



東北大学 災害科学国際研究所

災害リスク研究部門 津波工学研究分野

ICT Use in Disaster Evacuation of ASEAN Citizens: Lessons Learned from the 2011 Great East Japan Earthquake and the 2016 Kumamoto Earthquakes

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The Third JASTIP Symposium :: February 05, 2017



Research Timelines

We're here

JASTIP-Net 2016

2016

- **Completed: Interviews with Thai organizations and experienced Thai people from the 2016 Kumamoto earthquakes and the 2011 Great East Japan earthquake**

2017

- **Feb:** Interviews with key actors in Thailand (community, school)
- **Mar:** Interviews with key actors in Indonesia
- **Apr-Jun:** Encoding and data analysis
- **....:** Interviews with key actors in Malaysia

2018 (tentative)

- **....:** Interviews with key actors in Malaysia
- **....:** Research coverage expanding
 - **Disaster education**
 - **Disaster awareness**
 - **Community collaboration**

Achievements (as of January 2017)

- **Conference presentation**

- Leelawat, N., Suppasri, A., Latcharote, P., Yasuda, M., & Imamura, F. (2016, October 29). Evacuation of Thai Citizens during the 2016 Kumamoto earthquakes. *The 8th Thailand-Japan International Academic Conference Book of Abstract* (p. 50), Tokyo: Thai Students' Association in Japan under the Royal Patronage.

- **Academic article**

- (under review) Leelawat, N., Suppasri, A., Latcharote, P., & Imamura, F. Evacuation operation of Thai citizens during the 2016 Kumamoto earthquakes.

2016 Kumamoto Earthquakes

- 平成28年熊本地震 (Heisei 28-nen Kumamoto Jishin)

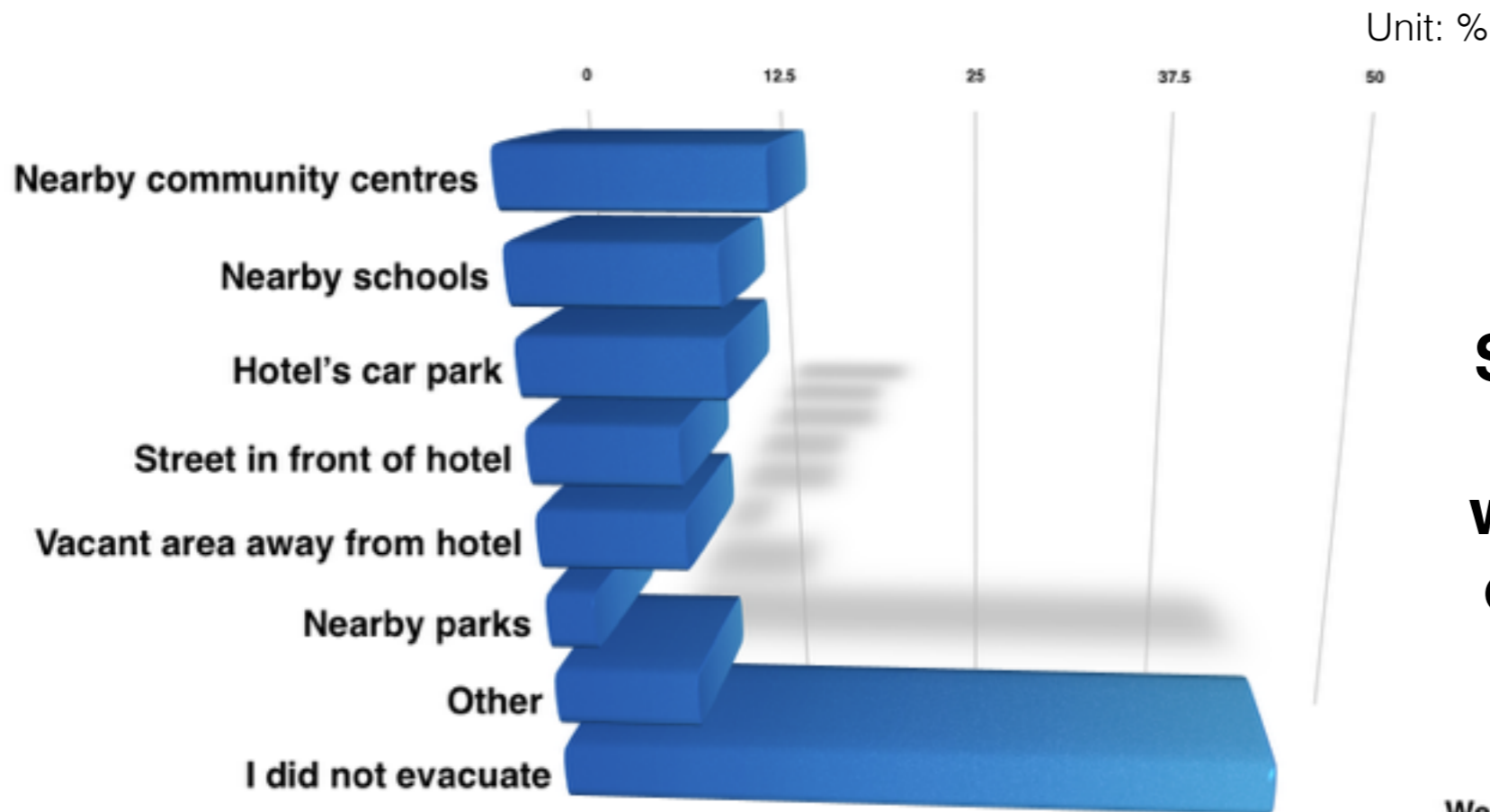
Shake Series of the 2016 Kumamoto Earthquakes

