

Development & Implementation of Disaster Prevention Education Program for Torrential Rainfall

National University Corporation KAGAWA UNIVERSITY Crisis & Risk Management Research Center



①: Making of educational teaching aid of disaster prevention science and technology for localized torrential rain

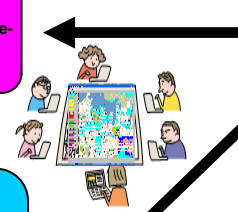
- 1) Making of educational teaching aid for schoolchildren
Development of teaching aids to study basic knowledge of disaster prevention (Disaster prevention literacy)
- 2) Making of teaching aid for high school and university student
Development of teaching aid using simulation system for training of decision making and evaluation
- 3) Making of educational teaching aid for community resident
Development of learning aid using detailed map of region



- I. Development of multimedia and experience type simulation system teaching aid
- II. Development of training curriculum of reader
- III. Development of practicing educational program of community resident participatory type

③: Development and execution of disaster prevention education program to localized torrential rain with practice

- 1) Development and execution of educational program for grade-schooler and teacher to make disaster prevention map
Disaster prevention education executed at time of on-site training and social study
- 2) Educational program development and execution of disaster prevention map-making that grade-schooler, teacher, and community resident can make together
Disaster prevention education learning city planning with a little damage of disaster with community resident



Experience type Simulation system



Regional property database of Kagawa Prefecture (geography, weather, environment, social economy, and land use, etc.)

②: Development and execution of localized torrential rain disaster prevention training curriculum intended for school personnel, disaster prevention administrative staff, and leader of voluntary organization for disaster prevention

- 1) Experiential training system for beginner
Development of disaster prevention measures basic technique (disaster prevention literacy) learning curriculum
Organizing of training instruction system and execution of educational instruction
- 2) Training system for mid-career teacher, staff, and disaster prevention leader
Development of practicing disaster prevention responsive capability (disaster prevention competency) learning curriculum
Organizing of training instruction system and execution of educational instruction
- 3) Holding of disaster prevention leader step-up training association
Learning of techniques for grasping and using latest disaster prevention information

Outline

① Making of educational teaching aid of disaster prevention science and technology for localized torrential rain

The familiar name of a place is used to make easily to image.

Plain explanation using animation

Features of teaching aid to localized torrential rain

- Using Power Point : So that everyone may easily use it.
- Explanation using animation
- A familiar district is used as a teaching aid.
- Use of experience type simulation

1. Definition and generation mechanism of localized torrential rain
 - 1) Generation mechanism of localized torrential rain
 - 2) Generation and growth mechanism of cumulonimbus
 - 3) Phenomenon (by cumulonimbus)
 - 4) Feature of localized torrential rain and regional heavy rain
 - 5) Downpour experience using car with precipitation system
2. Feature of occurring disaster
 - 1) Inundation by river water and inundation inside the levee
 - 2) Cliff crumble
3. Kind of disaster prevention equipments and the function
 - 1) Drain pump
 - 2) Water sealing plate

4. Disaster prevention measures technique
 - 1) How to make breastwork
5. Simplicity disaster measures
 - 1) Let's understand the feature of the community.
 - 2) Standard of rainfall
 - 3) Method of gathering information
 - 4) Method of evacuation
 - 5) Corrective action on change of weather conditions



Result

The main term of teaching aid

Let's see the simulation! (50mm per hour)

② Development and execution of localized torrential rain disaster prevention training curriculum intended for school personnel, disaster prevention administrative staff, and leader of voluntary organization for disaster prevention



- (3) Disaster prevention practice ability master training (Disaster prevention ability step-up study)
 - 1) Investigation of characteristics of the region
 - 2) Simple precipitation investigation
 - 3) Training of disaster measures technique etc.
- (2) Disaster responsive capability training (Disaster prevention competency study)
 - 1) DIG (Disaster Image Game)
 - 2) Grasping method of characteristics of the region
 - 3) Simulation using method etc.

- (1) Basic knowledge of disaster prevention training (disaster prevention literacy study)
 - 1) Understanding of generation mechanism
 - 2) Localized torrential rain disaster
 - 3) Disaster measures to localized torrential rain etc.

Course attested with Japanese Bousaishi Organization

- *The first term: "Disaster prevention literacy training course (Let's know the disaster!)"
22. Hours (lectures) + 3 hours (practice)
 - 1) Guidance (What is the Bousaishi?)
 - 2) Natural hazard in recent years
 - 3) Study of predecessors' teaching
 - 4) Earthquake, tsunami hazard, and disaster mitigation measures
 - 5) Strong wind and tornado disaster
 - 6) Flood damage and disaster mitigation measures
 - 7) Sediment disaster and volcano hazard
 - 8) Knowledge and use of disaster prevention meteorological information
 - 9) Decision making training (crossed)
 - 10) Lifeline disaster and urban disaster prevention
 - 11) A fire and fire fighting
 - 12) Disaster medical treatment
 - 13) Acquisition and sending of disaster and evacuation information
 - 14) Disaster reporting
 - 15) Summary
- Extra-curriculum practice (Normal lifesaving course: Applicant)

- *The second term: "Disaster prevention competency training course (preparation for disaster)"
22. Hours (lectures) + 3 hours (practice)
 - 1) Disaster prevention and crisis management
 - 2) Disaster action of the administration and relevant statute
 - 3) Seismic safety evaluation and seismic reinforcing (self-help)
 - 4) Disaster measures and insurance at home (self-help)
 - 5) Disaster measures executed in region (mutual assistance)
 - 6) Disaster measures to Tonankai and Nankai earthquake (public assistance)
 - 7) Support to victim by the administration (public assistance)
 - 8) Estimation of damage and hazard map, disaster prevention map
 - 9) DIG (Disaster Image Game) training 1
 - 10) DIG (Disaster Image Game) training 2
 - 11) Time series management for disaster and an evacuation simulation
 - 12) Volunteer at disaster
 - 13) Disaster prevention city planning by regional community
 - 14) Business contingency plan of enterprise (BCP)
 - 15) Completion ceremony
- Extra-curriculum practice disaster drill (applicant)

③: Development and execution of disaster prevention education program to localized torrential rain with practice

- Jyoushin elementary school disaster prevention education program (scheme)
- Let's know the disaster: The lecture of the earthquake and localized torrential rain.
 - Measure the rainfall (experience).
 - Let's know geographical features and the history of my town: The study of the hometown.
 - Let's walk in the town looking for disaster prevention : With the voluntary organization for disaster prevention
 - Let's make the disaster prevention map: With the voluntary organization for disaster prevention
 - What do you do when regional localized torrential rain is occurred in the upstream in the Ddoki river water friendly park?
 - Challenge to the disaster training: With the voluntary organization for disaster prevention



Study on high flood tide damage by Typhoon No.16(2006)



- Nibancho elementary school disaster prevention education program (scheme)
- Let's know the disaster: The lecture of the earthquake and localized torrential rain.
 - Measure the rainfall (experience).
 - Let's know geographical features and the history of my town: The study of the hometown.
 - Let's walk in the town looking for disaster prevention : With the voluntary organization for disaster prevention
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