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Tsunami Hazard Map for Cilacap District, Indonesia based on Numerical Modelling Data

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District of Cilacap is located on the southern coast of Java island, in the area near to the subduction zone between the Indo-Australian Plate and the Sunda plate which has high earthquake activity. One of the biggest tsunami events ever recorded in the past is the tsunami event known as the Pangandaran tsunami. The July 17, 2006 tsunami originated from the Mw 7.8 earthquake on Pangandaran Beach, West Java. The tsunami impacted the tourist area of Cilacap, the water level reached 5 m and caused the destruction of 64 houses, 98 people died, and 7 others injured (Cousins et al, 2006).

As an area with vital economic infrastructure, it is necessary for the district of Cilacap to anticipate the incoming tsunami disaster, especially to the coastal communities. An important key to ensuring an appropriate community response is developing a tsunami evacuation plan and procedure. We conduct several tsunami simulations based on numerical modeling using historical data (Mw 7.8 Pangandaran earthquake, 2006) and also Mw 8.9 worst-case scenario earthquake (PUSGEN 2007).

Using simulation data results, we provide more detailed tsunami evacuation hazard maps that can be used as a reference for local governments to prepare and updating the tsunami contingency plans.

Promotional text

updating tsunami contingency plans for the district of Cilacap, Indonesia using a detailed tsunami hazard map based on numerical modeling.

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