



EARTHQUAKE AND TSUNAMI DISASTER MITIGATION TRAINING FOR ELEMENTARY SCHOOL STUDENTS IN THE COASTAL AREA OF PADANG PARIAMAN DISTRICT WITH KYOTO INTERNATIONAL DISASTER PREVENTION SCHOOL METHOD

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ABSTRACT: Sumatera Barat is located in the earthquake-prone area. In 2009 the West Sumatera earthquake (7.9 on the Richter scale) caused 1,117 people dead, 2 were missing, 1,214 were seriously injured and 1,688 were slightly injured. The disaster also caused damage to community homes, with details of 114,797 heavily damaged, 67,198 moderately damaged and 67,838 slightly damaged. This earthquake was caused by fault movement passing through the coastal area of West Sumatra namely Indo-Australian fault. Based on the disaster vulnerability index, the areas along the coast of West Sumatra (Pesisir Selatan, Padang, Padang Pariaman, Agam and Pasaman Barat), have high levels of disaster vulnerability. Padang Pariaman regency is one of the districts which has a coastal area with a coastline along the 60.5 km stretching up to the cluster of Bukit Barisan. The condition of the Padang Pariaman district is potentially affected by the tsunami, as some of the cities with populations and public facilities are located near the coast. This condition is very apprehensive and makes this city need more shelter and tsunami evacuation path. Until now, the Government of Padang Pariaman district and supported by the provincial government of West Sumatra as well as the private sector (NGO) has made various mitigation and earthquake mitigation efforts such as mitigation training. However, the training has not reached all the people, especially elementary school students who do not have basic knowledge of earthquake and tsunami and have not been able to independently evacuate and mitigate. Until now, the Government of Padang Pariaman district and supported by the provincial government of West Sumatra as well as the private sector (NGO) has made various mitigation and earthquake mitigation efforts such as mitigation training. However, the training has not reached all the people, especially elementary school students who do not have basic knowledge of earthquake and tsunami and have not been able to independently evacuate and mitigate.

This mitigation training is expected to optimize disaster prevention activities to achieve the objectives of Disaster Preparedness School (SSB). Disaster Preparedness School (SSB) is an effort to build school preparedness for disaster in order to awaken the awareness of all elements in education both individually and collectively in school and school environment before, during and after a disaster. Targets of training activities on earthquake and tsunami mitigation of the Kyoto International Disaster Prevention School (KIDS) method at elementary schools in coastal areas of Padang Pariaman District by providing basic understanding to elementary school students about earthquake and tsunami, and adequate socialization to improve the ability of elementary school students, especially on the theory of fast and simple mitigation theory to earthquake and tsunami that can be understood and implemented later and disseminate simple earthquake and tsunami mitigation pamphlets to elementary school students and target schools as a reference for future evacuation activities.

Keywords: Earthquake, tsunami, evacuation, mitigation, training, disaster preparedness school, Kyoto International Disaster Prevention School (KIDS) method

1. INTRODUCTION

Based on the disaster vulnerability index, the areas along the coast of West Sumatra (Pesisir Selatan district, Padang City, Padang Pariaman, Agam and Pasaman Barat districts) have high levels of disaster vulnerability. Padang Pariaman regency is one of the districts that have coastal areas with 60.5 km of coastline stretching up to the Bukit Barisan cluster. Geographically located adjacent to the epicenter (Mentawai Megathrust)

which has the potential to experience earthquake and tsunami disaster.

Until now, the Government of Padang Pariaman district and supported by the provincial government of West Sumatra as well as the private sector (NGO) has made various mitigation and earthquake mitigation efforts such as mitigation training. However, the training has not reached all the people, especially elementary

school students who do not have basic knowledge of earthquake and tsunami and have not been able to independently evacuate and mitigate.

2. HEADINGS

This mitigation training is expected to optimize disaster prevention activities to achieve the objectives of Disaster Preparedness School (SSB). Disaster Preparedness School (SSB) is an effort to build school preparedness for disaster in order to awaken awareness of all elements in education both individually and collectively in school and school environment before, during and after a disaster.

One of the most intense organizations conducting disaster mitigation training is the Kyoto International Disaster Prevention School (KIDS). KIDS is a mitigation organization composed of Japanese Japanese university students. KIDS has been conducting mitigation activities in Indonesia since 7 years ago to elementary school students (SD). The training and socialization focused on ways of early evacuation in various conditions and places. This is important because this area is known as earthquake and tsunami hazard zone.

