

Applications of Satellite Remote Sensing Technology and Geographic Information Systems in Monitoring Seagrass Ecosystem Condition and Status on Barrang Lompo Island, Makassar City

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Abstract. The seagrass ecosystem on Barrang Lompo Island has an important role in maintaining the condition of the island, both in terms of physical (coastal protection) and non-physical (habitat) aspects. Currently the condition is getting worse and worse, so it is necessary to conduct research with the aim of analyzing the condition and status as well as the factors that cause it. At the research location, several types of seagrass were found and the percentage of cover was *Thalassia hemprichii* 26.04%, *Enhalus acroides* 21.02%, *Cymodecea rotundata* 19.22% and *Cymodecea cerulata* 84%. The condition of the cover was found to be above 70% in the western part (in good category) with an area of about 1.60 Ha, while on the eastern side it was found below 50% so that it was categorized as moderately damaged (1.10 Ha). One of the causes is anchorage and oil discharge from ships.

Keyword: remote sensing, geographic information system, seagrass status