

The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)

The Strategic Action Programme (SAP)

Integrated Coastal Zone Management (ICZM)

Project Implementation Plan (PIP) of the ICZM Model Activities

Introduction

ICZM is a management framework which has proven to be effective at enhancing the sustainable development of coastal resources and the marine environment at the local government level. It provides local government units with a mechanism and process to harmonize both the economic development and environmental management of marine and coastal resources.

ICZM ensures that the coastal decisions of all sectors and all levels of government are harmonized with and consistent with the coastal policies of the nation in question.

ICZM focus on environmentally sound integrated planning and management and serves as a blue-print for sustainable coastal development. A current consensus is that economic sustainability constitutes institutional and structural economic changes that allow for current improvement of societal welfare without foreclosing options for similar development for future generations.

ICZM in most countries in the Red Sea and Gulf of Aden Region is adversely affected by weak co-ordination between ministries, overlapping jurisdictions, conflicting objectives, and weak execution of land use plans. The effective use of **ICZM** is especially important in supporting the co-operating countries to meet challenges related to long-term development of coastal settlements and development zones, further expansion of international and domestic tourism, and maintenance of the rich biodiversity and cultural heritage of the coastal zone.

Therefore, PERSGA will support the preparation and assist in implementation of **ICZM** model activities for selected sites in the four southern countries—Djibouti, Sudan, the northern coast of Somalia and Yemen. The development of **ICZM** in these countries is less advanced than in the northern ones and measures need to be taken to transfer of knowledge from northern countries, improve their knowledge of the **ICZM** planning and management process in order to achieve regional goals for conservation of the coastal and marine environment.

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Objectives

The overall aim of the ICZM Model Activity is to prepare and test a draft ICZM Guidelines for Coastal Area Planning by applying the process and evaluating its strengths and weaknesses, its difficulties, its appropriateness, etc, and proposing improvements to the process and revision of the Guidelines.

The general objectives of the model activities are:

- To protect and rationally utilize the coastal resources over a relatively long period of time;
- To determine and recommend the management measures with a view to resolving the existing environmental conflicts and setting up the optimum paths of the future dynamic development;
- To propose a development concept of the selected coastal area of the model activity, harmonized with the receptive capacity of the environment

Strategy

The strategy of the model activities will be based on the principles of Sustainable development and integrated management of the coastal resources, the basic elements of which are:

- Increase and concentration of population;
- Development of economic activities which would respect the natural resources of the area;
- Cessation/halting of degradation of natural systems;
- Prevention of negative environmental processes in the future.

For the successful implementation of a pilot activity an active involvement of the national and local authorities is probably the most important factor. Additionally, the knowledge of the local conditions and the precise allocation of the environmental problems in the area can only be secured by the relevant national and local institutions. All activities should lead to the preparation of environmental management plans integrating all knowledge gained by individual actions.

Institutional framework

The following actors will participate in the development of an ICZM model activity:

- PERSGA:
PERSGA will participate through the headquarters in Jeddah; PERSGA regional focal point agencies; SAP components and the national programme coordinators.
- Government authorities and organizations;
- National institution;
- Private sector and NGO's.

PERSGA national focal point agencies will act as a general national co-ordinator for the pilot activity;

A national ICZM working group representing all stakeholders will be established;
 A multidisciplinary experts team lead by an ICZM expert will be established. The team leader jointly with the SAP-NPC will ensure full exchange of information between various activities and working group members of other SAP components

Scope of Work

The work will be divided into four stages:

Stage 1 - Preparatory

Activity 1-1- Establishment of the national experts team:

A team of ICZM National experts has to be established following the procurement process of PERSGA

Activity 1-2- Selected coastal site: in each country will be identified of a length and depth that will vary from site to site according to the topographic and coastal characteristics of the selected area (annex-1);

Activity 1-3 - Coastal Profile:

In initiating, the development of the ICZM model activity, it is essential to have a clear profile of socio-economic, cultural, political and ecological characteristics of the site. The national experts team will prepare the national coastal profile which will be used for the development of guidelines, procedures and recommendations and in the implementation of Pilot Projects to test the draft guidelines (annex-2).

Activity 1-4 - Establishment of the national ICZM working group:

A national ICZM working group representing all relevant stakeholders will be established. The working group will participate in the formulation , preparation and implementation of the integrated management plans as will as agree on the detailed work plan, review progress and consider future plans.

Stage 2 - Prospective Analysis

This stage, which can be identified as the initiating stage, elaborates frameworks that show interactive relationship between development and environment.

