

ON THE FAILURE MECHANISM OF GUINSAOUGON LANDSLIDE, LEYTE ISLAND,  
2006.02.17.

We could meet a witness, local farmer: Virgilio Monghit (Address: Guinsaogon, St. Bernard, Southern Leyte, Zip code 6616, Philippine heard together with Prof. Marte Gutierrez of Virginia tech, USA). He was at a palm tree forest at the right bank of the failed slope, about 50 m far horizontally from the edge of the edge of the failure. The forest slope consisted of three steps (3 sections of slope + terrace) and he seems to have been at the top of the section (about 400 m high?). The rice-field was at the lowest step and the Guinsaogon village was one step down from the lowest terrace. The precipitation before the slide was maximum 200 mm in 24 hours for consecutive 3 days, which was exceptionally large even in this area with a large annual rainfall.

1) 10:25 in the morning, Feb.17, 2006:

First a mild tremor of about 3 seconds like a swing, which was actually a small earthquake felt not only by him but also many other people in the nearby villages as well. (According to Gutierrez, it was a combination of 3 successive seismic events with the max. Magnitude of 4 + something.)

2) Wild roaring sound like a jumbo jet-plane touching down was heard. In just seconds, an explosion of dust occurred at the lower part of the slope and then rocks fell down from the top of the slope.

3) When the slide happened, a strong wind occurred in the palm tree forests making him fell down for sometime then he felt the ground heave slightly. He saw the slope was waving down in three parts in parallel in down-slope direction. In only one minute, the rock debris arrived to the edge of the affected area covering everything with lots of dusts which prevented what was going on after that. Everything finished in three minutes.

4) He kept staying there for more minutes and then ran down the slope while crying and weeping.

5) When he arrived at the place of his village, he started to rescue his family in vain (his wife and children all missing). The center of the village was covered with 50 m thickness debris. A 3-story concrete building (a private house) was flowed by about 500 m in the south-east direction.

6) Rescue works by local villagers started about 1.5 hours after the landslide. Rescue teams from Tacloban arrived 4 hours after the slide. Japanese embassy staff arrived almost at the same time.

7) The village had a relatively short history. The villagers moved to this area in a relatively recent times, since 1930's from the northern part of Philippine. Among them, Guinsaugon was the newest in settling in 1950's. However, there was a old saying in this area that "mountains would get angry someday".

One man who was in the village during the slide survived in the middle of the debris flow miraculously (His name is Malbolt Ybanez, a deaf person, explaining us with motions) by clinging to a palm tree which was flowed down to the toe of the flow.

Statistics by the municipal of St. Bernard was 945 missing, 42 dead (identified) and 18 survived with injury. This number is one third less than what the witness Virglio told us.