Date	Time (JST)	Epicenter	Magnitude	Shindo
14 Apr 2016	21:26	Kumamoto Pref.	6,5	7
14 Apr 2016	22:07	Kumamoto Pref.	5,8	6 lower
15 Apr 2016	00:03	Kumamoto Pref.	6,4	6 upper
16 Apr 2016	01:25	Kumamoto Pref.	7,3	7
16 Apr 2016	01:45	Kumamoto Pref.	5,9	6 lower
16 Apr 2016	03:55	Kumamoto Pref.	5,8	6 upper
16 Apr 2016	09:48	Kumamoto Pref.	5,4	6 lower

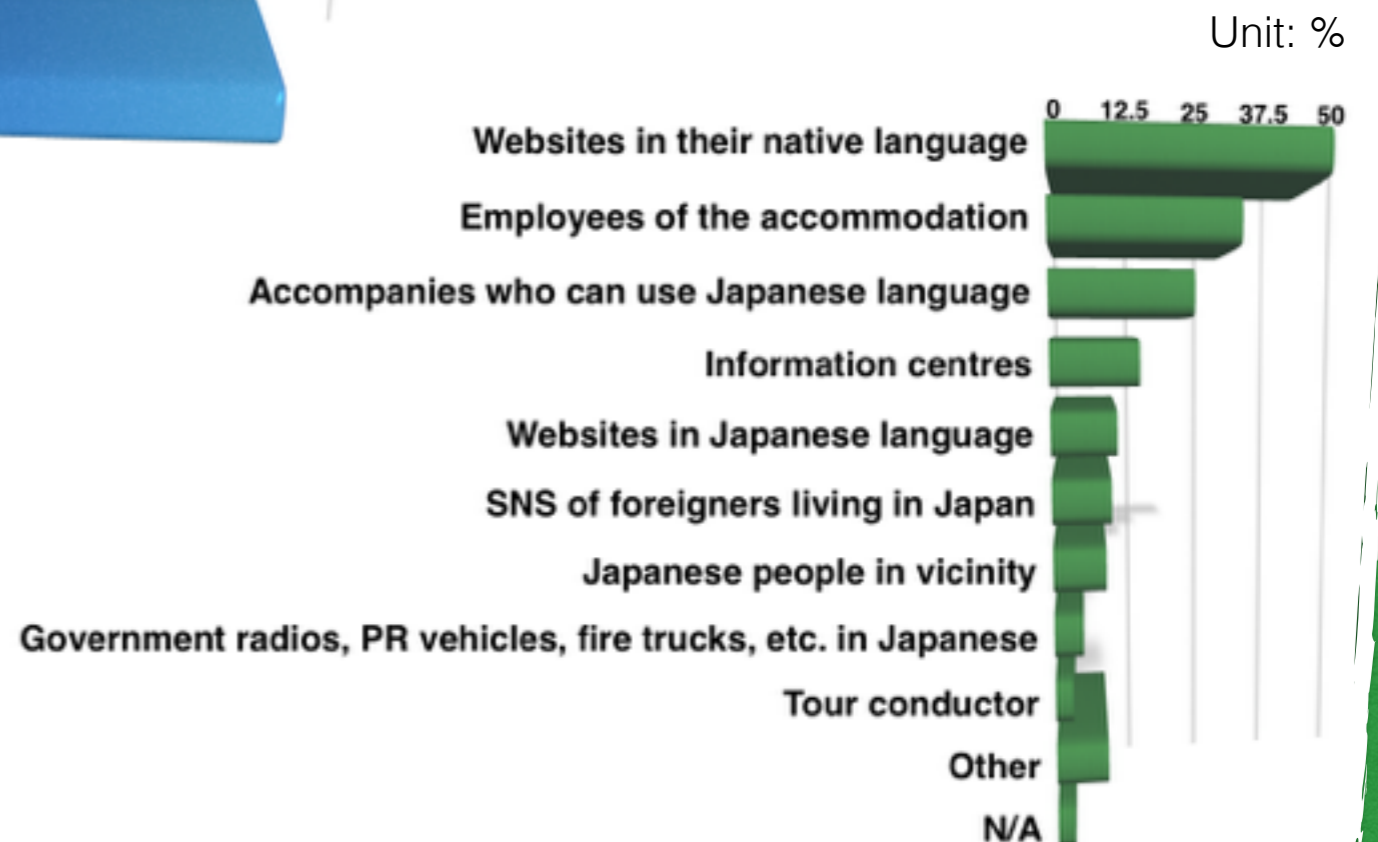
SRC Survey: What trouble did foreigners encounter?

