

HYPERSPECTRAL REMOTE SENSING AS A DECISION SUPPORT TOOL IN COMMUNITY BASED COASTAL ZONE MANAGEMENT IN FORDATE, INDONESIA

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Fordate is a small island situated in the North of the Tanimbar archipelago, Eastern Indonesia. This area is among the top ten coral reef hot spots, identified by the UNEP's World Conservation Monitoring Centre as exceptionally rich in endemic species, but facing extreme threat. This threat is recognized by the Fodatese people who depend heavily on marine resources for their livelihood. Coral reefs and mangroves can provide food, fish for trading, construction material, burning wood and coastal protection to the local community. Moving towards sustainable use of these resources, there is a need for an integrated coastal zone management plan which deals with the ecological and socio-economical aspects of the area. Using traditional management systems like 'Sasi' as a basis, a community based management plan will be developed. To be able to make decisions, monitor changes and identify valuable areas, data on societal, ecological and physical parameters is required. In this project a new monitoring method will be developed by MatureDevelopment B.V., Vito, the Flemish institute for technological research and Ghent University with support of the Belgium Science Policy, using hyper spectral remote sensing. The collected data will be translated into effective information, required for the community based management processes on Fordate.

References

- Roberts C.M., C.J. McClean, J.E.N. Veron, J.P. Hawkins, G.R. Allen, D.E. McAllister, C.G. Mittermeier, F.W. Schueler, M. Spalding, F. Wells, C. Vynne and T.B. Werner. 2002. Marine Biodiversity Hotspots and Conservation Priorities for Tropical reefs. *Science*, 295:1280-1284.
- Van der Steen T. 2004. Benthic habitat mapping; Fordate, Indonesia. Unpublished B.Sc. thesis. Hogeschool Zeeland, department aquatic ecotechnology, integrated water resources management, Vlissingen, The Netherlands.