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From the Knowledge of Earthquakes and Tsunamis to Community Preparedness - The Indonesian Effort

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Indonesia is very prone to earthquake and tsunamis, as it lies on the junction of most active tectonic-plates in the world. Almost half of the 94 autonomous cities in Indonesia sit in the active faults, and almost half of 80,000 km of Indonesian coast are susceptible to tsunami disaster. From the perspective of number of people at risk, not less than 20 million people in Indonesia are threatened by tsunami. Meanwhile the quantity of people threatened by the earthquake are increasing in this decade due to sharp increased of the population in the cities keep as an impact of autonomous policy (decentralization) in Indonesia since year 1999. In 2008, for the first time, the number of Indonesian people living in the cities outnumber those in rural areas.

Even-though from the perspective of scientists that the knowledge of earthquakes and tsunamis have been so dynamic with progressive state of the art, the common scientific understanding on the natural disaster is very difficult to be disseminated to the community in threat. The main obstacle comes from the level of poverty which disables the abilities for protection. Therefore, several different schemes for efforts in increasing of awareness should be prepared. This paper discusses the Indonesian attempts to bind the knowledge of earthquake and tsunami, convey the scientific message to community and finally promote the participation of the people in disaster exercises. Alternatives to different scheme is encouraged to adapt not only with different levels of poverty but also with variation in local and natural condition.

On the beginning part of this paper, Indonesian Tsunami Early Warning Systems (Ina-TEWS) is presented. The systems consist of the structure and the culture part, but this paper discusses in a greater attention to the latter. Both parts of the systems need to be tested regularly not only to examine the missing link which might occur, but also to encourage people participation in increasing their selves preparedness. Based on the experience in conducting tsunami drill in Bali and Banten, the stakeholders to do-list, especially for local government are developed and different types of organization structure for the common efforts together with budget components are proposed.Last but not least, disaster scenarios based on the knowledge and judgements of experts are necessary to be developed in order to conduct tsunami exercise which can involve the community and the whole stakeholders participatory. The scheme was then applied to various places in Indonesia, including Banda Aceh, Jogja, Gorontalo and Manado. As conclusion, in the final part of the paper, some positives as well as hindrance factors in involving the stakeholders during the implementation of some full scale exercise are presented.

Keywords: tsunami, exercise, preparedness, earthquake, community