



**USAID-ADRC Cooperative Program**

**Enhancing Natural Disaster Education in Schools**

**in Galle District,**

**Democratic Socialist Republic of Sri Lanka**

**Project Report**

**Asian Disaster Reduction Center**



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## **Acknowledgements**

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- US Agency for International Development (USAID)
- Prof. Kapila Dahanayake, University of Peradeniya
- Disaster Management Centre (DMC) of Sri Lanka
- Mr. Koji Kanda, Hyogo Prefectural Board of Education, Japan
- National Disaster Relief Services Centre of Sri Lanka
- Southern Provincial Department of Education of Sri Lanka
- School principals, teachers and students of Galle District

for their contribution and efforts to the realization of this program.

Asian Disaster Reduction Center

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## **I. Introduction**

## **Background**

As the horror of the devastating tsunami of 26 December 2004 unfolded, the world was shocked to learn that many thousands of lives might have been saved had people only known more about tsunami disasters and the importance of promptly evacuating when they occur. It was an alarm bell that woke people up to the possibilities of future natural calamities all over the world.



The ADRC conducted a survey of tsunami risk awareness in Galle District, in the southern part of Sri Lanka, among residents, school children and government officials to understand the current situation and the ability of the local community to respond to natural disasters. This survey was intended to contribute to the development of an appropriate strategy and methodology for disseminating tsunami knowledge and for raising public awareness, with a view to creating disaster resilient communities. The survey findings revealed the necessity of introducing disaster education in schools and raising public awareness in communities.

Based on its findings, the ADRC has made recommendations regarding activities for enhancing the disaster reduction capacity of local communities in Galle District to the Government of Sri Lanka, Office of the Administrative District of Galle, and to the Southern Provincial Department of Education. Both government agencies recognize the need for conducting trainings for capacity building in the school community and indicated a strong willingness to carry out the activities outlined in the USAID-ADRC Cooperative Program.

## **Objectives**

The main objective of this program is to raise the awareness of school communities regarding various types of natural disasters and regarding the value of disaster reduction efforts. The program was developed based on the findings of the above mentioned survey, in concert with the disaster management sectors of the Government of Sri Lanka and the Southern Provincial Department of Education, along with the support of USAID.

The specific program objectives are:

1. To support efforts by the Southern Provincial Department of Education to design a model school curriculum for disaster education in Galle District.
2. To support the development of a basic action plan for incorporating disaster education in the school curriculum in Galle District.
3. To build teachers' capacity for disaster education in Galle District.
4. To provide basic knowledge about natural disasters and natural disaster risk management for

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- the school community in Galle.
5. To introduce the Total Disaster Risk Management (TDRM) approach, a comprehensive and sustainable disaster risk reduction approach to improve the capacity of the school community in Galle.
  6. To make recommendations for incorporating disaster education into the basic school curriculum in Sri Lanka.

### **Targets and Beneficiaries**

The primary targets of the program are school representatives, such as principals, teachers, and administrators in Galle District. All parties involved in and representing the school community in Sri Lanka will benefit from this program.

### **Program Outline**

The program was conducted in the following stages:

#### **(1) First Consultative Meeting on the Development of Disaster Education**

**Participants:** Disaster management experts from Japan and Sri Lanka, a disaster education expert from Japan, officials of the Southern Provincial Department of Education, division/zonal directors of Galle, and others.

**Program:**

- Introduction of disaster education practices in Japan and US, including school curricula, guidelines, and methods of disaster education.
- Observation of model lessons on disaster education in schools.
- Discussions around the development of a disaster education curriculum in Galle District.
- Decision of the program of the next District Workshop

#### **(2) District Workshop (Trainers' Training)**

**Targeted Participants:** School principals, teachers, disaster management experts from Japan and Sri Lanka, a disaster education expert from Japan, officials of the Southern Provincial Department of Education, etc.

**Program:**

- Lectures: Learning disasters, effective disaster risk management, disaster education in Japan and audio-visual presentations
- Observation of the disaster simulation exercise/emergency drill in schools
- Demonstration of lessons on natural disasters

### **(3) Pilot Lessons**

**Organizers:** Fifteen pilot schools in Galle District, with the support of the Southern Provincial Department of Education

**Lecturers (teachers):** Trainees of the District Workshop

**Observers:** Two representatives from each of 462 schools in Galle (about 65 in each school), division directors, division/zonal directors of Galle, officials from the Southern Provincial Department of Education.

**Preparation:** The preparation will be done by 15 pilot schools, one in each of the school clusters in Galle District, with the support of the Southern Provincial Department of Education and the Galle District Education Office. Technical advice will be provided by experts from Japan, if necessary.

**Program:**

- Implementation/observation of the disaster education pilot lessons, including disaster simulation exercises and emergency drill
- Dissemination of knowledge on the implementation of disaster education to other teachers in Galle District

### **(4) Second Consultative Meeting on the Development of Disaster Education**

**Participants:** A disaster education expert from Japan, officials from the Southern Provincial Department of Education, division/zonal directors of Galle, two representatives from each of the 15 pilot schools that conducted the Pilot Lessons (about 60 persons in total).

**Program:**

- Introduction and review of the results of the Pilot Lessons conducted in 15 schools
- Presentation of action plans by the 15 pilot schools, district/zonal directors of Galle and the Southern Provincial Department of Education

**II. First Consultative Meeting on  
the Development of Disaster Education**

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## Introduction

This meeting was held from 22 to 25 March 2006 at the Wakwella Training Centre in Galle District, Sri Lanka as the kick-off activity for this disaster education program. It focused on introducing relevant officials in charge of disaster education in Galle District to disaster education practices in Japan and the US, and on discussing the specific format for disaster education in Galle District, and thinking about the direction this program should take.

## Purpose

- Provide information on disaster education practices in Japan and the US
- Provide model lessons on disasters conducted in schools
- Determine the structure of the next district workshop

## Participants

We invited officials from the Southern Provincial Department of Education, principals from schools in Galle, division/zonal directors of Galle in charge of education, and observers from disaster-related organizations. The following individuals from Japan also participated in the workshop: Prof. Hirokazu Tatano (Disaster Prevention Research Institute, Kyoto University), Mr. Koji Kanda (Hyogo Prefectural Board of Education), Dr. Tetsushi Kurita (ADRC Senior Researcher), Ms. Akiko Nakamura (ADRC Researcher), Mr. Makoto Ikeda (ADRC Researcher) and Mr. Sisira Colombage (ADRC Assistant).

