# Japan Geoscience Union Meeting 2015

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HSC05-08

会場:101A

時間:5月26日17:15-17:30

Disaster Information and Awareness: A Study on Typhoon and Storm Surge in The Philippines

Disaster Information and Awareness: A Study on Typhoon and Storm Surge in The Philippines

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#### Introduction

"Use knowledge, innovation and education to build a culture of safety and resilience at all levels" is one of the priority actions addressed by Hyogo Framework for action 2005-2015. In many developing countries, there are a large number of young age who have less experience in natural hazards. Philippines is located in the typhoon belt of the Pacific, which frequently encounters strong precipitation (Mateo & Oki, 2011). During Nov. 6-8, 2013, the central region (Visayas) was attacked by a heavy storm and storm surges caused by Super Typhoon Haiyan. The typhoon primarily impacted Leyte and Samar (Daniell et al., 2013).

#### Research Design

In Dec. 2013 (less than 2 months after the impact), we did surveys in some Barangays of Tacloban City in Leyte to observe the perspective of people in terms of disaster information and awareness (Leelawat et al., 2014). Also, in Aug. 2014, we conducted surveys via the IRIDeS disaster education program (similar to Yasuda et al., 2014) with 218 elementary school students (9-15 years old) at 4 schools located in Palo, Tacloban, and Tanauan. These schools were in Leyte, an island in the Visayas group. Leyte is more than 616 km far from Manila.

### **Disaster Information & Warning**

Based on Leelawat et al. (2014), we found that the most preferred method for officials to announce disaster warning was TV for any period of time (i.e., 1 week before, a few days before, and just before impact). Nevertheless, the score of TV decreased as the typhoon approached while the preference of radio increased as its impact approached. While most samples received warning message, 47% did not evacuate to shelters. The reasons for not evacuating were Safety of all family members must be ensured first, [Believing that it was] More dangerous to go outside, Uncertainty of expected typhoon level - might subside, etc., respectively.

## **Disaster Understanding & Awareness**

First, we found that students in different locations have different level of awareness. The students in a school near the sea considered natural disasters are dreadful higher than the schools far from the sea, probably because their location is along the coastal area. Second, students whose school is on the mountain where the landslide occurred at that time have higher awareness of the immediate future disasters than students whose school is on the plain area. Third, students whose school is on the mountain considered the natural disasters are dreadful higher than students of plain-area school. Better understanding of disaster information and awareness would be helpful for supporting improvement of disaster management preparation.

#### Acknowledgements

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#### References

Damiell, J., Muhr, B., Girard, T., Dittrich, A., Fohringer, J., Lucas, C., et al. (2013). *CEDIM FDA Report No. 2 on Typhoon Haiyan / Yolanda*. Postdam: CEDIM.

Leelawat, N., Mateo, C. M. R., Gaspay, S. M., Suppasri, A., & Imamura, F. (2014). Filipinos' views on the disaster information for the 2013 Super Typhoon Haiyan in the Philippines. *International Journal of Sustainable Future for Human Security*, 2 (2), 16-28.

Mateo, C. M. R., & Oki, T. (2011). Filipinos' perception about flood warning systems and their behavior. In *Proceedings of the 9th International Symposium on Southeast Asian Water Environment*.

Yasuda, M., Imamura, F., Suppasri, A., Nouchi, R., Yi, C. J. (2014). A report of disaster reduction class in the 2004 Indian Ocean Tsunami and the 2013 Super Typhoon Haiyan affected areas (in Japanese). In *Proceedings of the Tohoku Regional* 

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Research Seminar on Disaster Science.

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