

User Functions in The Coastal Zone Of Yemen

Lecture 2

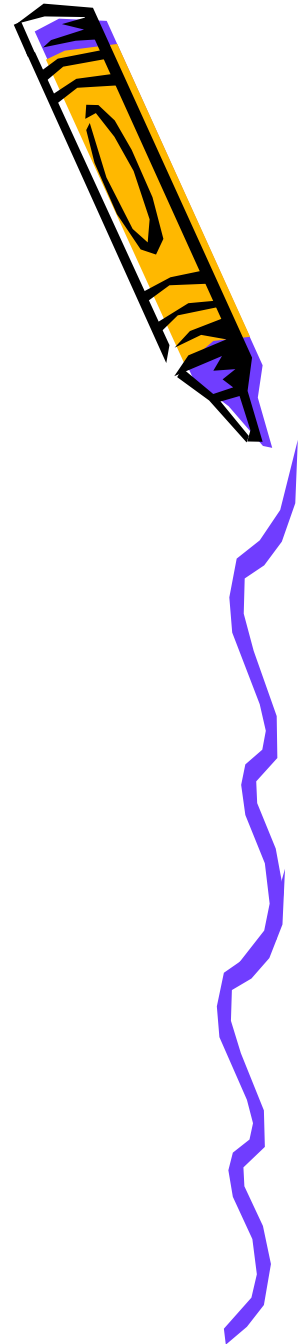
Dr K. Hariri – IWRM Masters Program

WEC- Sana'a University

9th January 2007

Objectives

- Identify Context of Management of CZ
- Define Coastal Management Area
- The Coastal System to be Managed
- Planning as an Integral Part of Management
- Explain the Planning Process for



Context of Management

- Management of coastal areas involves multiple problems. It involves desired - and often conflicting- outputs from different users of the coast. There are differential productive capacities over space and time within any designated coastal area. The linkages to upstream areas and beyond can be different. The coastal area may involve a number of governorates, institutions with varying responsibilities and roles in management (e.g. Balhaf- Burum CZ, Luhayyah – Midi CZ).

- Mangroves in Luhayyah



Problems of Coastal Areas

 Typical problems include:

- water quality degradation
- Loss of habitat
- Decline in yields of fisheries
- Pollution of beaches
- Contamination of shellfish and finfish
- Congestion of recreational areas
- Sedimentation of harbors and navigation channels
- Damage from natural catastrophes
- Loss of biodiversity



Problems of Coastal Areas

Loss of Amenity



Locals Loading Mangroves in Luhayyah



The Coastal Management Area



- **Designation of the coastal area to be managed as a single unit is made through a political decision. The management boundaries of the area usually do not coincide with the boundaries of a single ecosystem. Typically several ecosystems of different sizes exist within and sometimes beyond the designated management area.**



The Coastal System

- The coastal system to be managed is comprised of a complex, dynamic interrelationships among human activities, societal demands, natural resources and external natural and human inputs. The main driving force in the system is the human activities to fulfill societal demands for use of the natural resources to produce the required products and services.
- Sometimes one societal demand might be to restore and/or maintain a coastal ecosystem in its natural state as a protected area (Khor Shoran in Bir Ali or Sikha Island opposite it

Factors Affecting Management (1)

- Management of Coastal Areas must deal with:
 - Multiple conflicting demands on the coastal area
 - Human population increases and increasing demand for economic development
 - Stochastic nature of natural events including frequency distribution of quantity and quality of freshwater inflows and frequency distribution and intensity of hurricanes, storms and other natural phenomena
 - Rate and magnitude of natural processes, shoreline erosion (e.g. Urj north of Hodeidah, and Shuqra 75 km east of Aden)

Factors Affecting Management(2)

- Limited resources allocated
- Uncertainties such as policies, demographic and economic conditions, and technological change
- Long term effect of climate change

e.g. Bleaching corals in near shores of some Red Sea Islands due to rise in temperature 2004





Factors Relevant to Context of ICZM

- Management Goals and Objectives- level of sophistication in detailing outputs, scope of planning, constraints imposed on planning
- Gov't and/or institutional structures- institutional responsibilities, capacity, implementation, public participation and financing source
- Resources available for conducting the analysis
- Data availability- in relation to surface water, groundwater, atmosphere, ecological processes, pollutant generation and discharge
- Existing perceptions in the coastal area
- Regional boundaries- e.g. Economic boundaries, ecosystems boundaries, political jurisdiction
- Physiographic, hydrographic and climatic characteristics- topography, surface water and groundwater, temperatures, sunlight and precipitation
- Habitats, ecosystems and biota.



Planning As An Integral Part of Management

- Operationally planning can be defined as the process of deciding who gets what, when, where, how, at what cost and who pays the cost.
- Initiation of planning and the ultimate decision as a result of planning are normally a function of the political process
- Analysis is that activity that generates information for the planning decision. For the ICZM it is important to consider explicitly a) how the planning is organized and b) what analyses are essential to develop the information needed for the planning decision.
- Hence, it is important to consider:
 1. The Planning Process
 2. Analysis for Planning

The Planning Process

- Initiating the Planning Process (Reasons for deciding to make the plan e.g. declining fish productivity, delays of vessels in the port, degradation of water quality, damages of on shore property, damage to ecosystems)
- damage to habitats and concerns about the long term effect of climate change
- Because management of coastal areas is a continuous activity, the planning process for ICZM must be organized ***to generate information at various points in time***
- ***The activity of analysis and planning must be continuous***

Organizing the Planning Process

- Who participates?
- How to ensure Participation over time?
- Who does the Analysis?

Please answer these questions in writing and hand the answers in the next lecture

Thank you