



Observations about the 26 December 2004 Indian tsunami from eyewitnesses accounts

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The catastrophic tsunami of Indian Ocean on 26 December 2004 was experienced by many foreign visitors in the countries that were hit by the wave. An interview survey was organized to collect field macroscopic observations on the basis of Greek eyewitnesses that experienced personally the tsunami. The interview was performed among about 20 persons on the basis of a standard questionnaire. The questionnaire is structured in three main parts: personal data, earthquake experience, tsunami experience. Each one of those persons was asked to respond the standard questions independently from all the others in order to avoid any personal influence. The eyewitnesses experienced the earthquake and/ or the tsunami in four main localities of Thailand: (1) Patong, west Phuket island, (2) Boat Lagoon Marina, east Phuket island, and (3) Maya Bay, Phi Phi islands, (4) on sailing between Boat Lagoon Marina to Maya Bay. Both islands are located to the west of Thai mainland. The eyewitnesses accounts are accompanied by photographs taken by some of the eyewitnesses. Some preliminary results indicate that the earthquake was slightly felt but with long duration in both Phuket and Phi Phi islands. In Maya Bay the first tsunami wave arrived about 09:55am local time after a ~200m retreat of the sea water which happened 3-5 min. earlier. A swimmer experienced the water retreat as a very strong turbulent current. The retreating water left behind steps of hard sand in the sea floor. The wave, being of a height of ~10m swept away many local wooden houses. People sailing by a high speed boat from Boat Lagoon Marina to Maya Bay felt the tsunami around 10:05am. The high speed boat, being of length 33-35feet, weight 3.000kgs, engine 30-50knt, and max passenger 20-22pax, was uncapable to sail for several minutes while at the same time very strong hits were felt from all directions as well as below the craft. In Padong the tsunami wave arrived around 10:10am. A sea water retreat of ~200-300m

was first observed. The first wave arrived 2-5min. later. In both Maya Bay and Padong at least three strong waves hit with a period ranging from 10 to 15 min. In Padong the water penetrated inland up to at least 400m causing great destruction. It was reported that in some instances the water level reached up to the second floor of hotel buildings. In many hotel buildings the lobby as well as the first floor were heavily damaged. Cars were overturned and drifted. Many killed people were counted. Wave height is estimated around 10m. A sand mantle full of fishes was left behind by the waves. In Boat Lagoon Marina the port facilities were heavily damaged and became unavailable while heavy destruction was also reported from the coastal zone. A preliminary tsunami intensity estimation in the 12-grade Papadopoulos-Imamura scale is as follows: Padong grade X, Boat Lagoon Marina grade IX, Maya Bay grade VIII.