

Modeling Spatial Dynamic of Coral Reef on The Small Island Case Study: Barrang Lompo Island, Spermonde Archipelago, Indonesia

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Abstract : More than 85% of coral reefs in the Coral triangle asia getting lower and directly threatened by human activities and when combined with the threat of coral bleaching, caused by rising sea surface temperatures, the percentage increase in the value of coral reefs threatened to over 90%. By using remote sensing data can be produce a changing area. The objective of this study to determine the spatial dynamics of coral reefs during the 30-years (1982 - 2012) and predicting next 10 years (2012 - 2022). Methods used include Landsat satellite of image fusion and Cellular Automata to generate spatial dimensional of coral reef area changes in waters of the island Barrang lompo, Spermonde Islands, Indonesia. The result show the area of live coral from 1982 to 2012 has decreased and increased death coral (rubble, Dead Coral Alga) and the prediction of the next 10 years an area of live coral has declined.

Key word : Coral Reef, Spatial Dynamic, Remote sensing, Cellular Automata.