

# **KAJIAN KERENTANAN BANGUNAN AKIBAT TSUNAMI SEBAGAI UPAYA MITIGASI BENCANA**

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## **ABSTRACT**

Tsunami wave hitting Cilacap and surrounding area on July 17, 2006 has become the starting point of disaster mitigation activities, such as the development of tsunami early warning system, evacuation facilities, evacuation map, and map of tsunami hazardous zone. These mitigation activities are mostly based on scientific study on earthquake and Tsunami in the Regency of Cilacap.

This study was carried out based on tsunami modeling using three earthquake scenarios: Mw 8.0, Mw 8.3 and Mw 8.6. Results of the tsunami modeling showed the 61.061 ha of affected area used for analyzing the factors of susceptibility of structures. Structure porosities of 0%, 20% and 60% were used for valuing susceptibility. Tsunami modeling results were used as hazardous level and classified based on the inundation height. As the mitigation effort, this study classified roads and determined the shelter location by considering the velocity of both tsunami and the early warning system.

Results of this study were map of vulnerability of structures due to tsunami, with porosity of structure as the element risk, map of tsunami inundation, map of structure risk and map of evacuation route.

*Keywords: tsunami modeling, porosity of structure, map of risk, evacuation route.*