

Coastal Zoning Process for Land Protection using satellite image and GPS camera image on Majuro Atoll, the Marshall Islands

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Intergovernmental Panel on Climate Change (IPCC) opened the Fourth Assessment Report to public in May, 2007. In the report of the Working Group1, there is the indication of the following 2 points on the environment of coastal zone. 1) The mean sea-level will increase up to 18-59cm by the end of this century. 2) The strength of the tropical cyclone will be intensified. The report of the Working Group2 showed that coral bleaching will frequently occur because the sea surface temperature will rise up to 1-3 degree . For example, in particular, atoll islands in the South Pacific, where the highest part is only several meters above the sea-level, will suffer from the risk of inundation due to the sea-level rise. In such islands, countermeasures against the sea-level rise would be quite important. We carried out the field survey in August 2006, in Majuro atoll. At the top of Laura district in Majuro atoll, SOPAC and Ibaraki university was surveying of the beach profile(1997 and 1998: SOPAC and 2006 Ibaraki University). From this result, it can be confirmed that Laura district is in the erosion tendency, and the plan of the appropriate coastal zone management is required. Therefore, a zoning map which combined land use and the landform characteristics of the hinterland should be proposed in this study.