Activity 2-1

Development of environmental scenarios through which the impact on the environment of various options of development is analysed:

The coastal profile will be used in determining the types and level of policy and management interventions. Through environmental profiling and consultation with stakeholders, it is possible to prioritise the environmental concerns requiring immediate attention.

Activity 2-2

Study the possible implications of expected climate change on the coastal area: Through the examination of the possible effects of the sea level changes on the coastal ecosystems and the examination of the possible effects of temperature elevations on the aquatic and marine ecosystems, including the possible effects on economically important species.

Stage 3 - Integrated planning and management programme:

The Integrated plan and management programme (IPMP) shall provide a general framework and long-term action program within which more detailed issue-specific and area-specific action plans can be developed

Activity 3-1**Development of Integrated Planning and management study**

The objective of this activity is to establish the basis of the process of integrated planning and management of the resources of the coastal area of the model activity and to develop an outlook of the area based on the capacity of the environment to sustain the proposed development among other benefits.

The Integrated Planning and management Study should cover the following aspects:

- Organizational and legal arrangements (annex-6);
- Building local capacity to plan and manage coastal and marine areas;
- A strategic environment plan for sustainable development of the coastal and marine resources;
- Short-term action plans covering critical environmental management issues, such as waste management and eco-tourism;
- Environmental investments by both the public and private sectors;
- Environmental monitoring program;
- Training of local people from the public and private sector to manage and implement ICZM programs and related supporting activities; and
- Establish partnerships and building awareness and capabilities among full range of stakeholders including relevant Government agencies, academic institutions, community leaders, private sector interests and nongovernmental organisations (NGOs) to fully participate in ICZM.

Developing Institutional Arrangements

As a result there has often been little opportunity for input from outside interests whether public or private, particularly at the local government level. On top of this, no specific criteria has been established for involving public participation into the planning process. In the absence of an effective and appropriate institutional mechanism, ICZM cannot be carried out. A study will determine the most appropriate institutional mechanism that

would address resource use conflicts and ensure the sustainable development of the bay area. The formulation of a multisectoral organization which takes the form of a council might be recommended.

Developing Data Gathering

The environmental profile of the model activity area acknowledges the inadequacy of information base for a more specific assessment of environmental issues and in determining the most appropriate management regimes for the area. Although the Strategic Environmental Management Plan will be developed within the purview of available data, the generation of additional information is expected to enhance the present strategies and programs set forth for the model activity area's management. Institutional networking will be established as a basic strategy in the pursuit of activities under this component. A close working mechanism to implement this activity should be established with PERSGA IIMS (Integrated Information Management System)

Developing Environmental Monitoring

A monitoring program has to be designed to provide information on the state of marine environment to policy makers/managers and the general public in order that appropriate strategies and actions can be taken for the sustained use of the marine environment. Participation in the monitoring program included local and national government agencies, private companies operating around the bay, and academic institutions. Appropriate institutional arrangements requiring multi-sectoral involvement will be developed to ensure that the process of environmental monitoring and assessment could be sustained.

Developing Financial Options

Generally, most local governments in the region do not have the expertise or funds to develop, construct, and operate efficient and effective environmental facilities and services such as a municipal solid waste management system although they are mandated to do so.

Recognizing that the governments has very limited funds to finance all the environmental programs of the ICZM model activity areas, innovative financing mechanisms will be proposed in the Strategic Environmental Management Plan to help sustain its implementation

Adopting

The ADOPTING phase of the Integrated Coastal Zone Management (ICZM) cycle comes after the necessary elements of the DEVELOPING stage have been completed. Getting the Strategic Environmental Management Plan and other action plans adopted by the local government authority is a crucial exercise at this stage. To facilitate this, the general public should be informed of the environmental problems, the risks associated with public health, ecosystem health, and the well being of the society especially in terms of food and employment security.

Adoption by the local government brings the developed plans and organizational mechanisms into a heightened level of legitimacy. This solidifies the ICM initiative in terms of its sustainability due to a higher degree of political will from stakeholders.

Implementing

Program implementation begins by setting up an interagency and or multi-sectoral coordinating mechanism including the operating office. The project management arrangements at this stage can be transformed and become the essential part of the local governments' institutional structure through appropriate legislative procedures. External financing resources should be used to operationalize the Integrated Coastal Zone Management (ICZM) program.

Annex 1: GUIDELINES FOR THE SELECTION AND NOMINATION OF A SITE FOR A

POTENTIAL PILOT PROJECT IN COASTAL AREA PLANNING

Aim

The aim of the Model Activities will be to test the draft Guidelines for Coastal Area Planning by applying the process and evaluating its strengths and weaknesses, its difficulties, its appropriateness, etc, and proposing improvements to the process and revision of the Guidelines.

