

Microtremor observation in the tsunami inundation predicted area in Hokuriku Region: Preliminary results from observed data in Suzu city, Ishikawa prefecture

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Compared with the Pacific coast, the Japan Sea coast has experienced few tsunami disasters, especially in the Hokuriku region, where the seismicity is low; however, disaster prevention awareness is also low. To promote practical disaster prevention education by making full use of lessons learned from the tsunami disaster following the 2011 Tohoku Earthquake, it is crucial to deepen our understanding of a devastating tsunami following strong ground shaking and relevant damage from an earthquake. In our previous study, focusing on the Hokuriku region in Japan (Fukui, Ishikawa, and Toyama prefectures), we conducted a tsunami simulation and examined the resulting tsunami hazard map. Three potential faults of Mw7.6 earthquake were selected to generate the tsunami. Also, using a simplified method, ground shaking and liquefaction rates were evaluated to gain insight into tsunami hazard in relation to strong ground motion. In particular, attention was focused on Suzu City in Ishikawa prefecture as a region where the damage resulting from a tsunami is especially devastating. Furthermore, the coastal lowland, which represents the primary inundation area of the city, has high seismic intensity and liquefaction occurrence rate. To escape damage resulting from the tsunami, it is important to evacuate to a safe place as soon as ground shaking ends; however, to ensure the safety of the evacuation route, safety measures against earthquake shaking are also important. In this study, I conducted microtremor measurements at about 80 sites along a coastal area in Suzu City and preliminary results were presented. This study was partly supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, under its Earthquake and Volcano Hazards Observation and Research Program.

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