

Monitoring mangrove disappearance by remote sensing: A case study in Surabaya, East Java-Indonesia

Title	Monitoring mangrove disappearance by remote sensing: A case study in Surabaya, East Java-Indonesia
Author Order	1 of 2
Accreditation	
Abstract	<p>This study deals with the application of remote sensing in monitoring mangrove disappearance. Color aerial photograph scaled to 1:30.000 of 1981, numerical data of Landsat satellite taken in 1985 and SPOT satellite data of August 30, 1988 were used. The photograph was interpreted manually, while the digital analysis with DIDACTIM software was applied to the Landsat and SPOT data. Barycentric supervised classification procedure was used in clasiffing mangrove and land use classes. Key interpretation of mangrove type was obtained by field check in 1989. Two types of mangrove (<i>Avicennia</i> sp and mixed mangrove) could be identified both on the aerial photograph and on the SPOT data. The extent of mangrove in 1981 was measured manually, while those in 1985 and 1988 were obtained by multiplying the number of pixel (picture element) and the spatial resolution of Landsat and SPOT respectively. During seven years (1981-1988), there were 852 hectares of mangrove in the study area which have been cut. For mangrove reforestation purposes, two mangrove zonations are presented ; one is based on the salinity gradient, while the other is based on the Ciloto formula. It seems that the second zonation is quite good for the study area.</p>
Publisher Name	Faculty of Geography, Universitas Gadjah Mada
Publish Date	2013-07-02
Publish Year	1991
Doi	DOI: 10.22146/ijg.2194
Citation	
Source	Indonesian Journal of Geography
Source Issue	Vol 21, No 61 (1991): Indonesian Journal of Geography
Source Page	15-32
Url	https://journal.ugm.ac.id/ijg/article/view/2194/1969
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