



*Children Make a Difference in the world*

*"Communication saves lives!"*

## **Global Disaster Safety Map (GDSM) program**

### **■■■ Introduction ■■■**

Disaster management has four phases; mitigation, preparedness, response, and recovery/reconstruction. Mitigation and preparedness are phases before disasters occur and response and recovery/reconstruction are phase after disasters. Mitigation means not causing any damages. Preparedness means preparation something for the time when people take damages. Response

means evacuation or rescue soon after disasters occur. And recovery/reconstruction means rebuilding or improving social and natural environment than states before disasters. recovery /reconstruction means rebuilding or improving social and natural environment than states before disasters.

In the Great Hanshin-Awaji Earthquake of 1995, more than 80% of dead people lost their lives because of collapse of their houses. For dead people by fire, they lost their lives because they could not evacuate or be rescued from collapsed house. Thus, it seems that earthquake-proof houses are most important factor to reduce damages. Making earthquake-proof houses is identified as mitigation. In this earthquake, many peoples were rescued by neighbors. Almost 60% of dead people lost their lives in 15 minutes since the earthquake occurred. Developing community rescue system is also measures for disaster reduction and it is identified as preparedness.

From lessons of the Great Hanshin-Awaji Earthquake, measures before disasters (mitigation and preparedness) is more important and mitigation should be emphasized more than other phase of disaster management.

The present disaster education in Japan mainly consists of evacuation training or disaster training. This is identified as response. For information related to disasters from mass media, contents are mainly emergency bag or training. Thus, it seems that awareness to emphasize mitigation is lack in the society.

Global Disaster Safety Map (GDSM) Program is the program that students learn



past disaster and present states of disaster management in their community, image problems when disasters occur, and think measures for mitigation and preparedness. This process is implemented by students' discussion using map around their school. Finally specific measures for mitigation and preparedness are written by students on the map and the map is finalized as community disaster safety map. The map of each school is joined and the joined map becomes disaster safety map in the world, in turn, Global Disaster Safety Map.

### ■■■ Objective ■■■

- To let students understand importance of mitigation
- To let students be interested in community
- To let students have knowledge of disaster management

### ■■■ Activity ■■■

#### ■■ Disaster learning

##### ■ Step 1 Setting Kind of Disaster

A teacher of each school decides disaster out of many types of natural disasters which has probability to occur around school. It is possible to choose some disasters.

##### ■ Step 2 Past Disasters

Students and teachers learn past disasters which occurred in students' country or community. For ways to learn, each school decides but following show how to collect information.

- From experts related to disasters
- From internet or books
- From community members who are getting engaged activities for disaster reduction

Following are contents to learn. Teacher can increase contents accordingly.

- Time to have occurred
- Affected area
- The number of death people
- Causes of death and injury
- Damage of houses
- Damage of lifeline (Water, Gas, and Electricity)
- Damage of transportation
- Peoples action during disasters
- Livelihood after disasters occurred
- Recovery and Reconstruction
- Characteristics of disasters (From aspect of natural environment)
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■ Step 3 Measures and activities for disaster reduction (which is implemented in personal, family, community level)

Students conduct hearing with family and community members about measures or activities for decided disaster reduction.

## ■ ■ Making disaster safety map

### ■ Needed materials

- Map of targeting area (Area where students can understand each building is hoped. School area of elementary or junior high school is preferable.)

Size of map is about 2m x2m. Teachers can blow up some maps and connect them.

### ■ Step 1 Checking natural environment

Students and teachers check following contents. They make in these contents into the map, using some colors.

- Location of urban area (red)
- Borderline between mountain area and flatland (green)
- Location of river, pond, and waterway (blue)



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#### ■ Step 2 Checking built environment

Students and teachers check following contents. They make in these contents into the map, using some colors.

- Railway (black)
- Main road (blown)
- Narrow alley (pink)
- Park or open space (yellow green)
- Water way (blue)



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#### ■ Step 3 Checking human and material resource

Students and teachers check following contents. They check them on the map or put objects on the map to understand human and material resource easily. If needed, fieldwork is implemented.

① Showing organizations or institutes related to government, medical institutes, or disaster relief

- Administrative institutes, fire department, police station
- School and nursery school
- Medical institutes
- Community hall, social welfare facility
- Other public facility

② Showing place or facility for community disaster management

- Place or building for evacuation
- First aid station
- Store for foods, daily commodity, medicine, fuel, and other goods for daily life
- Stock room for disaster reduction
- Corporation which has heavy machine
- Handheld pump, water supply

③ Showing dangerous institutes and things when they fall or are broken

- Preservation institutes for dangerous materials
- Wall of blocks, stone wall
- Outside advertisement goods

④ Showing human resource for community disaster management

- Neighborhood community association, leader of community management disaster group, experienced worker of fire department or fire company, experienced worker in local government, worker in construction company or repairperson, welfare or children commissioner, interpreter, and worker for welfare

⑤ Showing houses which has persons needing back up in disasters

- Elderly persons
- bedridden persons
- Mental defective
- Children who are younger than elementary school students
- Foreign people

■ Step 4 Anticipating damages of buildings, houses, and lifeline

Based on disaster learning and made map, students and teachers discuss damage in disasters. If school can get information of expected damages, they can refer to it.

Damages are colored up on the map. Season and time disaster occurs is decided accordingly. Students can understand seriousness of damages if teacher sets season and time that damages is larger.

#### ■ Step 5 Action during and soon after disasters

Students and teachers discuss following contents. They image states during and soon after disaster and anticipate whether not only each of them but also family or community members can evacuate and whether organization related to disasters can come to affected area, using information on the map.

- Action and way of evacuation during disaster
- Action and way of evacuation of family and community members
- Action and rescue of people needing other help

#### ■ Step 6 Problems during and soon after disasters

Based on Step 5, students and teachers discuss problems. Teachers need to let students know importance of taking measures before disasters.

#### ■ Step 7 Livelihood after disasters (recovery/reconstruction) and its problems

Students and teachers image livelihood after disasters and in recovery/reconstruction and discuss its problems. They write the problems in the map.

#### ■ Step 8 Thinking way of mitigation and preparedness

Students and teachers discuss measures people can take in personal, family, and community level. And they write the measures in the map. Measures in this step means mitigation and preparedness but teachers are requested to emphasize the former one.

### ■■■ Schedule ■■■

Following shows schedule of GDSMP. The number in parentheses means hour needed in each step in disaster learning and making disaster safety map. 50 minutes is 1 hour in this schedule. Showed hour in this schedule is minimum hour needed and each school can increase hour in each step. It is hoped that schools use time after school or on Saturday and get more time to implement.

## ■ ■ Disaster learning (September to October)

- Step 1 Setting Kind of Disaster (0)

Teachers decide disaster before students starts this project.

- Step 2 Past Disasters (5)

■ Step 3 Measures and activities for disaster reduction (which is implemented in personal, family, community level) (2)

Hour in this step is used for summing up information which students and teachers collect have collected from survey or interview, and don't include time for interview to family or community members.

## ■ ■ Making disaster safety map (October to December)

- Step 1 Checking natural environment (0.5)

Step 1 and Step 2 are conducted at the same time

- Step 2 Checking built environment (0.5)

Step 1 and Step 2 are conducted at the same time

- Step 3 Checking human and material resource (1)

- Step 4 Anticipating damages of buildings, houses, and lifeline (2)

- Step 5 Action during and soon after disasters (1)

- Step 6 Problems during and soon after disasters (1)

■ Step 7 Livelihood after disasters (recovery/reconstruction) and its problems (1)

- Step 8 Thinking way of mitigation and preparedness (2)

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