Name	Title	Organization
Mr. H. W. Wijerathna	Chief Secretary	Chief Secretariat, Galle
Mr. Asoka Jayasekara	G.A./D.S	District Secretariat, Galle
Mr. C. D. Vidanapathirana	Secretary	Ministry of Provincial Education, Galle
Mr. W. B. Piyatissa	Deputy Secretary	Ministry of Provincial Education, Galle
Mr. Wilfred J Perera	Deputy Director General	N.I.E., Maharagama
Mr. N. J. Karunadasa	Provincial Director, Galle	Department of Education, Galle
Mr. M. H. Dhanasiri de Silva	Addl. P.D.	Department of Education, Galle
Mr. J. B. A. S. Jayasinghe	Additional Provincial Director (Finance)	Department of Education, Galle
Mrs. Saraswathy Dahanayake	Director (Planning)	Department of Education, Galle
Mrs. U. H. Chandanie	Deputy Director (Planning)	Department of Education, Galle
Mr. W. D. D. Gunathilaka	Assistant Director (Planning)	Department of Education, Galle
Mr. W. A. D. A. Gunawardena	Zonal Director of Education	Ambalangoda
Mr. H. A. Piyadasa	Zonal Director of Education	Elpitiya

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Mr. M. W. Wijepala	Zonal Director of Education	Udugama
Mr. J. K. Rajapakse	Division Director of Education	Habaraduwa
Mr. Wimal Thabrue	Division Director of Education	Balapitiya
Mr. M. G. Dayananda	Division Director of Education	Niyagama
Mr. K. G. Premadasa	Division Director of Education	Mapalagama
Mrs. L. Gunawardena	Principal	G/Southlands College, Galle
Mrs. K. Bandunie	Principal	G/Devapathiraja M.V., Rathgama
Mr. D. P. L. S. Gunasekara	Principal	G/St. Aloysious College, Galle
Mr. Sunil Liyanage	Principal	G/Sudharma M.V., Galle
Mr. M. S. M. Aflal Hussain	Principal	G/Uswatun Hasana M.V., Galle
Miss M. W. Weerasooriya	Principal	G/Martin Wickramasinghe, Habaraduwa

## Program

### Day 1: 22 March 2006

- 08:30 - 09:00 Registration
- 09:00 - 09:20 Opening ceremony
- 09:20 - 09:30 Expectations for the program (USAID Sri Lanka)
- 09:30 - 09:35 Group photo
- 09:35 - 09:45 Welcome address (Mrs. Saraswathy Dahanayake, Southern Provincial Department of Education)
- 09:45 - 10:00 Introduction (Ms. Akiko Nakamura, Researcher, ADRC)
- 10:30 - 12:00 Lecture on Natural Catastrophè Risk Management Policies (Prof. Hirokazu Tatano, Disaster Prevention Research Institute, Kyoto University, Japan)
- 12:00 - 12:30 Lecture on Total Disaster Risk Management (Dr. Tetsushi Kurita, Senior Researcher, ADRC)
- 14:00 - 15:00 Lecture on Natural Disasters and Disaster Risk Management (Prof. Kapila Dahanayake, University of Peradeniya, Sri Lanka)
- 15:00 - 15:30 Report on the results of the Tsunami Awareness Survey conducted in Galle District (Dr. Tetsushi Kurita, Senior Researcher, ADRC)

- 16:00 - 17:00 Introduction to the school education system and disaster education in Sri Lanka (Southern Provincial Department of Education)
- 17:00 - 17:30 Brief introduction to various materials used for disaster education in schools including materials introduced in FEMA for kids (ADRC)

**Day 2: 23 March 2006**

- 09:00 - 10:30 Lecture on Disaster Education in Hyogo Prefecture: School Curriculum and Guidelines (Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 11:00 - 12:30 Lecture on Disaster Education in Hyogo Prefecture: Materials for Disaster Education in Schools (Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 14:00 - 15:30 Brief introduction of various materials used for disaster Education in Schools including materials related to the Japanese story for tsunami awareness education "Inamura-no-Hi" (ADRC)
- 16:00 - 17:00 Lecture on Evacuation Drills (Mr. Koji Kanda, Hyogo Prefectural Board of Education)



**Day 3: 24 March 2006**

- 09:00 - 12:00 Observation of model lessons for disaster education (model lesson is conducted by Mr. Koji Kanda, Hyogo Prefectural Board of Education), disaster studies and evacuation drills
- 14:00 - 15:00 Discussion of the trial lessons
- 15:30 - 17:00 Discussion of the development of materials for disaster education in schools in Sri Lanka



**Day 4: 25 March 2006**

- 09:00 - 12:30 Discussion for the Development of Materials for Disaster Education in Schools in Sri Lanka
- 12:30 - 12:40 Closing remarks
- 14:00 - 15:00 Discussion (local counterparts)

**Discussion Summary**

Through this four day workshop, participants discussed how to approach the next District Workshop and made the following decisions regarding its implementation.

## **Participants**

We will invite four teachers including principals of the 15 pilot schools (one school from each of the 15 school clusters, three teachers and one principal from each school, 60 people in total), and teach them about disasters and methods of teaching disaster reduction.

(Pilot Lessons: Teachers will conduct the pilot lessons in their own schools about two months after the District Workshop. Teachers from other schools in the cluster will be invited to observe the pilot lessons.)

### **Agenda**

The tentative agenda of the District Workshop was formulated as follows:

#### **Day 1**

AM: Lectures on disasters and disaster countermeasures in Sri Lanka

PM: Lectures on methods of teaching natural disasters by a Japanese expert

#### **Day 2**

AM: Model lesson by a Japanese expert (floods, landslides and thunderstorms)

PM: Model lesson by a Japanese expert (earthquakes and tsunamis)

#### **Day 3**

AM: Exercise by participants (participants will be divided into groups to practice teaching methods)

PM: Presentations (demonstrations by participants followed by comments and feedback by the Japanese expert)

*\*Evacuation drills are important, but this workshop focuses on teaching methods so that participants can improve their teaching methods as much as possible.*

*\*Lessons in first aid are not necessary at this phase.*

## **Participant Selection Criteria**

The ADRC emphasized that the teachers must be selected carefully so that the best results can be achieved. We decided to develop a set of criteria for choosing the teachers, as follows:

- A commitment to the project is the main and most important qualification.
- Teachers who are self-motivated and will look for information on their own for the pilot lessons.
- Teachers who can take into consideration the trauma and PTSD of students.
- Teachers who have enough mathematical and scientific knowledge to be able to explain the

background of the lessons to students would be preferred.

-Young teachers would be preferable so that the message can be carried to as many students as possible.

### **Educational Materials**

It is important that the materials reflect the Sri Lankan experience. We agreed that the ADRC will use the method used in the first model lesson on tsunamis for all other common disasters. The materials will be divided into two parts: (1) all weather related disasters and (2) earthquakes and tsunamis.

### **Working committee for educational materials**

The working committee for educational materials was established, to be chaired by Prof. K. Dahanayake. The seven-member committee members shall be:

- Prof. Kapila Dahanayake
- Mrs. Dahanayake, Provincial Education Department
- Mrs. L. Gunawardane, school principal
- Mr. Rajapaksha, Director in charge of a division
- Mr. Sumanaratne, Representative of UNICEF
- Miss Prdeepa, Representative of WFP
- Mr. Hettiarachchi Representative of DMC

The ADRC wanted drafts of the educational materials to be read and modified according to the needs of the students, and photos will be provided by the members of the working committee. The teachers' guide describing how the lessons are to be conducted will also be modified by the committee.

### **Workshop Schedule**

Since school is out from 23 May to 27 June, it was agreed that the next workshop should be held after 27 June. The next program will not be scheduled on a Wednesday, as this is official day-off for government offices. The school visit was done on a Friday to avoid the students leaving for prayers. Since the selected school was a bi-medium (Sinhali and Moslem) school, it was agreed that the school visit should be scheduled on either a Monday or Tuesday

### **III. District Workshop on Disaster Education in Schools**

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## **Introduction**

Based on discussions among relevant officials (see section II), the District Workshop on Disaster Education in Schools, designed for school teachers, was held from 6 to 8 December 2006 at the Wakwella Training Centre in Galle District, Sri Lanka.

