CHARACTERISTICS OF SEDIMENTARY ENVIRONMENTS IN SANYA BAY OF HAINAN ISLAND

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Sediments of the Sanya Bay beach are mainly fine sand, and their mean grain-size diameters are mainly between 2~3 Ф and in good sorting, and thus the beach is a resource of tourism. Moreover, grain-sizes of the seafloor sediment show a combination of sand-silt-clay, and only near the cape in the west of the Sanya Bay, medium-coarse sands dominate and they were deposited in the last glacial. These ancient fluvi-al sediments can provide good sands for modern beach. However, with the economic development, human activities have heavy influence on the coastal environment. Since the last two decades, pollutant water to the Sanya Bay is becoming more and more from urban life with the city enlarging, so the east part of the Sanya Bay beach becomes black. Moreover, in the east of the beach, sand becomes coarser, indicating that backwash strengthens and takes fine sands away, because human constructions shorten extent of the splash zone. Therefore, there are some countermeasures using law to exploit and manage the Sanya Bay to ensure the sustainable development.

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vulnerability along the coasts of the Hainan Island, we collected a large number of sediment samples through the last few years, and reconstructed the changes of the coastline by combining the data of sediment grain-size analysis and the nautical charts/TM RS imagery. The ten major cities in Hainan Province, the capital Haikou is located on the northern coast of the island and Sanya is a well-known tourism city on the south coast. The other major cities in