Selection criteria

In selecting a site to be nominated for a Pilot Project, the following must be taken into consideration :

- The site should have been the subject of a certain amount of study, survey and/or other investigations in the past.
- The site should provide sufficient challenge to test the Process adequately, but it should not comprise complex problems which require a more thorough and mature process.
- The site should, as far as possible, be bounded by natural boundaries (*e.g.* a natural bay, a valley system, a river catchment, etc), and/or within one single administrative organization.
- The site should comprise multiple activities and may include, *inter alia*, urban/built-up areas, agricultural uses, fisheries activities, port or harbour activities, recreational opportunities, wastewater discharges, industrial activity, nature reservations or other protected areas, coastal vegetation (desert or forest), etc.
- The administrative authority (local Government) must be willing to become actively involved in the Pilot Project, contributing in kind if not in cash, to the project.
- The private sector (where it exists) must be interested in participating, and supporting the project in cash or in kind.
- NGOs and community groups must have indicated an interest in becoming actively involved in the project.

Nomination

The nomination must -

- briefly describe the nominated site, noting any special characteristics;
- include a map, clearly showing the site, its special features and its boundaries;
- include photographs of aspects of the site, if available;
- identify the local Government involved;
- attach letters of support from local Government, private sector, academia, community groups;
- identify the Objectives for the Coastal Area Planning Process at this site;
- determine the benefits that are expected at the site through the Process;

Annex 2:

A) GUIDELINES FOR THE PREPARATION OF NATIONAL COASTAL PROFILES

Background

In initiating, the development of the ICZM model activity, it is essential to have a clear profile of socio-economic, cultural, political and ecological characteristics of the site. The national experts team will prepare the national coastal profile which will be used for the development of guidelines, procedures and recommendations and in the implementation of Pilot Projects to test the draft guidelines.

Objectives of the National Coastal Profile

- Identification and characterization of the selected coastal area.
- Identification of existing legislation on coastal planning and management, as well as procedures that may exist for coastal resources planning.

- Identification and recording of existing and potential demands and conflicts in coastal resources use and the important issues that must be taken into account in the coastal planning process.

Geographical scope of the National Coastal Profile

In determining the extent and range of “coastal area”, the team should try to cover as far as possible, all that land and water which has an influence one on the other and which can be planned for and managed.

Scope of Work for the Preparation of National Coastal Profile

- The national experts team is responsible for the preparation of the National Coastal Profile of the selected area
- Using the suggested contents (attached) as a guide, collate existing data, information and maps and confirm their reliability. Note gaps in the data sets. Only if absolutely necessary, undertake the minimum amount of new survey work to fill any important and essential gaps in order to meet effectively the objectives of the National Coastal Profile;
 - Identify and discuss existing national legislation with a focus on coastal planning and management, as well as the procedures that may exist for resources planning;
 - Identify and characterize existing and potential demands in coastal area resource use, conflicts which may arise, and other socio-economic issues that must be taken into account in the coastal planning process;
 - Identify and prioritise the important issues that must be taken into account in the coastal planning process.
- Assemble all the materials produced by the team and compile the National Coastal Profile according to the Technical Guidelines (attached). The language used should be understood by a wide cross-section of technical specialists, administrators and the general public including senior school students. The text can be in English or Arabic.
- The national team will work in his/her home country and communication with the PERSGA will be through email, fax or other form of correspondence.

B) SUGGESTED CONTENTS OF THE NATIONAL COASTAL PROFILE

The Physical Environment

Geographical scope and boundaries – determine boundaries; distinguish sub-sectors; get maps;

Physical Geography – geological characteristics, minerals, seismicity; altitude and bathymetry; land use patterns, soil types and stability, erosion/accretion; reclamation, dredging, other coastal alteration; estuaries, wetlands; coastal sediment types, seabed characteristics; landscape;

Atmosphere and Climate – wind, rainfall, sunshine, evaporation; wave regime and storm surge events; air temperatures, air quality/pollution; seasonal differences;

Hydrology – quality and quantity for groundwater, rivers and streams, lakes, the sea; coastal currents, water level fluctuations, water temperatures, salinity, chemistry, water pollution; seasonal differences;

The Biological Environment

Species – zoogeographical realm, plants and animals (abundance, diversity, life cycles), dominant and climax populations; rare/threatened/endangered, endemic/exotic, migratory; commercially important species; invasive, destructive and other problem species;

Ecosystems – coastal desert, coastal forest, coastal marine (benthic and pelagic); riverine (rivers and substantial streams), lacustrine (lakes and ponds), estuarine and wetlands, seabirds, mangrove, etc.;

Trophic aspects – productivity, predator/prey relationships, food webs/chains; blooms, eutrophication;

