully used	Present environmental issues regarding the coastal and marine environment on a regular basis and in different forms (scientific articles, cartoons, columns, short and easy articles, series of articles on certain subjects etc.)	Media Representatives	Group channel, such as a workshop where the state of the coastal and marine environment is discussed and the role of the media explored in a participatory way. The workshop should try to secure the understanding of the coastal and marine environmental priorities of the country by the participants and secure their commitment.	
Missing awareness and consciousness of the importance of the mangrove ecosystem and of the direct economic benefits from mangrove resources.	Consider the mangrove forests as an productive and biodiverse wetland that offers multiple uses and functions and take initiative in make use of them.	Decision Makers, Donor Community, NGOs and large Community Development Associations  Private Sector Representatives that are doing business at the	Group, organizational and individual delivery, integrated by mass media channel, such as:  National Workshop on sustainable use of mangroves  Pamphlet on the functions and	Giving concrete examples of the environmental and economic functions of wetlands, citing similar best practices projects that use mangroves as an economic and environmental resources. It is important to convince the target group that mangroves are an

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		coast	use of mangrove forests Newspaper article series that focuses on functions of Mangroves (lobbying) Sticker	important and beneficial resource. Present examples of sustainable economic use of mangroves (Eritrea currently has several mangrove projects, which could eventually be tapped for ideas, examples, assistance etc.)
Mangrove destruction due to overgrazing and collection of fire wood	Use mangroves in a sustainable way without depleting them.	Local Inhabitants, Fisherman that use mangroves as a source of fuel, housing material and camel grazing material or as fishing grounds	Group delivery and community channels, , such as: Intensive Extension Work and local workshops (high illiteracy), Folk Theatre or Puppet Show for communities that could show people in a dramatic and funny way the different consequences of mangrove depletion.	The promotion should focus on the possibility of income generating activities and on the presentation of best practices and be integrated by a concrete project: PERSGA Micro Grants could be used to finance a projects aiming at rehabilitation/reforestation of mangroves.
No appreciation of the sea as a source of food	Appreciate fish as a healthy, locally available and nutritious source of food	Primary: Women (rural and urban) Secondary: Families, Men, Children	Mass media channel such as radio and TV programme, articles in women magazines. Posters and stickers with a catchy slogan could be used to underpin the message. Group and organization channels such as presentations, workshops etc.	Highlight the nutritious benefits of fish for child development, the heart, cholesterol etc.  Present easy and adoptable cooking ideas and recipes with fish
International Waters: waste dumping and over fishing by foreign vessels	This problem should be addressed on a regional basis first through lobbying and public awareness addressing both Decision Makers and Donors. Please refer to the section Regional Awareness  For Social Marketing the promotion should focus on the benefits a state can gain when properly enforcing international law (financial and economic, as well as environmental benefits) and on the strengthened sense of sovereignty in the national waters if the law is properly enforced.			

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## 6.3 How to use the Social Marketing Plan – Recommendations for the next steps

### 6.3.1 Steps of a social marketing program

The design of a sound environment marketing program involves at least six stages:

- **Stage 1: Planning and Selecting Strategy**

This stage provides the foundation for the entire social marketing process. An assessment of the problem, the target audience and the available resources is necessary before moving ahead. During this planning process, the target audience should become segmented and goals and objectives for the program developed.

- **Stage 2: Selecting Channels and Materials**

Channels are how the message will be delivered, whether it is face-to-face, group, mass media, community activities or a combination of channels.

- **Stage 3: Developing Materials and Pre-testing**

It is important to develop a draft of materials, then pre-test them with target audiences to determine if materials get the intended results, or revise them accordingly before implementation.

- **Stage 4: Implementing the Program**

A method for tracking and evaluating the program should be in place before the kick-off. The appropriate evaluation type to use here is process evaluation, which requires looking at the steps involved with the program to see where the program is succeeding, and allows the identification of areas where changes are needed. The most successful programs are always being updated with current information about the program and the target audience.

- **Stage 5: Assessing Effectiveness**

Assessment of the effectiveness of the program should be conceived during the initial stage. It should measure how the program is affecting beliefs, attitudes and/or behaviors of the target audience.

- **Stage 6: Feedback Refining**

Whether the program continues or ends, an evaluation report should be prepared. The report can be used to undertake revisions, secure funding to continue the program, assist others conducting similar activities, or help document the ability to conduct programs.

We are concerned in this report with the first two stages outlined above. Due to insufficient funds, we were not able to allocate funds to the suggested activities and are aware that some of the suggested ideas might not be applicable. PERSGA will therefore need to choose Means/Channels from the suggested Marketing Plan that are suitable given the available budget.

### 6.3.2 Developing material and Pre-Testing

#### Use of existing Social Marketing Material

In an attempt to optimise the use of available facilities and minimize wasted resources, it is advised to use or restructure already existing social marketing material. Thus, PERSGA's present public awareness material and publications ought to be utilized. However, based on the Social Marketing Assessment, much of the existing material (a) is not widely and regularly distributed and (b) is targeting mostly the educated, literate public and thus is rather complex and difficult. Based on this point, some issues must be taken into consideration: (a) People do not want to read through long brochures (b) the fact that the rate of illiteracy in the entire region is high. Therefore, we recommend the following measures to be implemented: (a) PERSGA would revise part of the material to make the messages existing more visual and simple and to tailor them more towards the respective target groups in each country. (b) More attention should be paid to effectively distributing the material among the target groups in a regular manner.

