

STRATEGIES FOR THE PROTECTION OF THE COASTAL MARINE ENVIRONMENT OF MAHARASHTRA

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The physical features of Maharashtra state can be described within the framework of a broad two fold divisions namely the Maharashtra plateau and the coastal lowland confined between the Sahyadrian escarp and the Arabian Sea. This narrow coastal strip stretching all along the coast has a variable width of 40 to 60 km and is traditionally called Konkan. Strategies for the protection of the coastal marine environment of Konkan keeping in view the need for the development of this backward region are discussed.

It must be realised that the coastal zone is not only the most susceptible area to man-made changes, but also the most biologically productive of the marine ecosystems. With the various development plans for Konkan getting implemented, the pressure on the coastal zone will continue to increase year after year. A comprehensive programme of coastal area development and management of Konkan requires general and detailed information on the coastal environment as well as social, economic and demographic data on coastal activities including human settlement and industry.

There are obvious advantages in adopting the concept of classifying areas according to their principal and potential usage and subsequent water quality requirements. For instance, the areas could be set aside for the following primary uses.

- (a) fish harvesting,
- (b) port and harbours,
- (c) nonpolluting industries,
- (d) polluting industries,
- (e) tourism and recreation,
- (f) mining
- (g) conservation, etc.

Acceptance of a lower standard of water quality in certain designated areas could accommodate industries and municipal effluents but such waters would be precluded from use for fish harvesting and recreation purposes. Likewise, industrial and municipal discharges should not be allowed to contaminate regions identified for use for fish harvesting and recreation. If such a classification system is adopted for Konkan region, great care will be required in framing and administering pollution legislations owing to a number of technical and political problems inherent in this approach.

The coastline of Maharashtra is irregular marked by several bluffs, creeks, bays and estuaries and holds promise for brackish water fisheries. About 14500 ha area has been identified as suitable for aquaculture. However, it is necessary to conduct micro survey of these identified areas to ascertain their suitability for development of brackishwater farming. Establishment of industries in the vicinity of these identified areas should therefore be carefully considered.

The industries are largely concentrated near Bombay, Thane and Kalyan. In addition MIDC has developed industrial areas at Tarapur, Murud, Rasayani, Roha, Mahad, Chiplun, Ratnagiri and Kudal. Most of the industries are located away from the coast and release their wastewater in creeks, bays and rivers. Some of these water bodies are also being considered for aquaculture. It is therefore inevitable that proper zonation and environmental management plan is evolved. It is desirable that inland areas around estuaries should be considered only for nonpolluting industries and major industrial establishments and chemical industries should be located near the coast. The wastewater generated in these industries should be properly treated to specifications laid down by MPCB and released at a suitable location in the sea. The location for release of wastewater should be identified after detailed studies with respect to

hydrodynamics, water quality and biological potential to enable environmental impact predictions due to proposed development.

Kokan region has tremendous potential for tourism. The coast fringed with long beaches and meandering estuaries cutting through beautiful terrain with wooded hills is promising for recreational purposes. The areas identified for tourism development should be kept free from industrial development.

The coastal water of Maharashtra is by and large fairly clean except for some hot spots around industrial and urban centres. In view of the proposed developments it is desirable that the coast is periodically monitored to delineate changes if any due to the increased stress.