



## **The 22nd December 2018 Anak Krakatau Tsunami in Sunda Straits, Indonesia**

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On Saturday night of December 22nd, 2018 at 09.30 pm local time, the tsunami hits the coast of Tanjung Lesung in Sunda Straits West Java, Indonesia without any warning. The long holiday coming to Christmas day and family gathering party on a Saturday night at the resort turn into an unforgotten night. The night was almost perfect – as it was Saturday night with full-moon in the sky creating a beautiful scenery background of the continuing eruption activities of Anak Krakatau Volcano. The Anak Krakatau Volcano has been active since June 2018 and became an attraction for people on vacation along the coast in the Sunda Strait. That night, no one realized that the eruption of Anak Krakatau Volcano could generated a devastated tsunami. A total death toll reaches 437 fatalities, some fishermen still missing, and 33,718 people displaces. Four tide gauges in Sunda Straits recorded the tsunami wave; two tide gauges located at the west coast of Java Island and the other's two at the east coast of Sumatera Island.

A rapid field survey was conducted along the coast of West Java and Sumatera in Sunda Straits, meanwhile access to volcano and the surrounding islands is still limited due to the continuing activities of the Anak Krakatau Volcano. The most devastated area occurred along the Southwest coast of West Java from Tanjung Lesung down to the South, and the North coast of the Sunda Straits at Sumatera island along Kalianda-Rajabasa coast. The flow depth between 2-5m along the shoreline at the most devastated area were measured with an inundation distance between 100 – 500 m except to the area along the river. Scattered of coral boulders with dimension up to 2.5 m x 2.5m were observed at the southwest coast of West Java. This remind of scattered giant block coral up to 600 ton found along the road and padi rice field after the 1883 Krakatau event with scale of tsunami wave height of 20-25m.

A preliminary modelling of tsunami generation and propagation for this event is carried out that taking into account eyewitnesses from the fishermen in the sea (nearby of Anak Krakatau) who survived and saw how the tsunami was formed during the eruption of volcano. The model results indicate the hardest hit area around the Sunda Straits which explained and confirmed the rapid survey results. However, the discussion are still on going on how tsunami had been generated and comparison with laboratory experiment (Prasetya, 1998) will be discussed.