

# **MONITORING THE LANDCOVER CHANGE OF MANGROVE AS TSUNAMI BARRIER IN PANGPANG BAY BANYUWANGI USING LANDSAT DATA DURING LAST TWO DECADES**

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## **ABSTRACT**

Tsunami is a major threat of disaster in coastal region near to subduction zones. In the region, presence of mangrove ecosystem is very important as tsunami barrier. Tsunami disaster in Banyuwangi in 1994 was the beginning of the awareness of the issue of Indonesian nation against the threat of a tsunami. This research was done to monitor the dynamic of mangrove cover in Pangpang Bay, Banyuwangi during last two decades. We used the Landsat TM and ETM<sup>+</sup> acquisition every five year during last two decades, 1990 to 2010. We applied the maximum likelihood method of supervised classification to generate class of mangrove and other landcover classes. Then matrix confusion and statistic methods was applied to calculate the mangrove cover change. The results show that, in general, ecosystem of mangrove in Pangpang Bay still maintained its existence although it must remain alert to the threat of damage.

**Keywords:** landcover change, mangrove, Landsat, Pangpang Bay, Banyuwangi