

Abstract

Development of a Coastal Geographic Information System (Coastal GIS)

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This report presents the result of the development of a Coastal Geographic Information System (Coastal GIS) at the Institute of Marine Affairs (IMA) for Integrated Coastal Zone Management (ICZM) of the Gulf of Paria. The goal is to improve the integration of disparate data, spatial analysis and modelling of coastal phenomena and decision-making required for ICZM. The Coastal GIS and the vast amount of primary and secondary data collected by the IMA for multi-disciplinary research in the marine and coastal zones of the Gulf of Paria, provide an opportunity to demonstrate the potential GIS capabilities in contributing to ICZM initiatives and the challenges of implementing the Coastal GIS in a multi-user environment. The development and design of Coastal GIS are discussed in the report. The project deliverables include: (i) A comprehensive database containing data depicting topography, land use/cover, environment, fishery, socio-economic and offshore bathymetry; (ii) Coastal Applications for Coastal Resource Mapping, Sediment Quality Assessment and Aquaculture Sighting and (iii) Long term implementation strategy recommendation. The Coastal GIS provides a mechanism by which coastal data can be integrated and analyzed to communicate information, thus bridging of the gap between decision makers and researchers.

Keywords: Coastal Geographic Information Systems; Integrated Coastal Zone Management (ICZM); and Coastal GIS Applications.