Geospasial Dynamic of Seagrass on the Small Islands, Spermonde Archipelago, Indonesia

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ABSTRACT

Spermonde archipelago consist of more than one hundred small islands, which have the higher potential ecosystem especially of coral reef and seagrass distribution. It is very influencing and provide higher contributes to the preservation of society, where most livelihoods depend on its shallow water and has high growing human activity. Remote Sensing technologies is an alternative to support the availability of spatial information resources, such as coral reefs in the large area. The objective of this study are to analyze of spatial dynamic of seagrass during 41 years (1972-2013) on the small islands in outer zone, Spermonde Archipelago, Indonesia.   We used Landsat (TM and ETM +), and the acquisition are 1972, 1975, 1978, 1981, 1984, 1987, 1990, 1993, 1993, 1996, 1999, 2002, 2005, 2008, 2011, and 2013. Landsat image processing are image gap fill for ETM+ image and used the software Frame and Fill, Lyzenga algorithm combined with ground truth to result a new image. The percentage of seagrass change based on the image classification in outer zone islands from 1972 to 2013 has decrease. This research will be contributed to baseline information on spasial dynamic of coastal benthic communities in tropical area.

Key word : geospatial dynamic, seagrass, small island, landsat