

Tsunami source of the 2004 Sumatra-Andaman earthquake inferred from eyewitness of tsunami in northern Sumatra coast

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the 2004 sumatra andaman earthquake caused huge property damage and more than 250,000 casualties, 80,000 of which were from banda ache city and around area, northern sumatra island alone. such damage is one of the greatest in the world history concerning tsunami-related devastation. however many video and photographs were taken by people at some places, we didn't know tsunami properties at another places.

the purpose of this study is to clarify the physical tsunami behaviours and human reactions to the tsunami disaster and post-recovery processes of human society by interview. during the present study, about 50 local people were interviewed. in average, a person was interviewed for a period of more than 1 hour that was recorded on ic recorder. in some instances, some of the interviewees were interviewed again to be certain on the content of their accounts. the interviews were carried out by achenis (local language) or bahasa indonesia (standard indonesian language).

we have already taken many strange stories from victims. for example, several fishermen mentioned about their experiences of tsunami at sea. these fishermen encountered large waves after the shaking related to the sumatra-andaman earthquake onboard their fishing vessels located about half a kilometer to 20 km from the west coast of banda ache city and banda ache county. some of them had their vessels overturned and drifted in the water until rescued. after these accounts, the interviews were focused more on this subject during the survey. as a consequence, we were able to interview ten fishermen who encountered the 2004 tsunami at sea.

a simulation of the offshore tsunami was also undertaken to compare with the observed tsunami. the present study intends to provide valuable information that tsunami can also pose danger even offshore if the area has shallow water depths in a wide gentle slope.