

## The Eruption of Mount Sinabung after long dormancy

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Mt Sinabung lies in the region of the North Sumatera Province, or about 80 km to the west of Medan. Mt Sinabung with a peak of 2,460 m a.s.l is one of the 127 active volcanoes in Indonesia, belonging to B-type Indonesia volcano classification. B-type volcano means that it is a volcano with an unknown history of eruption in Indonesia since 1600. Like other B-type volcanoes in Indonesia, Mt Sinabung is not equipped with monitoring equipment, because the main priority of Center for Volcanology and Geological Hazard Mitigation (CVGHM) of Indonesia is the 77 A-type active volcanoes (meaning that at least there was once one eruption after 1600). After more than 400 years of dormant volcanic activity, Mt Sinabung crater suddenly blowed water vapor and volcanic ash for the first time at 18:15 Local Time, on August 27 2010. Ash spreaded mainly to the east and west of Mt Sinabung and covered the villages of Sukanalu and Mardinding. Those villages locate at 3 km radius from Mt Sinabung crater. Once again, on August 28 the volcano erupted with a thin white plume at an elevation of 20 meters from the volcanic crater with weak-medium pressure. At 00:08 Local Time, on August 29, a thundering sound was heard from the top of the volcano reported by the CVGHM team on field. From that moment CVGHM classify Mt Sinabung into A-type volcano and its status activity was at the highest level (level 4 of four levels). Digital seismic telemetry and seismic data logger system, as well as two deformation monitoring equipment (tiltmeter and EDM) had been installed. During this period eruption the most significant seismic activity was volcanic tremor and shallow volcanic earthquakes. After coordination with the field team and local government, CVGHM decided that the people living within 6 km radius from the volcanic crater were to be evacuated. At least 25,000 residents were evacuated. Again, four minutes later after thundering sound, a thick explosion plume with an elevation of 1,500 m occured. Ash explosions continued with ash height columns varying between 1,000-2,000 meters. On September 7, 2010, the latest strongest eruption in the series of eruptions was a one-time eruption with an ash column of more than 5,000 meters. Over the last two years the volcanic activity of Mt Sinabung is dominated by shallow volcanic earthquakes and degassing of thin white vapor with height colomn elevation of several tens of meters from the volcanic crater. Since 2012, the volcanic activity monitoring system of Mt Sinabung has been equipped with 4 continuous GPS stations.