

Hazard mitigation analysis of the Anak Krakatau eruption and its tsunami (22 December 2018)

Thursday 27 June 2019 11:45 (15 minutes)

Krakatau volcano formed as impact of Indo-Australian and Eurasian plate activity during millions years. It's located at Sunda strait, between Java and Sumatra islands. Krakatau volcano was erupted in 1883, with eruption scale estimated 30 times atomic bombs of Hiroshima and Nagasaki. The eruption cause more than 36.000 casualties and generate tsunami with maximum run-up around 30 meter in Java and Sumatra. The devastating eruption in 1883 made Krakatau volcano collapse. The top of Krakatau volcano destroyed and cause new smaller volcano appear that called Anak Krakatau volcano. Every year, Anak Krakatau volcano spouting volcanic ash on small scale and grows 0.5 meter in average per month. On 22 December 2018 occurred eruption Anak Krakatau volcano that generate large tsunami in Banten and Lampung and cause hundreds casualties. Based on Geospatial Information Agency of Indonesia (BIG), tsunami arrived in the land on 21:30 local time. We made analysis and simulation by difference origin time (OT) of Anak Krakatau eruption and tsunami arrival to proposed a tsunami early warning for local people in Banten and Lampung. We used the CGJI (InaTEWS) and LEM (CTBTO) seismic sensors in this research.

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Session Classification: T5.2 Experience with and Possible Additional Contributions to Issues of Global Concern such as Disaster Risk Mitigation, Climate Change Studies and Sustainable Development Goals

Track Classification: Theme 5. CTBT in a Global Context