

# THE ROLE OF FORESTS AND TREES IN PROTECTING COASTAL AREAS AGAINST TSUNAMIS

## Technical paper

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## Abstract

*This paper describes the role forest and tree in protecting coastal areas against tsunamis with focusing in Indian Ocean. First, the historical tsunamis in this region are studied to analyse the occurrences, strengths/tsunami heights, arrival time, and damage on coastal area. The coastal forest and mangrove are identified, and then study the effectiveness of them to reduce tsunami and their limitation. The hydraulic resistances of the forest and trees are proposed as results of hydraulics experiment and then the last is apply into the numerical model with study case of the Pancer Bay due to the 1994 East Java tsunami.*