This workshop aimed to train teachers who will conduct pilot lessons in February 2007 and will train other teachers in their school districts. This workshop focused on providing participants with a wide variety of information on natural disasters, instructions on how to teach that information, and disaster educational tools such as animated disaster videos and evacuation drills.

## **Purposes of the Workshop**

Since the next step is for pilot lessons to be conducted by participating teachers, the major purposes of the workshop were as follows:

- Provide teachers with information on natural disasters and disaster risk reduction, and raise their awareness of the importance of teaching children about natural disasters.
- Enable teachers to conduct lessons on natural disasters at their own schools.
- Enable teachers to train other teachers in their school communities.

## **Participants**

We invited 60 school teachers and principals from 15 schools (three teachers and one principal from each school), together with relevant officials from the Southern Provincial Department of Education, Disaster Management Centre (DMC), National Disaster Management Centre (NDMC), and others who attended the consultative meeting held in March. Although December is apparently the busiest time of year for Sri Lankan school teachers, we still had a good number of workshop participants (see below).

	<b>Participants (invited)</b>	<b>Officials, resources, etc.</b>
<b>Day 1</b>	45 (60)	15
<b>Day 2</b>	50 (60)	13
<b>Day 3</b>	52 (60)	13

One of the invited schools did not send any participants on any of the three days, as indicated in the list of participants below.

**List of Participants (District Workshop)**

<b>Name of School</b>	<b>Names of participants</b>	
<b>G/Kandegoda M.V.</b>	Mrs. R. Sumithra	Mrs. K. M. Gratika
	Mrs. D. M. Ranasinghe	
<b>G/Gurusinghegoda K.V</b>	Mr. J. De. L. Jayasekara (Principal)	Miss S. P. Thippalagama Arachchi
	Mrs. D. T. P. Senevirathna	Miss K. D. Disna Priyanjanie
<b>G/Mapalagama M.M.V</b>	Mr. W. G. A. Pushpakumara (Principal)	Mrs. A. A. Padma
	Mr. K. H. M. Yasarathna	Mrs. Shantha Nayana Premarathne
<b>G/Poddiwela M.V</b>	Mr. G. Edirisinghe (Principal)	Mr. D. S. S. Karunaratna
	Mr. M. A. G. B. Jagath	Mr. R. L. Kariyawasam
<b>G/Ganegoda K.V</b>	Mr. O. K. D. Wimalaratna (Principal)	Mrs. D. Weerasinghe
	Mrs. P. Helabage	Mr. K. V. Siriwardena
<b>G/Martin Wickramasinghe</b>	Mrs. D. Dias (Vice Principal)	Mr. L. U. S. Ariyasiri
	Mr. K. H. D. Kumara	Mrs. S. R. Vidanage
<b>G/Elakaka M.V</b>	Mr. I. Jayarathna (Principal)	Mr. D. M. M. Wijewardena
	Mr. M. K. Gamini	Mrs. H. K. N. Kariyawasam
<b>G/Madakumbura M.V</b>	Mr. S. P. Abeysinghe (Principal)	Mr. J. A. D. S. Wijesighe
	Mrs. H. A. Sitha Kalyani	Miss S. P. M. Ranasinghe
<b>G/Giuthota Medankara M.V</b>	<b>Absent</b>	
<b>G/Nabadawa Sri Sumangala M.V</b>	Mr. G. G. S. Renuka	Mr. T. G. Sunil
	Miss A. G. D. Priyadarshani	
<b>G/Lankagama M.V</b>	Mr. M. Sumith Lal (Principal)	Mr. B. K. Rathnapriya
	Mr. P. G. Ajith Priyantha	
<b>G/Kalehe Sri Sumangalodaya V</b>	Mr. S. M. C. G. Bandara (Principal)	Mr. B. A. D. Nagahawaththa
	Mrs. R. Hettiarachchi	Mrs. W. P. G. C. Jayawardena
<b>G/Anthonies M.V</b>	Mr. Nihal Gurusinghe (Principal)	Miss K. K. S. Sandya
	Mr. J. P. Munasinghe	Mr. A. J. L. Chandrasingha
<b>G/Sanghamitta Balika M.V</b>	Mrs. S. M. Dahanayaka (Principal)	Mr. K. K. S. Dilhan
	Mrs. M. S. F. Hasana	Mrs. S. N. Amarakoon
<b>G/Saralankara M.V</b>	Mrs. L. I. D. Abeysekera	Mrs. Visaka Manawadu
	Mr. A. H. U. Prasanna	

### Other Participants

Name	Title/ Organization
Mr. M. W. Wijeratne	Secretary, Provincial Education Ministry
Mr. W. B. Piyatissa	Deputy Secretary
Mr. N. J. Karunadasa	Director, Provincial Education Department
Mrs. U. H. Chandanie	Deputy Director (Planning), Provincial Education Department
Mr. W. D. D. Gunathilaka	Assistant Director (Planning), Provincial Education Department
Mrs. H. T. L. Gunawardena	Provincial Education Department
Mr. J. K. Rajapaksha	Division Director of Education
Prof. Kapila Dahanayake	Senior Professor of Geology, University of Peradeniya
Mr. Koji Kanda	Hyogo Prefectural Board of Education
Mr. G. M. G. K. Gunawardena	Assistant Director, NDMC
Mr. R. S. Thudugalla	Development Assistant, Gampaha
Mr. A. P. Vidanage	Development Assistant, Kaluthara
Mr. H. S. S. Karunarathna	Development Assistant, Galle
Miss K. A. Kanthi	Development Assistant, Mathara
Mr. Hiroyuki Takita	UNV
Ms. Kiku Hamada	UNV/CODE
Mr. Akira Yamamoto	ADRC Senior Researcher
Mr. Makoto Ikeda	ADRC Researcher
Ms. Maki Yoshida	ADRC Researcher
Mr. P. M. Siriwardena	Coordinator, ADRC Galle Office
Ms. Chathuri Panditharathana	Assistant, ADRC Galle Office
Ms. K. P. Chandima	Assistant, ADRC Galle Office

Workshop participants from Japan consisted of Mr. Koji Kanda (Hyogo Prefectural Board of Education), Mr. Akira Yamamoto (ADRC Senior Researcher), Mr. Makoto Ikeda (ADRC Researcher), and Ms. Maki Yoshida (ADRC Researcher).