2.1. Method Used

Based on the existing issues and taking into account the inputs of teachers and related parties, a commonly agreed step is taken:

1. Collaborate with schools in terms of permits and partners on training activities as well as evaluation of these activities for program sustainability.
2. Cooperation with the parties in the primary school to be visited in the form of training facilities and infrastructure.
3. Implementation of in-school training in every school is 6 hours with no disruption of the existing learning implementation activities (PBM).
4. Method of implementation is begun by giving direct counseling allocation used in each school is 3 hours. The time allocation is as follows:
 - a) The first 30 minutes are used for friendly meetings with school leaders.
 - b) In the next 30 minutes is the opening by the committee chairman of UNP Civil Engineering Department and welcome from the school.
 - c) In the next 60 minutes is the giving of materials about earthquake, tsunami and simple mitigation that is local by 2 speakers.
 - d) At 30 minutes later was Sopo Jarwo's drama staging on the earthquake and tsunami mitigation.

e) In the next 30 minutes is a group game of material conclusions in terms of students' level of understanding.

5. For the next SD as it is in accordance with the schedule of visits that have been set.

6. Training methods are made interactive using existing local approaches.

To achieve the maximum goal based on existing problems and with the consideration of teachers and related parties, take a step agreed upon as the method used, namely:

1. Giving material

Give explanations to the students of SDN No. 01 Ulakan Kabupaten Padang Pariaman and SDN 8 Kota Pariaman about what is meant by earthquake and tsunami, earthquake and tsunami mechanism based on existing keilmuaan and explanation about mitigation to earthquake and tsunami, that is how to rescue, and what and how what if earthquake and tsunami disasters, including the readiness of objects / goods that may be brought in the rescue.

2. Drama

The drama is conducted to provide a real explanation for how to mitigate in case of earthquake and tsunami. Characterization of the drama is based on the story of Adit Sopo Jarwo and friends (a familiar figure), the goal is that the students of SDN No. 1 Ulakan district Padang Pariaman and SDN 8 Pariaman city can understand well and easy to remember

3. Quiz and group stage

The quiz grading is done to evaluate the extent to which the students (the training targets) understand the material given by the speaker. The quiz activity is preceded by group game activity from participants who are divided into groups in discussing material conclusions in terms of the level of understanding.

3. TABLES, FIGURES, AND EQUATIONS

3.1. Figure



Fig 1. Giving of materials at SDN 01 Ulakan Pariaman



Fig 2. Staging drama at SDN 08 Kota Pariaman



Fig 3. Quiz

4.CONCLUSION

The results obtained through the implementation of community service activities are as follows:

1. Implementation of Earthquake and Tsunami Disaster Mitigation Training of SDN 01 Ulakan Kabupaten Padang Pariaman and SDN 8 Kota Pariaman was successfully conducted on 19-20 September 2015, with 38 participants and 6 teachers.

2. Students and companion teachers gain knowledge about the earthquake and tsunami disaster mitigation are simply understood and applied. It is beneficial for them in responding quickly to the situation and conditions in the event of the earthquake and tsunami.

3. Students and accompanying teachers obtain evacuation guidelines are local to achieve effective mitigation objectives in urban areas.

In general, trainees (students and companion teachers) can be said to be enthusiastic about the delivery of training materials because it adds knowledge to those who mostly reside on the beach.

Implementation of Earthquake and Tsunami Disaster Mitigation Training of SDN 01 Ulakan

Kabupaten Padang Pariaman and SDN 8 Kota Pariaman has been successfully conducted on 29-30 September 2017, the outcome that has been achieved in this community service activity is:

1. The management method of implementing early earthquake and tsunami disaster prevention training in the form of mitigation. The training was delivered in the form of staging drama to attract more students of elementary school, as well as in the form of delivery of materials directly by the speaker.

2. Produced a pamphlet/banner containing simple and easy-to-understand, simple, local mitigation practical guidelines for elementary school students. The pamphlet is directly assigned and paired with each SD. Publication of results of this activity in local scientific publications (journals) and proceedings

3. As a material evaluation, also produced kuisoner filled by students who participated in this training.

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