MEDCOAST 99 – EMECS 99 Joint Conference, Land-Ocean Interactions: Managing Coastal Ecosystems
9 – 13 November 1999; Antalya, Turkey, E. Özhan (Editor)

Towards the Establishment of an Integrated Management Program for a Coastal Zone

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Abstract

The State of Tamaulipas, with a coastal area of over 231 000 Ha and 14.7% of the estuarine areas of Mexico, with large proven natural oil reserves and the largest coastal lagoon in the country (Madre lagoon), is one of the most important States along the Mexican coast in the Gulf of Mexico. However it is also one of the less studied.

The situation of the coastal research in the Tamaulipas Coastal Zone was studied based on an analysis of the existing scientific information compiled until 1997. A total of 233 studies were revised, which included articles published both in refereed and non refereed journals, books, graduate and postgraduate theses, technical reports and congresses' abstracts. We found that the information is centralized around the principal population centers and at the same sample sites; this has caused wide zones without studies.

According to the environmental description of the Tamaulipas Coastal Zone and the evaluation of coastal natural resources here analyzed, nine conservation priority zones were detected: the Pánuco river delta, the beach and lagoons of Altamira Port, the Madero City beaches, the San Andrés lagoon, the Kemp's Ridley turtle beaches, the Carrizal river, the Soto la Marina river, the Madre lagoon and the Bravo river.

The main impacts along the Tamaulipas Coastal Zone are related to the presence of big industrial zones, and agricultural, aquacultural, fishing, port and oil activities, in addition to the absence of wasted water treatment plants.
The analyzed information indicates that the region should be subjected to natural resources' conservation programs, ecological restoration plans and an adequate coastal zone management. The highest priorities should be given to coastal lagoons, estuaries and forests, since those are the main environments where high numbers of animal and plant species are distributed, both from ecological and economical perspectives. As an important part of this investigation, we can confirm the necessity of an Integrated Plan for the Management of the Tamaulipas Coastal Zone whose

establishment will completely depend on the creation of a multi- and interdisciplinary commission dedicated to direct, orient and coordinate the activities of the different sectors towards the sustainable development of the TCZ. Important national changes in coastal zone politics are necessary in order to accomplish sustainability. This kind of programs must be revised and applied to the rest of the coastal states.