#### **Program**

##### **Day 1: 6 December 2006**

09:30-10:30 Registration

10:30-11:00 Opening ceremony & remarks from Mr. M.W. Wijeratne, Secretary of the Provincial Education Ministry, Mr. Janaka Gunawardena (Deputy-Director, NDMC), Mr. Akira

- Yamamoto (Senior Researcher, ADRC)
- 11:00-11:15 Introduction to the workshop (Ms. Maki Yoshida, ADRC)
- 11:15-13:30 Lecture on Natural Disasters and Disaster Risk Management in Sri Lanka  
(Prof. Kapila Dahanayake, University of Peradeniya, Sri Lanka)
- 14:30-16:00 Lecture on How to Teach Natural Disasters: Introduction to the Model Lessons on  
Day 2 (Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 16:20- 16:40 Introduction to Disaster Educational Tools I: Video of Inamura no Hi
- 16:40-17:00 Wrap-up of Day 1 and introduction to Day 2

### **Day 2: 7 December 2006**

- 09:00-09:50 Model Lesson I on Earthquakes and Tsunamis at Hapugala School  
(Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 10:00-10:50 Model Lesson II on Earthquakes and Tsunamis at Hapugala School  
(Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 11:40-12:30 Model Lesson III on Floods, Sediment Disasters, and Thunderstorms at Hapugala  
School (Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 12:30-13:20 Model Lesson IV on Floods, Sediment Disasters, and Thunderstorms at Hapugala  
School (Mr. Koji Kanda, Hyogo Prefectural Board of Education)
- 15:00-16:10 Q & A on the Model Lessons (at the Training Centre)
- 16:20-16:40 Observation of Evacuation Drills (at the Training Centre)
- 16:40-16:50 Wrap-up of Day 2 and introduction to Day 3

### **Day 3: 8 December 2006**

- 09:00-11:45 Group exercise (Groups A-F, H-J, total nine groups)  
(Each groups practices how to teach lessons on "Earthquakes & Tsunamis" or "Floods,  
Sediment Disasters, and Thunderstorms")
- 11:45-13:30 Presentations (Groups C, A, I and E)
- 14:30-17:00 Presentations (Groups B, F, J, H, and D)
- 17:00-17:10 Wrap-up of Day 3 (Southern Provincial Department of Education)
- 17:10-17:30 Closing Remarks by Mr. P. M. Siriwardena of ADRC Coordinator, NDMC, and Mr.  
Karunadasa, Provincial Director of Education

### **Overview**

#### **Day 1**

Before starting the session on Day 1, Ms. Yoshida of ADRC briefly explained the project and the role of the workshop. She emphasized that the workshop is a training program designed to teach those who will in turn be teaching others, and that the participants will need to demonstrate the pilot lessons to other teachers around their school communities in February 2007.



The ADRC invited a prominent expert, Prof. Kapila Dahanayake (Senior Professor of Geology, University of Peradeniya of Sri Lanka), to give the participants some basic information on natural disasters and disaster management in Sri Lanka. He referred to a historical Sinhala book that tells of a tsunami that occurred long ago and explained how ordinary villagers have been engaging in disaster management for

generations based on their own experiences. His presentation included information on the local situation, such as the area's vulnerability to landslides and other natural disasters. The participants were very interested in hearing about his many experiences.

In the afternoon, Mr. Kanda of the Hyogo Prefectural Board of Education gave presentations on how to teach lessons on natural disasters. This was an introduction to Day 2, in which he would conduct model lessons (two lessons on "Earthquakes & Tsunamis" and two lessons on "Floods, Sediment Disasters, and Thunderstorms") for eighth grade students at Hapugala School. He explained the tools that he was going to use in the model lessons and described the essence of what would be taught. After his presentation, the participants asked the following questions:



- Is there any particular way that tsunami waves recede?
- How can animals use their senses to save themselves even though human beings cannot?
- What are the signs of an impending landslide? (In addition to the signs in the educational materials provided by the ADRC, one participant mentioned the appearance of leaning plants and trees.)

After answering these questions, Mr. Kanda explained that certain information may differ from country to country because of the nature of earth, and that it is therefore best for teachers to explain disasters to children using examples from their own environments.



## **Day 2**

Using the educational materials created by Mr. Kanda and the ADRC, model lessons on natural disasters were taught to 30 school children (eighth graders, 13 years old) at Hapugala School. Mr. Kanda gave four 50-minute lessons on "Earthquakes and Tsunamis" and "Floods, Sediment Disasters, and Thunderstorms." First, Mr. Kanda helped break the ice by saying good morning in Sinhala and then teaching the children to say "good morning" in Japanese. During the lessons, we found that the



children already had a fair level of knowledge about the issues Mr. Kanda was discussing. In fact, their geography textbook contained information about tsunamis and how they are created.

The lessons conducted by Mr. Kanda focused on the "mechanisms of earthquakes and tsunamis (Lesson 1)," "characteristics of tsunamis and evacuation measures (Lesson 2)," "disasters caused by heavy rain (Lesson 3)," and "protecting yourself from floods and sediment disasters (Lesson 4)."

Mr. Kanda conducted the lessons interactively with the children, who asked many questions. He used many pictures and tried to get the students to provide answers and express their opinions. Showing pictures, he asked questions like "What do you think about tsunamis?" "What should you do to protect yourself?" "When do landslides occur?" "Where should you go to evacuate?" "What should you take with you when



evacuating?" After asking what they thought they should take with them when evacuating, Mr. Kanda divided the children into groups and let them pick the 10 most important items they thought they would need. Some of the items the children suggested were money, jewelry, flashlights, mobile phones, medicine, ID cards, and important documents. The children actively answered these questions based on their memories of the 2004 tsunami.

In the afternoon, we moved to the training centre and the participants gave us the feedback on the model lessons conducted in the morning. The following feedback was given regarding the educational materials created for this project:

#### Earthquakes and Tsunamis

- The pictures of "where to evacuate" should include a picture of someone climbing up a tree.

#### Floods, Sediment Disasters, and Thunderstorms

- Pictures of the floods and sediment disasters in the material should be changed to show images from Sri Lanka.
- Are the months of rainy seasons accurate?
- Leaning trees or plants are also signs of impending sediment disasters.
- The mechanisms behind thunderstorms should also be included.

Based on this feedback, the ADRC is going to revise the educational materials before the pilot lessons are conducted in February 2007. Based on a discussion with Mr. Kanda, we are planning to print these revised materials in the form of leaflets that can be handed out to school children, as well as large posters that can be used at the schools for many years.

Next we introduced the participants to one type of disaster educational tool: earthquake and

tsunami evacuation drills. First, we described the earthquake evacuation drills conducted in Japan and explained what sorts of elements should be included. Then we showed a video of an evacuation drill conducted in Thailand, and compared the evacuation drills used for different types of natural disasters. We learned that one of the schools had already conducted a tsunami evacuation drill and another is planning to conduct one in the near future.

At the end of Day 2, we emphasized that the participants would have to practice teaching lessons on natural disasters, based on the model lessons conducted by Mr. Kanda, on the following day.

### **Day 3**

We started Day 3 by explaining that the participants would be practicing how to teach natural disasters in groups. Lessons were to be 40-45 minutes in length and designed for eighth grade students. We told them that they could utilize the materials that Mr. Kanda had used on Day 2, as well as the other disaster educational tools that had been introduced during the workshop. We also asked participants to adapt their lessons to reflect Sri Lanka's culture and attitudes.



The participants were divided into groups to practice conducting lessons on "Earthquakes and Tsunamis" and "Floods, Sediment Disasters, and Thunderstorms." While observing the groups as they practiced, we found out them to be even more creative than we had expected. We therefore decided to ask all the groups to demonstrate their practice lessons in front of all the participants. Due to time constraints, we gave each group 15-20

minutes to demonstrate their lessons. The following are some of the more unique aspects of the demonstrations.

### **Earthquakes and Tsunamis**

- To introduce the lesson, the teacher gave out two sets of cards with English letters and asked students to spell out the word "tsunami."
- The teacher gave out pieces of paper and asked students to write down what they felt when they heard the word "tsunami."
- The teacher drew three columns (entitled "How tsunamis occur," "Negative effects," and "How to prevent tsunami damage") on the board and asked students to fill in the columns.
- The whole class sang a song called "The Sea is Beautiful," a well-known song in Sri Lanka. Then the teacher asked the students if they like the sea.
- The teacher showed two pictures, a "happy face" and a "sad face," and asked students to describe what makes them feel happy and sad (introduction to the tsunami lesson).