- Survey Research Center conducted a survey
 - Samples: Foreigners ($n = 115$)
 - Location: International Terminal, Fukuoka Airport
 - Period: April 14-22, 2016
- **36.5%: Lack of the Earthquake Evacuation Manual for foreigners, so they could not understand the evacuation action**

SRC Survey: Location foreigners took evacuation during the earthquake?



SRC Survey: What kind of information source that was helpful in the process of evacuation and travel?



n = 115

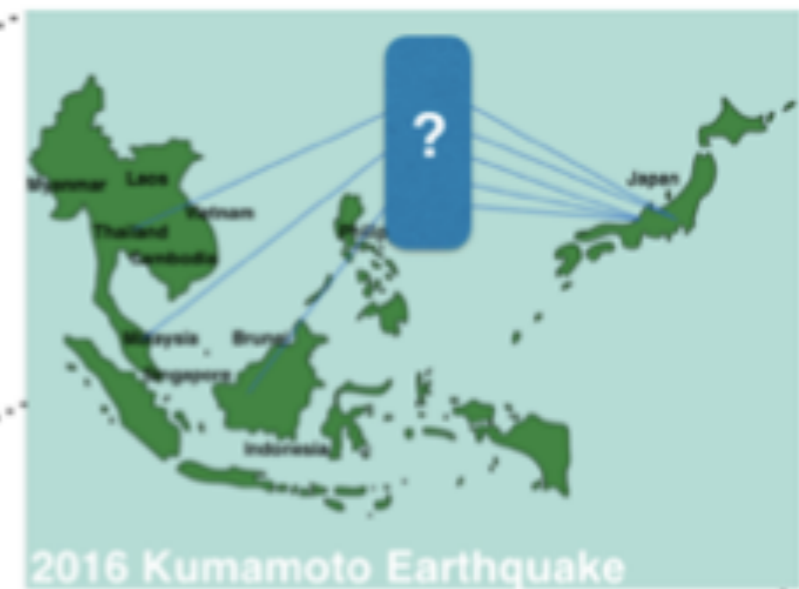
Source: Survey Research Center (2016)

Other Issues encountered by Foreigners

- Limited Japanese language skills especially for **evacuation-related terms**
- Hard time for **public evacuation shelter**
- Hard to **find new houses**
- Hard to **understand disaster information** as most of it was officially provided in Japanese

Research Objectives

- To explore role of ICT during the disaster evacuation of ASEAN citizens



Methodology

- **Semi-structured interviews**

First target group: Thailand

- **Royal Thai Embassy, Tokyo (RTE)**
 - Consular Section & Command Center
 - Office of Educational Affairs, RTE
- **Thai Students Association in Japan under the Royal Patronage (TSAJ)**
 - TSAJ Executive Board
 - TSAJ Kyushu
 - TSAJ Head of Kumamoto

- **SNS Archived data collection**