

GIS APPLICATIONS IN THE STUDY OF COASTAL PROCESSES. Barbara E. Yassin, Stephen M. Oivanki, and Jack S. Moody, Miss. Office of Geology, Jackson, MS 39289

GIS (Geographic Information System) a system for storing and manipulating spatial information in a computer, provides an unlimited format for the accumulation and study of data required to predict changes in the dynamic coastal environment. Using ARC/INFO, a GIS software, the Office of Geology is developing a database of historical shoreline maps, seismic profiles, core information, beach profiles, public land survey, hydrographic data, and geomorphic data. This extensive database will be layered to study the interrelationships of the various coastal processes. Historical trends can be easily recognized and used to focus research efforts on critical areas. Short term and seasonal change patterns can also be identified by updating the database with current research information. Previously these data were only available from numerous separate sources. GIS provides a method of incorporating all sources of geographic information into a readily accessible and easily manipulated form. Digital data can be rapidly transferred to appropriate federal and state agencies, municipalities, consulting groups, and individuals for application of the results.