- The teacher used a half-boiled egg and a wooden apple to explain the movement of the plates.
- The teacher started by blowing a whistle, and then asked students when they might be likely to hear the sound of a whistle.
- The teacher used a watermelon to explain the inner structure of the earth.

### **Floods, Sediment Disasters, and Thunderstorms**

- The lesson started with a dance and a rain song that is apparently famous in Sri Lanka. The song is a dialogue between an elder and younger sister and contains concepts of several disasters (heavy rain, landslides, thunderstorms).
- The teacher introduced the activity by making a rain sound, using the fingers of one hand to tap the palm of the other hand (tapping with one finger, then two, three and so on). The teacher explained the difference between the sound of heavy rain and light rain.
- The teacher asked students about the weather report on the previous evening's news.
- The teacher divided students into three groups ("floods," "sediment disasters," and "thunderstorms") and asked each group to fill in a chart with four columns: "How does the disaster occur?," "What conditions are present when it occurs?," "What are the negative effects?" and "How to protect yourself."
- The teacher brought an umbrella to class.
- The teacher instructed students to check the weather report at home as their homework.
- The teacher asked students whether they had ever experienced a thunderstorm.



All the lessons were conducted interactively and focused on keeping the students' attention and providing accurate information on natural disasters. It is important for lessons to teach students how to protect themselves during natural disasters based on accurate information, as well as to make a strong impact on the students since these lessons are generally only conducted at schools a few times a year.

At the end of the workshop, an official from the Department of Education praised the great work done by the participants. It was again emphasized that the workshop would not end here, but would continue with the pilot lessons in February. One of the participants also made a speech, saying "We were not initially very excited about participating in this workshop because of its timing at the end of school year, but it turned out to be very beneficial for us. We all are glad to have participated."

### **Achievement & Outcomes**

#### **Participants**

Since we learned that December is the busiest season for teachers in Sri Lanka, we were worried about whether teachers would be interested in participating in this workshop. However, those who did

participate were enthusiastic to learn and put a lot of effort into the development of the natural disaster lessons. They also tried to obtain as much information as possible about natural disasters. They were very motivated by the resources and officials made available by the Department of Education as well as by one another.

Considering the timing of the workshop, at the busy end of the school year, we were pleased by the turnout of school principals. They appreciated the workshop and found the lessons to be important for their pupils.

With many natural disasters occurring around the world and in Sri Lanka in particular, teachers as well as principals expressed great interest in early warning signs and the steps that individuals can take to protect themselves. They will take this information back with them so they can share it with their own school systems.

The teachers were clearly very interested in evacuation drills, a new tool they deemed essential to their school systems. This was the first time that a program like this has been introduced directly to all schools by the Department of Education. This made teachers and principals more aware of the significance of their role in serving as trainees who would be responsible for training others.

This workshop was not intended to achieve any specific outcomes, but to serve as a next step in expanding disaster education in Galle District. This workshop's success can be measured by the participants' eagerness and strong commitment to promoting disaster education in their own schools and districts. We believe that these are the best results that could be gained from the workshop and expect that this will facilitate the promotion of the pilot lessons in February.

#### **Department of Education**

Officials from the Department of Education also played a significant role in the workshop. They motivated the teachers by providing a lot of feedback during the lesson demonstrations. The workshop was observed by about 10 officials each day and their presence was very important to its success. They will also facilitate the arrangement of the pilot lessons to be conducted in February 2007.

#### **Educational Materials**

The educational materials on "Earthquakes and Tsunamis" and "Floods, Sediment Disasters, and Thunderstorms," which were created by Mr. Kanda and the ADRC and confirmed by the Southern Provincial Department of Education, will be revised to reflect input provided by the workshop participants. They will then be printed out and sent to the 15 schools before the pilot lessons are to be conducted in February 2007, along with other educational materials (OHP sheets on "Earthquakes and Tsunamis" and "Floods, Sediment Disasters, and Thunderstorms," and other materials).

#### **Next Step: Pilot Lessons in February**

After discussing the timing of the pilot lessons with the Department of Education, we tentatively decided that we will visit 15 schools over seven days as follows:

**Tentative schedule: 5 February to 13 February (7 days)**

<b>Group</b>	<b>Name of school</b>
<b>Group 1</b>	(A) G/Kandegoda M. V. (O) G/Saralankara M. V
<b>Group 2</b>	(B) G/Gurusinghegoda K. V (C) G/Mapalagama M. M. V (D) G/Poddiwela M. V
<b>Group 3</b>	(E) G/Ganegoda K. V (G) G/Elakaka M. V
<b>Group 4</b>	(F) G/Martin Wickramasinghe (M) G/St. Anthonies M. V (N) G/Sanghamiththa B. M. V
<b>Group 5</b>	(H) G/Madakumbura M. V (I) G/Ginthota Medankara M.V
<b>Group 6</b>	(J) G/Nabadawa Sri Sumangala M. V (L) G/Kalehe Sri Sumangalodaya V.
<b>Group 7</b>	(K) G/Lankagama K. V

We need more discussion on how to handle School (I), which did not send any representatives to the workshop. The Department of Education and the ADRC will decide whether the school should do the pilot lessons in February or whether they should go and observe pilot lessons elsewhere instead. In the latter situation, the structure of the pilot lessons will need to be rearranged.

**Conclusion**

Over the course of this three-day workshop, the participants learned a lot from the resources provided, as well as from one another. The organizers also found that they were able to learn a lot from the participants. The organizers provided the best information and tools possible, and the participants then utilized and applied those resources in the best possible ways. We were very impressed with the participants' creativity and flexibility, and their dedication to children's education. We would like to thank all the participants as well as the Department of Education and Mr. Kanda. We are looking forward to visiting their schools and observing their pilot lessons in February.

## **IV. Implementation of the Pilot Lessons**

## Introduction

At the District Workshop on Disaster Education in Schools held on 6-8 December 2006, school principals and teachers from 15 schools expanded their knowledge of natural disasters and disaster education. Utilizing the information they obtained and the existing materials in Sri Lanka, each school conducted pilot lessons at their schools from 7 to 15 February 2007. School teachers from various school divisions were invited to attend. In order to transmit sufficient information to all the schools in Galle District, each pilot school conducted a "one-day workshop on disaster education," to include model lessons for neighboring school teachers to use when teaching school children.

## Purposes of the Pilot Lessons

The purposes of conducting the pilot lessons are as follows:

- To enable principals and teachers from the 15 pilot schools to transmit what they learned in the previous workshop to other teachers in their school district.
- To enable principals and teachers from the 15 pilot schools to develop and demonstrate lessons on natural disasters.

## Participants

The Department of Education invited two teachers from all 422 schools in Galle District to participate in one of the one-day workshops organized by 15 pilot schools. In addition, the division directors for education of Galle District were also invited to observe the lessons. A total of 564 participants attended the 15 one-day workshops, which were held from 7 to 15 February 2007 as shown in the Table 1.

The following officials came from Japan to observe the pilot lessons: Mr. Koji Kanda (Hyogo Prefectural Board of Education), Mr. Makoto Ikeda (ADRC Researcher), and Ms. Maki Yoshida (ADRC Researcher). The table below lists the officials who attended from Sri Lanka.