Socio-economic Environment

Demography – populations, gender ratios, age distributions, ethnicity, population growth rates; historical record of human habitation and use of resources; social structures, cultural resources

Health, Education and Recreation – health statistics, environmental health, social welfare system; schools and student population at various levels, literacy, environmental education; community activities, sports, leisure facilities, swimming beaches, resorts, recreational boating;

Economic Activity – employment/unemployment; heavy and light industries, mining, primary industries (agriculture, forestry, horticulture, fishing), retailing, tourism, service sector; transport (road, rail, air and marine); import/export activity; occupational health and safety, average household income;

Utilities – energy (electricity, gas, oil, nuclear, wind, other); potable water, irrigation, water reuse and recycling; management of domestic solid waste, sewage and domestic wastewater, industrial solid and liquid waste; roads, rail, shipping and other transport; electric power lines; oil, gas and other pipelines;

Environmental Risks – land, air and water pollution (point and non-point sources); water depletion; pesticide use, hazardous wastes (toxic and radioactive); exotic species, pests; inadequate knowledge and weak information base;

Institutions and Administration

Administrative relationships – local government role and responsibilities, relationship to central government; democratic processes, public involvement in resources and environment administration and management;

Legislation - resource use and environmental protection legislation; environmental impact assessment legislation; environmental management, environmental quality standards, indicators;

Planning - land, water and resources planning mechanisms, contingency planning;

Conclusions on Important Priority Issues (the following are only examples)

Sustainable use of natural resources, depletion, wasteful practices

Marine pollution and water quality

Human health and well-being

Ecological health and biological diversity

Waste management

Legal framework for protection and management of coastal areas

Public participation in planning and management

Administrative, planning, management and research capability

References (see Additional Guidelines)

Annexes (for example)

- EIA Process flow diagram
- Planning Process flow diagram
- Lists of terrestrial and marine species
- Environmental Quality Standards, Discharge Standards, etc
- Environmental and Planning Administrative structure

Annex 3: TECHNICAL GUIDELINES FOR THE REPORTS

1 WORD PROCESSING SOFTWARE, FONT, FORMAT, ETC

Kindly use Microsoft WORD ver.6 or higher. If possible use Arial or Helvetica font, at a size of 11 or 12 pt. Format and type the entire document on A4 paper (210mm by 297mm), in single spacing, allowing the usual margins for binding (about 2.0cm). Please avoid the use of footnotes. Provide hardcopy printout as well as diskette version.

2 TABLES

Each table, if possible, should be contained within a single page. Tables should be numbered sequentially throughout the entire document (*e.g.* Table 1, Table 2, etc.) and should form part of the main text file. Neither text nor numbers contained in tables need adhere to the font type and size noted above for the main text.

3 ILLUSTRATIONS

High quality illustrations are encouraged. Illustrations should be numbered sequentially throughout the entire document (*e.g.* Figure 1, Figure 2, etc.). They should be in monochrome (black and white), or able to be printed effectively in monochrome. Preferably they should be scanned and embedded in the document text. Neither text nor numbers contained in illustrations need adhere to the font type and size noted above for the main text.

4 MAPS

As far as possible limit all maps to A4 size. If absolutely necessary, you can use A3 size (297mm by 420mm); it will then be folded to fit within the A4 size of the document. Consider such maps as illustrations and number them according to the sequence noted above. Any other essential maps of other sizes, should be referred to in the text but not numbered sequentially since they will need to be folded and carried in a pocket attached to the inside of the back cover.

5 LISTS, INVENTORIES, ETC

Long lists, long tables, inventories, etc., should be attached as annexes and not in the main body of the text. Annexes should be numbered sequentially (*e.g.* Annex 1, Annex 2, etc.) and can then be referred to in the text in discussion. For example, the Inventory of Caspian Species, the Inventory of Land-based Sources of Pollution, etc., should be attached as Annexes.

6 REFERENCES

Only publications that are relevant and are referred to in the text, should be listed in alphabetical order according to the name of the author. The usual, conventional reference method is to be used, ensuring that the following are all provided :

name(s) of author, the year of publication, the title of the work, and the journal name and details (for journal articles).

e.g. Saeed, O., 1981. *Sudane Marine Life*. Port Sudan Private Printer, Sudan.

7 ACKNOWLEDGMENTS

In the Acknowledgments section, due recognition should be given to the major contributors of analyses, syntheses, data, information, maps and other material. Kindly provide the name, organization and position of each person listed, together with an indication of the topic or issue that he/she contributed to. An acknowledgment is not only recognition of a person's contribution, but it is also an assignment of responsibility.