

Study of the Vulnerability of Coastal Areas of the Algerian Basin with the GIS,

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Abstract :

The Bay of Algiers is of a strategic, economic, and social, it is located in the heart of the Algerian capital, where the population density is high and many factories and commercial activities making it vulnerable to the pollution. Particularly along the coast, in addition to climate change, all this leads us to study their impact on the coast of Bay of Algiers, and exposure to risks of erosion and seawater intrusion. The aim of the work is the perception of vulnerable coastal areas by determining the coastal vulnerability index (CVI) at Bay of Algiers, based on physical, geomorphological and hydrodynamic factors, coupled a study of groundwater vulnerability to risks level saline particular endangered areas. These results obtained enable to project the future maps from the request processing on the state of the coastal system using the Geographical Information System (GIS). The landmark decisive tools to provide preventive and curative solutions to coastal systems for better coastal protection particular to estuarine areas, privileged place for exchange of sediment transport. The results of the study helped to locate areas of high vulnerability to moderate eastern bay of Algiers by the ICV index varying from 8 to 14. These values are still increasing in the medium to long term if no Compensation by protective structures unsupported consideration.

Keywords: Bay of Algiers, coastal vulnerability, pollution, coast line, DRASTIC, CVI.