1	Mr. M.W. Wijeratne	Secretary, Southern Provincial Education Ministry
2	Mr. N.J. Karunadasa	Director, Southern Provincial Department of Education
3	Mrs. U.H. Chandanie	Deputy Director (Planning), Southern Provincial Department of Education
4	Mr. W.D.D. Gunathilaka	Assistant Director (Planning), Southern Provincial Department of Education
5	Mrs. H.T.L. Gunawardena	Southern Provincial Department of Education
6	Mr. J.K. Rajapaksha	Division Director, Southern Provincial Department of Education
7	Mrs. S.M. Dahanayaka	Former Director, Southern Provincial Department of Education Principal of the Sangamitta Balika M.V

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**Table 1**

Date	School	Division	Zone	No. of Schools	No. of Invitation	No. of Participants
7-Feb-2007	Kandegoda M.V	Balapitiya	Ambalangoda	21	42	29
	Madakumbura M.V	Karandeniya	Elpitiya	30	60	38
8-Feb-2007	Ganegoda K.V	Elpitiya	Elpitiya	33	66	33
	Elakaka M.V	Bentota	Elpitiya	22	44	29
9-Feb-2007	Mapalagama M.M.V	Mapalagama	Udugama	21	42	32
	Poddiwala M.V	Niyagama	Elpitiya	19	38	27
12-Feb-2007	Saralankara M.V	Ambalangoda	Ambalangoda	23	46	27
	Gurusinghegoda K.V	Welivitiya- divitura	Elpitiya	15	30	29
13-Feb-2007	Martin Wickramasinghe K.V (at Unawatuna M.V.)	Habaraduwa	Galle	50	100	53
	Kalahe sri Sumangalodaya	Akmeemana	Galle	37	74	52
	G/Deerananda M.V	Hikkaduwa	Ambalangoda	39	78	32
14-Feb-2007	St. Anthonies M.V	Baddegama	Galle	29	58	52
	Sangamitta Balika M.V	Galle	Galle	29	58	48
15-Feb-2007	Nabadawa Sri Sumangala	Yakkalamulla	Udugama	21	42	34
	Lankagama K.V (at Neluwa M.V.)	Tawalama	Udugama	33	66	49
				422	844	564

*\*G/Deerananda M.V. is a substitute pilot school for G/Ginthota Medankara M.V. which did not send any representatives to the District Workshop last December.*

### **Overview of the pilot lessons at 15 pilot schools**

In order to make the most of the day for those who came to observe the pilot lessons, the Department of Education instructed each pilot school to organize a "one-day workshop," to include model lessons for neighboring school teachers.

### **Format of the Pilot Lessons at Each School**

Below is an example of the format of a "one-day workshop" (pilot lessons) conducted at one of the schools.

## Sample Pilot Lesson Program

Divisional Workshop on Disaster Education in Schools  
9 February 2007, G/Mapalagama Central College

### Program

08:15-08:25	Religious observation
08:25-08:35	Recitation of the National Anthem
08:35-08:45	Oil lamp ceremony
08:45- 09:00	Introduction to the workshop by Mr. Ajith Pushpakumara Gamage, Principal of Mapalagama Central College
09:00-09:15	Demonstration on "Tsunamis" - Vihara Maha Devi
09:15-10:30	Lesson I – "Tsunami & Earthquakes" by Mrs. A. A. Padma
10:30-10:40	Comment by participants
10:40-11:00	Tea break
11:00-11:15	Dance for a song
11:15-12:00	Lesson II- "Floods & Thunderstorms" by Mrs. S. N. Premaratne
12:00-12:30	Lesson III- "Landslides" by Mr. Yasaratne Kariyawasam
12:30-12:40	Comments on the workshop by participants
12:40-13:00	Thanks & wrap up

### Outline

The outlines of the pilot lessons conducted at each of the 15 schools are as follows (notes taken by Mr. Kanda):

**(1) Kandegora M.V: 7-Feb-2007**

Lesson Flow

- Students watch song and dance performances and discuss their impressions. They think back on the tsunami.
- The teacher reaffirms that the sea is beautiful, but can sometimes be treacherous.
- Divides disasters into categories.
- Explains the structure of the earth using diagrams and cut fruit.
- Uses map clippings of Africa and North and South America to explain continental drift.
- Confirms the names of the eight major plates.
- Explains the mechanisms of earthquakes and how damage is assessed based on the Richter scale.
- Tsunami is a Japanese word.
- It is difficult to escape from a tsunami.
- Students think in groups about what items should be included in an emergency kit.
- Conducts evacuation drills using a whistle as the start signal.



Strengths

- Took an interesting approach in using cut fruit and a diagram to explain the structure of the earth.
- The teacher asked a lot of questions and created a lot of opportunities for children to think.
- Continental drift and the structure of the earth are difficult topics, and need to be presented in a way that is easy to understand. The teacher did well to incorporate such tools as a globe, OHP, and diagrams.
- Preparing the cut maps of Africa and America in advance saved time.



Areas Needing Improvement

- The board where the diagrams were hung and the whiteboard used for the OHP projections were too far back and hung too low, making them difficult to see.
- The children would be able to concentrate better if the diagrams were shown one at a time rather than all at once.
- The size of the shaking is not only determined by the Richter scale, but by the distance from the epicenter.
- Teachers should convey that tsunamis can start not only with a receding tide, but also with an advancing tide.
- Evacuation drills should start with a lesson on the importance of adhering to the following rules during evacuation: "No pushing, no running, no chatting, and no going back."



## (2) Madakumbura M.V: 7-Feb-2007

### Lesson Flow

- Starts with the premise that a tsunami has struck a nearby town.
- Explains why tsunamis occur.
- Explains that Sri Lanka gets more rainfall than Japan.
- Explains that in countries like Japan and Sri Lanka, rivers are at such an incline that any rain that falls flows quickly down rivers and causes a lot of flooding.
- Explains the warning signs of mudslides and landslides.
- Explains the effects of cyclones and monsoons.
- Strongly emphasizes the importance of obtaining accurate information.
- It is important to think about the ground conditions around where you live so that you can evacuate quickly.
- Students think about and discuss what should be included in an emergency kit.
- Students watch the Stormy Sea dance.



### Strengths

- The surprising use of sound effects to introduce the lesson was interesting. It was a good idea to set up the lesson by having a student come to inform the class that a tsunami had struck.
- The children concentrated well and listened carefully to the story.
- Since it seems that disaster-related songs and dances are being spread orally, these are extremely useful teaching tools. These were well used, and we should recognize their role as unique components of disaster prevention education in Sri Lanka.

### Areas Needing Improvement

- The teacher talked too much. The teacher should have stopped along the way to ask the students questions.
- The folded paper diagrams held up by the teacher during the presentation would fold and bend. They should be hung on a board of some kind. Attaching these papers to a stiffer board and using them like a picture-story show would make them harder to damage and easier to maintain.
- The teacher had the students get together in groups to discuss what should be included in an emergency kit for different kinds of disasters, but this did not seem to be a very meaningful exercise. The items that need to be included in an emergency kit are the same regardless of the type of disaster.



