

### **Coastal and Littoral Management**

1. There is no precise definition of coastal areas. All definitions include coastal waters, marine waters and estuaries, and some portions of the land along the coast where human activities and natural processes both influence and are influenced by those in the water. The extent of these lands varies because its limits are determined not only by ecological and geological characteristics, but according to what is considered politically and administratively manageable. Thus, it is possible to understand an entire watershed that drains into the sea and all the waters that overwhelm the continental shelf, in practice, coast zone is relatively narrow band of water and land and natural elements whose features are beaches, wetlands, estuaries, lagoons, coral reefs and dunes. Features made by man that characterize these regions, include commercial fisheries and commercial aquaculture operations, industries, recreational and tourist facilities, archaeological sites.
2. The economic importance of coastal zone is vast. Most of the seafood consumed live and are picked up along the coast. All commercially important fish in the world and depend on the coastal zone and a large part of industrial fishing takes place in it. The coastlines are locations for seaports and for industrial and commercial activities which involve transport and process of large volumes of raw materials and finished products. The coastline attracts people and in developing countries like those in West Africa, it records the highest growth rate of the urban populations. For centuries, coastal regions have been used for recreation but now have become tourism big business. The littoral and coastal region thanks to its natural characteristics provides environmental benefits often ignored, but important: shoreline stabilization, protection against storms, fish

feeding, protection against floods, maintenance of nutrient cycling and wastewater treatment.

3. To manage the development of littoral and coastal region in a way that is environmentally sound and sustainable is particularly challenging when it is in natural areas most subject to the impacts of development and, as said, attracts it. Most economic development projects in these areas could seriously affect the resources located in these areas and to present conflicts when it comes to use them. Consequently, an environmental assessment alone is not sufficient to encompass the entire coastal zone management. Therefore, emphasis should be put in regional planning both to minimize or mitigate negative impacts and promote optimal use of available resources.

### **Relevance to BOAD investment**

4. The following types of projects may have an impact on coastal and marine areas:
  - Agriculture: coastal and inland farms, large-scale irrigation dams.
  - Fisheries: coastal capture and mariculture / aquaculture including the conversion of wetlands and mangroves.
  - Forestry: harvesting of mangrove forest products and other renewable resources, intensive inland forestry.
  - Energy: oil and gas exploration and exploitation, coastal power generation, large hydroelectric dams.
  - Transport: ports and harbours; channel construction and maintenance dredging; dredge spoil disposal, roads, railroads and bridges.

- Urbanization: shoreline modification, waste disposal, tourism, extensive development of water resources, urbanization of watersheds.
- Industry and Trade: Industry/commerce: industrial plant establishment, coastal and marine mining (e.g., sand); salt manufacture; and waste disposal.

### **Sectoral and intersectoral reports**

5. Three main types of linked issues from the perspective of a rational management of resources relate to the issue of sustainable development of coastal and marine areas. First, most of development programs are sectoral and generally focus on large projects aiming only at one objective such as building a large port facility, applying an intensive system of capture fisheries (see guidelines "Fisheries"), or establishing a program of converting mangrove to rice production or shrimp ponds culture (see "Management of natural forests"). Multi-purpose resource management is particularly suitable for coastal zone.
6. Second, government agencies, as well as lending institutions and local interest groups tend to support the development goals of a particular sector, due to the economic interests it represents. The economic interests of each of the government agencies responsible for the management of certain resources may well give rise to conflicts between agencies or between them and the organizations whose task is to design a program of wider planning. These conflicts can occur on ecologically or economically since the of these areas and their ability to recover after having been badly damaged or disturbed are often hampered by the effects of a type of development no another. If we want to implement the mitigation measures that will offset the negative intersectoral effects, integrated approach to planning and management of resources is required.

7. Third, coastal and marine regions are home to different types of resources whose ability to sustain decreases where development is accelerating. Among the manifestations of this situation, one can mention the pollution of coastal zones to increasing risks to human health, declining fisheries, and beach degradation, conflicts between local culture and tourism and displacement of communities whose livelihoods were based on coastal and littoral resources. This trend can be reversed if it is recognized that these areas require unique management.

### **Bank Experience**

8. Although BOAD does not have an extensive experience in coastal management project, significant steps have been taken in recent years, firstly, to incorporate the principles of marine and littoral management in a number of projects and secondly, to monitor the activities on land whose effects occur downstream on the coast.

9. Apart from its involvement in specific projects, BOAD indirectly defends the protection and management of coastal and marine resources in advocating the application of environmentally sound guidelines for infrastructure and urban development projects.

### **Bank Policy, Procedures, and Guidelines**

9. There are no formal policies or procedures on overall coastal and littoral planning and management. However, a number of those regarding other areas may apply to development activities in these areas. Among these, two of particular importance concern dam projects and the protection of biological diversity. The policy that refers to dams and reservoirs construction states that an analysis of downstream effects will be undertaken (see "Dams and reservoirs" guidelines). Regarding biological diversity conservation and ecological benefits, they represent two elements that are the basis of BOAD guidelines on natural sites, indicating that coastal and littoral regions development should be such that it does not affect the mangroves and other coastal wetlands, coral reef or protected areas and of biological importance (see "natural sites" and "wetlands" guidelines). The question of port facilities development and of disposal dredging (see "Ports and harbours installation") is treated in policies and guidelines documents.

### **Guidelines for environmental impacts assessment**

10. A growing number of developed and developing countries use coastal zone planning as water resources use decisions. Such planning, which is defined by its integrated approach to all sectors and resources should be recommended when it comes to designing environmental strategies and sectoral studies. Each investment project may allow moving a little more towards the same goal. Integrated environmental planning is particularly delicate in marine and coastal area because of the importance of these

extremely fragile resources represent socially, ecologically and economically for which the demand is high and which uses may alternate.

11. Such planning may obviate an impact assessment on the detailed environment of a particular project if it has led to plans, standards and guidelines that are environmentally sound and if adequate control instruments for resources use are in place. In the absence of marine and planning, it will be required an assessment of environmental impacts to ensure community participation and inter-organizations coordination at the launch of the project, all alternative solutions and intersectoral impacts to be considered before the sponsor making any decisions about the project and finally adequate implementation plans are developed and institutions are able to enforce them.
12. There are a large number of international treaties and conventions allowing protecting the coastal and marine areas (see "Treaties and international agreements on the environment and natural resources"). While most countries have signed them, their compliance is not systematic. Environmental impacts assessment of a project in coastal or marine areas should ensure that the design, construction and operation comply with these agreements.
13. Several international organizations, including the United Nations Environment Programme (UNEP), the European Community, the International Maritime Organization and the International Association of Ports, have issued guidelines for managing impacts on the environment in various activities in coastal and marine areas. The team responsible for preparing the environmental impacts assessment should estimate at what

level the guidelines applying to the project are useful for the planning and design.

14. It is important not to neglect the socio-cultural impacts that may be particularly significant (see Guidelines "Social Issues in environmentally sensitive