Communication materials, such as booklets, leaflets, posters, videotapes on specific subjects, (i.e the trade with protected species, mangrove depletion etc) has been already developed, produced and tested by donors, international NGOs and other organizations. These materials are in general designed to be publicly distributed and used. We recommend that PERSGA reviews already existing material in view of accuracy and completeness, appropriateness for the relative target audience in forma, style and readability, availability and price, and inquires about permission to use this material and modify where appropriate.

#### Development of new material and further refinement of messages

For the development of new material, communication specialists will need to be hired to define and develop wordings and contents. Based on earlier cases, the establishment of a communication centre, where ideas and materials are universally formulated and produced, has proven successful in the past. Even though the entire bulk of material does not need to be created separately for each county, it will be important to tailor and fine tune everything for country-specific conditions. This is important to sustain the cultural context of the materials. Realizing the measures to be taken to achieve such tasks will develop a rapport amongst the local groups as well as international communities.

#### 6.3.2 Evaluation and Indicators

Indicators are the basic tools used to measure and assess the progress and results of a project. While there could be any number of indicators for each project objective and activity, in practice, it is important to limit the number of indicators in order to have a reasonable and viable Monitoring and Evaluation (M&E) plan. Indicators ought to be customized to each project and site specification.

Indicators should: (a) measure/assess the most important expected results of activities and objectives, and, (b) be based on accessible data that can be collected by PERSGA. In addition, indicators should also be time-specific, independent of the objective (not just be a repetition of the objective) and cost effective.

We have mentioned before constraints concerning budget availability for the social marketing plan. These are not tailored to specific activity for effective implementation. Our monitoring framework, therefore, is meant to be indicative only and has been inserted for the regional activities only.

The suggested Marketing Plan is supposed to be implemented over a period of two years. Choosing and developing the Means/Channels will require a substantial time input, will depend on how this process will be carried out (done by internal communication specialists, tendered to consultancy companies, NGOs, developed with the help of the NPCs by national NGOS etc). It will therefore be difficult to measure within the timeframe of the marketing plan any substantial changes in behaviour. Thus, indicators used should be quantitative, rather than qualitative. Only if some of the campaigns would effectively run in a regular basis for over 2 years, quantitative indicators could be applied. This might be also made more difficult due to the lack of an available database.

## Monitoring Framework SAP

Project Component: Monitoring Framework Social Marketing Plan – Regional Level			
	Expected Results	Indicators	Remarks,
<b>Objective One:</b> To promote PERSGA as an organization and introduce specific relevant issues to environment and coastal management in PERSGA region			
<b>Activity 1:</b> Establish a regular newsletter that is distributed at least every 2 <sup>nd</sup> month	PERSGA is known to politicians, decision makers, donors, international and regional NGOS and individual and cooperate subscribers	<u>Quantitative:</u> No. of times the newsletter has been published No. of copies printed and distributed No. of subscribers according to category No. of distribution points <u>Qualitative:</u> Number and quality of feedback received by PERSGA (letters, visits, calls)	
<b>Activity 2:</b> Establish an informative, regularly updated website	PERSGA is known to politicians, decision makers, donors, international and regional NGOS and individual and cooperate subscribers	<u>Quantitative:</u> No. of updates No. of visitors to the site <u>Qualitative:</u> Number and quality of feedback received by PERSGA (letters, visits, calls)	
<b>Activity 3:</b> Produce and distribute desk calendars, posters etc	PERSGA is know to wider general educated public which will have a better (basic) understanding of some of the environmental priorities of the region	<u>Quantitative:</u> No. of posters and calendars distributed No. of requests to obtain extra copies of posters, calendars	
<b>Activity 4:</b> Booklets and programs on Environment and Islam	Increased environmental sensitivity	<u>Quantitative:</u> No. of books printed and distributed No. of programs made and distributed No. of pre-testing sessions <u>Qualitative:</u> Quality of comments received from target group	

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Activity 5: Drawing competition	Increased environmental sensitivity	<u>Quantitative:</u> No. of competitions held in the region No. of participants	
<b>Objective two:</b> promote PERSGA as an organization and discuss the role and need of different activities within PERSGA and SAP and gain commitment from decision makers and important motivators			
	PERSGA is known to politicians, decision makers, donors, international and regional NGOS  Each workshop results in a number or clear recommendations for actions to be taken for the sustainable development and the protection of the RSGA area	<u>Quantitative:</u> No. of workshops hold No. of participants Documentation of workshop has been distributed to all participants/relevant organizations No. of initiatives identified during the workshop that have started implementation/are in implementation phase  <u>Qualitative:</u> PERSGA focal points are known and are systematically invited by various government and donor organizations for environmental related issues	