**(3) Ganegoda K.V: 8-Feb-2007**

Lesson Flow

- The teacher shows the class newspaper articles on tsunamis and asks about different types of disasters.
- Students explain why they know about various disasters.
- The teacher explains what goes on in the middle of the earth using diagrams, and after informing students about plate movements, distributes maps showing the plate boundaries.
- Explains the characteristics of a tsunami, plays a DVD about the tsunami on a computer screen.
- Has students think about methods of reducing the damage caused by natural disasters, which cannot be controlled through human intervention.
- Helps students realize that obtaining information and passing it on to others can save lives.
- Students think about what items should be included in an emergency kit by categorizing items listed on cards.
- Evacuation drills are conducted, and students take the cards they've chosen with them.
- Drill activity review. The class discusses the items they took with them and their evacuation sites.
- The content of the lesson is confirmed using a worksheet.



Strengths

- The teacher asked lots of questions, and her engaging speaking style held the students' attention.
- She effectively used mass media materials, such as newspaper articles and a video. Imitating a radio broadcast was a good way to start the evacuation drill.
- Writing down emergency kit items on cards and having students take these with them during the drill was also an interesting idea.
- Summarizing what had been learned on the worksheet at the end of the class was an impressive way not only to help students evaluate what they had learned, but also to effectively clarify the goals of the lesson.



Areas Needing Improvement

- It was a shame that the video did not run smoothly. The teacher should check ahead of time that it can be shown at the desired time.
- It is difficult to see folded paper diagrams being held up by the teacher.
- When conducting evacuation drills, teachers need to teach students to adhere to the rules of "no pushing, no running, no chatting, and no going back" so that evacuation proceeds quickly and in an orderly manner.
- The teacher said that food does not need to be taken because help will arrive quickly, but this is an overly optimistic view.



#### (4) Elakaka M.V: 8-Feb-2007

##### Lesson Flow

- Students discuss their impressions of the songs and dances. The teacher confirms that the class will be studying natural disasters.
- A tsunami video is played on a computer, and the teacher explains the mechanisms of a tsunami.
- Using a large map showing the plate boundaries, the teacher explains continental shift and the plates.
- World maps are distributed to student groups, and they try to cut out and fit together the coastlines of South America and Africa.
- A computer video is used to explain why the plates move and spring up at their boundaries.
- The teacher explains the various characteristics of tsunamis using diagrams.
- Has students think about ways to protect themselves from a tsunami. Teaches them to quickly evacuate to higher ground and other safe locations.
- Students work in groups to select prepared cards showing the names of items that would be included in an emergency kit.
- Students think about important evacuation tips by examining diagrams.
- The class listens to an announcement made by a student and an evacuation drill is conducted after the class watches a video on tsunamis.



##### Strengths

- Tsunami videos are more realistic and provide the students with more specific images than oral descriptions.
- Drawing the plate boundaries on a large map of the world was easy to understand.
- It was surprising to see the teacher showing the plate movements on a computer.
- The use of a student to make the announcement that started the evacuation drill and the use of the tsunami video heightened the sense of realism in the exercise.

##### Areas Needing Improvement

- It was nice to see so many different teaching materials used, but it was a waste to use each of them for such a short period.
- Is it really necessary to deal with nuclear tests and meteor splashdowns as causes of tsunamis?
- Do not teach the misconception that tsunamis always start with a receding tide.
- When conducting evacuation drills in schools, teach children to adhere to the rules of "no pushing, no running, no chatting, and no going back" and convey the need for teachers to exercise leadership.



(5) Mapalagama M.M.V: 9-Feb-2007

Lesson Flow

- The students watch a skit that makes them think about why people die and they learn that tsunamis have occurred throughout history.
- The teacher explains the meaning of the word "tsunami," and also explains continental drift, plates, and the structure of the earth's interior.
- Uses diagrams to explain how the plates spring up, and the relationship between the plate boundaries and epicenters.
- Uses a diagram to show the most earthquake-prone countries: Japan, Mexico, Indonesia, and Chile.
- Explains the characteristics of tsunamis, such as the difference between tsunami waves and regular waves, their speed, and the fact that multiple tsunami waves can come ashore.
- Explains the range of areas devastated by the Indian Ocean tsunami using a map.
- The groups think about ways to reduce tsunami damage, post them on the whiteboard, and explain them to the class.



*Watch animal signals. Do not go out to get fish when the water recedes. Evacuate if you feel shaking. If you are on the sea, head toward the open ocean. Escape to high ground. Climb a tree. Check on your family. Choose a home away from the coastline. Prepare an emergency kit. Familiarize yourself with the evacuation routes. Do not use elevators. Stay away from bookshelves. Do not cut down trees near the coastline. Leave your car and escape on foot.*

Strengths

- Hanging only one diagram at a time on the board made it easy to see.
- The demonstrations using a twig floating in a wash basin to demonstrate plate movements, and a ruler to show how a plate boundary springs up were useful in explaining the material in an understandable manner.
- The teacher did a good job of using the example of those who died on the train to explain that anyone can become the victim of a disaster.
- It was a good idea to post the groups' ideas on the whiteboard and have the students describe them to the class.



Areas Needing Improvement

- The teacher should make the students think more by asking them more questions, and teach the lesson using the children's own words.
- I think the teacher said that the speed of a tsunami is determined by the depth of the location where the earthquake occurred.
- Climbing a tree was suggested as a way to escape, but climbing a tree is not easy and is not something that everyone can do.
- In Sri Lanka, more attention should be paid to the Indian Ocean plate.

**(6) Poddiwala M.V: 9-Feb-2007**

Lesson Flow

- Class watches a tsunami video.
- The teacher shows the types of natural disasters on an OHP.
- Cuts a world map along both sides of the Atlantic Ocean.
- Describes the conditions of the earth's interior and explains that earthquakes occur where plates intersect.
- Shows the students phenomena caused by earthquakes using written materials.
- After demonstrating how students are to protect their heads using their schoolbags, the teacher conducts a disaster drill in which students take cover under their desks.
- Shows how a plate springs up using two sheets of paper.
- Shows a diagram of the areas devastated by the Indian Ocean tsunami, and explains the four causes of tsunamis: earthquake, volcanic eruption, nuclear testing, and meteor splashdown.
- Explains the characteristics of storms, highlighting the most dangerous locations and scenarios.
- Introduces a poem about rain, and has groups think about ways to reduce damage caused by landslides and flooding.
- Everyone thinks about what items should be included in an emergency kit as the teacher shows items prepared in advance.



Strengths

- The teacher had prepared easy-to-understand teaching materials including diagrams of the earth's interior and diagrams of flooding caused by forest development.
- The presentation on earthquake phenomena was deemed necessary for the children who had never experienced an earthquake.
- A poem about rain was used as a teaching device, but I expect that more such materials unique to Sri Lanka could be found.
- I was very impressed that the students seemed to be enthusiastic and genuinely enjoying the lesson. Amusing the children by intentionally putting things in the emergency kit that were not needed was an effective teaching device.



Areas Needing Improvement

- You should not use a Mercator map for the map cutting exercise, as the shapes of the continents are not correctly represented on it.
- After the group work, none of the groups were evaluated. This was probably unsatisfying for the students.
- The children in the groups did not seem to discuss ideas very actively with one another.
- During the evacuation drill, some of the students did not get under their desks.

