

NATURAL DISASTER (EARTHQUAKE) PERCEPTION IN RANAU, SABAH

UTSUNOMIYA UNIVERSITY, REGULAR MEMBER (STUDENT) ○MUHAMMAD HILMI BIN ISHAK
REGULAR MEMBER: SHINYA KONDO, SATOSHI YAMAOKA AND MIKI MATSUMOTO

1. Research Background

Natural disasters are extreme adverse events caused by environmental factors that cause financial, structural, and human losses depends on the affected population resilience: capacity and ability of the population to support, resist, recover from the disasters and also on the strength of infrastructure available. Human vulnerability is usually caused by the lack of appropriate emergency management.

Mount Kinabalu is located in Sabah, Malaysia (Figure 1). There are many people climb the mountain every year. On June 5 2015, Mount Kinabalu and the surrounding districts were jolted by a series of earthquakes, which started at 7.15am with an earthquake measuring 5.8 on the Richter scale. Eighteen climbers, including four mountain guides, were killed when the earthquake rocked the mountain. This incident is called 2015 Sabah earthquake. On that day, there were 195 people on Mt Kinabalu. Although the nation is not in the Pacific Ring of Fire of earthquakes and volcanoes, the disaster has shown that Malaysia can no longer be regarded as being free from natural disaster. It is time for the country to establish an effective disaster management procedure to minimize the sufferings and damage. We can learn from the experiences of other countries such as Japan.



Figure 1. Location of Mount Kinabalu in Malaysia.

2. Objective

Keywords: natural disaster, population resilience, 2015 Sabah Earthquake, mountain guides, qualitative analysis of interview

Address: 7-1-2 Yoto Utsunomiya, Tochigi 321-8585 TEL: 028-689-6223 E-mail: hilmiishak92@yahoo.com

The main objective of this study is to research on risk perception of the mountain guides of Mount Kinabalu before and after the 2015 Sabah earthquake and also the tourist that want to climb the mountain regarding their preparations. Therefore, the data reported here are based on the survey that was administered in Ranau, Sabah. The results obtained can be used by local authorities or other natural disaster related organizations for management, mitigation and control.

3. Method: Key Informant Interviews (KIIs)

A field study was conducted in Kota Kinabalu and Kinabalu Parks through key informant interviews (KIIs), survey and direct observation.

Semi-structured checklists were designed to administer the KIIs. The main objective of undertaking the field study was to understand people's perception about natural disaster in the context of earthquake and what kind of interventions they feel can increase their resilience and reduce the disaster risks.

The interview had been conducted with the chairman and representative of The Mountain Guides Association of Mount Kinabalu (Pemangkina) and also representative from Sabah Tourism Board.

Qualitative analysis¹⁾ is used to further understanding the data from the interview. From the transcript of the interview, relevant pieces were labeled and this process is called coding or indexing. Categories were created by bringing several codes together and the categories were labeled under bigger type of dimension which are physical, social, economic, institutional and natural²⁾.

4. Result

The dimensions in Table 1 above were arranged from the most crucial aspect and the most important is the social dimension. The categories in the dimensions were actually correlated and the most obvious one is between social and institutional aspects.

Table 1. List of variables considered in dimensions

Dimensions	Variable considered
Social	Education and awareness, health status, social capital, communication
Institutional	Internal institutions (government) and development plan, effectiveness of internal institutions and network, institutional collaboration and coordination
Economic	Income, employment, savings and insurance, budget and subsidy
Physical	Water supply, road network, housing and land use, warning system and evacuation
Natural	Hazard intensity, hazard frequency

Education, when it is confined to school education, can provide useful information as the basic knowledge for natural disasters especially earthquake. Levels of education may be important with respect to access to knowledge. The interviewee also stressed the need for education and guidance to enhance understanding of environmental issues and improve community planning. More than half of the mountain guides only finished high school and some of them are functionally illiterate. This may place structural blocks on building sustainable communities. Opportunities for mitigation strategies and other planning may be curtailed if the people are not in position to participate. Therefore, better use could be made of schools as a focus for natural disasters awareness. However, in school education, more active ways of disaster education through conversation, experiencing, and visual aids should be implemented as they are more effective. In addition, parent and family members could help facilitate this education process at home as it is believed that school education, coupled with self, family and community education can help a student to develop a “culture of disaster preparedness”, which, in turn, will urge them to take right decisions and actions as an adult. From the interview, we can understand the impact of earthquake experience is one of the prime factors that enhance awareness among the mountain guides.

Besides, earthquake recovery programs have helped in building stronger social capital which improved the quality of life in the community as it is enhanced when the individuals in the community support one another in overcoming the problem that rise after the earthquake.

The Sabah Fire and Rescue department has formed a mountain search and rescue (Mosar) team. Mosar is based at Ranau Fire Station and serve as a measure to

prepare for natural disasters or other emergencies.

Communication, which is under social dimension, is essential for mountain guides. Communications and Multimedia Ministry of Malaysia³⁾ provided walkie-talkie to the mountain guides to facilitate communication which really help the mountain guides to exchanged information faster among themselves in case of any emergency. A repeater, which acts like a base station for the walkie-talkie system is also being installed up at the mountain. However, there are also some suggestion from the mountain guides to improve the technology or install another repeater to ensure that it is enough for the whole mountain coverage because the existing coverage have some limitation as in order to get clear message through walkie-talkie, the distance cannot be too far and also it has to be quite in a straight line between the users.

Therefore, the things that we can understand from the correlation of the dimensions above is that the knowledge about the actual circumstances after the earthquake from the perspective of the participant of the interview in this research study can be used as baseline for future improvement to reduce the natural disaster risks.

5. Conclusion

Relief policies and programs after 2015 Sabah earthquake significantly affect the rate and patterns of recovery and aggravate vulnerability issues after the disaster. Strengthening of the social component and overall recommendations are converging to one goal which is to enhancement of population resilience in the face of natural disasters in Ranau, Sabah, Malaysia.

References

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