**(7) Saralankara M.V: 12-Feb-2007**

Lesson Flow

- The teacher reads a poem about rain, flooding, and storms. The text of the poem is distributed to groups of students. Students discuss their impressions.
- Explains natural disasters and the damage they cause. Has students explain what kind of damage is caused by flooding based on materials, such as newspaper articles, that they have brought from home.
- Explains why rain falls (water evaporation rises and is cooled).
- Explains the features of the climate in various regions using a large map of Sri Lanka.
- Uses a diagram to explain the relationship between the monsoons and rain. Confirms the directions of the monsoons using the eight compass directions.
- Makes students aware of the fact that Sri Lanka is a country that receives a lot of rainfall using graphs showing comparative worldwide rainfall and a graph comparing the rainfall in Japan and Sri Lanka.
- Confirms methods of evacuating during a flood. Conveys the importance of preventing deforestation.
- A diagram of an emergency kit is distributed to groups, and students are asked to think of 10 items to put in it.
- Explains ways to prevent flood damage using the OHP.
- A skit depicting a family conversation during an evacuation is put on at the rear of the classroom, and an evacuation drill is conducted using a whistle as the start signal.



Strengths

- The teacher asked many questions, and the children had to think carefully and express many of their ideas.
- Distributing a single black-and-white copy of the graphs to each group was a good idea, as it made it easier for students to see the material.
- The teacher created opportunities for the children to give presentations and explanations in front of the class.
- Putting up materials on natural disasters in the hallways and stairwells was very good for increasing the students' appetite for learning.



Areas Needing Improvement

- The whiteboard was in a dark corner and was difficult to see. Also, it needs to be used more effectively.
- When the skit started, the teacher should have instructed the entire class to pay attention.
- In the next workshop, students should learn to adhere to the evacuation drill rules of "no pushing, no running, no chatting, and no going back."
- When showing graphs and diagrams, more time should be taken to explain them.

**(8) Gurusinghegoda K.V: 12-Feb-2007**

Lesson Flow

- When the teacher strikes a finger across the palm of her hand, this is the signal that a tsunami has struck.
- The teacher uses a diagram to explain that Sri Lanka is a country that gets a lot of rainfall.
- Uses a graph to compare rainfall amounts worldwide and rainfall amounts in Japan and Sri Lanka (after asking students to guess which country gets more).
- Explains that flooding is likely if 75 ml or more of rain falls in a day.
- Explains the length and inclines of rivers using a diagram. Provides the names of Sri Lanka's four largest rivers.
- Asks students to guess the length of these rivers, and explains that Sri Lanka's rivers are short and fast by holding a book at an incline.
- Explains that their depth changes due to repeated landslides and that this is also a cause of flooding.
- Explains eight warning signs of a landslide using the OHP.
- Explains the causes of and damage created by mudslides, and their relationship to highways.
- Groups draw pictures on different topics. Afterwards, a representative of each group explains the group's drawing.
- Students had a limited time to select emergency items to take with them, and were instructed to talk with their families about preparing an emergency kit at home.



Strengths

- The teacher hung one diagram on the board at a time so that she could carefully explain each.
- It was good to have all the students read the text shown on the OHP.
- I was impressed that all of the groups were able to work together in a short amount of time to create nice drawings.
- Giving students a time limit to choose the items they would take with them in an emergency helped them feel some of the urgency they would feel in an emergency situation and they seemed to enjoy the exercise.



Areas Needing Improvement

- It would have been more effective when presenting materials to increase the students' sense of anticipation as much as possible by having them guess at the answers.
- The teacher talked too much. The teacher should ask more questions and strive to find ways to utilize student input.
- It would be helpful to try to keep the folds out of the materials.
- When the students put their pictures on the board and described them, it would have been useful to have added titles showing the theme of each picture.

**(9) Martin Wickramasinghe K.V (at Unawatuna M.V): 13-Feb-2007**

Lesson Flow

- The story "Inamura no Hi" was shown using a projector, and students were asked to describe their impressions.  
"It reminds me of the tsunami." "It makes me feel scared." These are the impressions of students who were rescued from the tsunami.
- Using PowerPoint slides with easy-to-understand diagrams, the teacher explains the earth's interior, the plates and their movements, the mechanisms of tsunamis, the ways that tsunamis are propagated, and damage photos.
- Using damage photos (rubble, corpses, the moment the wave struck), the teacher explains that you must not go look at the ocean, and that those who knew about tsunamis were able to escape.
- Explains the tsunami warning signs after showing a satellite photo of the receded tide.
- Students were divided into four groups to determine what they would do if a tsunami were to strike. They then presented their ideas to the class and the teacher helped supplement their answers.
- Pictures shown on PowerPoint slides were used to explain tips for evacuating.
- Students had to take a computer quiz so the teacher could evaluate their learning.

Strengths

- Showing a PowerPoint presentation of "Inamura no Hi" easily grabbed the students' attention.
- Because PowerPoint slides can be used to efficiently present a lot of information, they were very effective.
- The four groups were able to adeptly present their ideas in a short period of time.
- The quiz at the end of the lesson was a good way to review and confirm what had been learned.

Areas Needing Improvement

- Rather than a "teacher talks, students listen" format, lessons should include more opportunities for interaction, using a format such as "teacher asks questions, all students think, several students answer, and teacher summarizes."
- Why are the children shown photos of corpses? This could be very distressing if any of the students in the class lost close relatives.
- The satellite photos were shown in reverse order. If you don't show any before photos in the beginning, there is nothing to compare them to.
- PowerPoint is very useful, but how many teachers can use it?



**(10) Kalahe sri Sumangalodaya: 13-Feb-2007**

Lesson Flow

- Song lyrics are passed out to groups and everyone sings a song, "The Sea is Beautiful."
- The teacher explains that the sea is not always beautiful and explains the meaning of the word tsunami.
- Students present what they know about tsunamis or what they have heard about them.
- Map clippings of North and South America, Europe, and Africa are distributed to groups, and students are asked to guess how they were connected.
- Explains continental drift, the earth's interior, and the earth's mantle.
- Using a handmade globe made so that some of the plates can be peeled off, the teacher explains the plates and their movement.
- Demonstrates how a plate is dragged down using a sponge. Explains that a tsunami occurs when one of the plates shifts.
- After showing a video of a news broadcast, the teacher explains the relationship between the height of a tsunami and the depth of the ocean.
- Showing a model of the coastal areas, the students are asked to think about and describe the best evacuation options.



Strengths

- Starting off the lesson with a song was a very good idea.
- I was impressed with the teacher's enthusiasm and the various handmade materials that had been prepared.
- Among these, I was most surprised by the globe whose plates could be peeled off. I was also impressed with how well conceived the coastal model was, as it included threatened homes as well as a buildings and tower that could likely be used for evacuation.
- The news broadcast sufficiently conveyed the urgency of a tsunami situation.



Areas Needing Improvement

- The students were confused when they were suddenly given map clippings of North and South America, Europe, and Africa, and asked how they were connected. If the students don't have some common understanding of what is expected of them, they just end up confused.
- When this happens, it is hard to understand the diagram of the continental shift that was already shown. The teacher shows the students the answer.
- Saying that one can escape from a tsunami on a bicycle can lead to misunderstandings.
- Full advantage is not taken of the coastal model. It would have been better to have everyone gather around the model and point to the locations nearest them that would be safe evacuation locations. It was a waste of a good tool.

(11) G/Deerananda M.V: 13-Feb-2007

### Lesson Flow

- A skit depicts an interview conducted in 2019 with a grandmother who lived through the 2004 tsunami. A tsunami video is shown. The grandmother cries when she hears that two missing persons are still being sought. Teaches students ways to protect themselves from a tsunami.
- The teacher explains natural disasters and human disasters using an OHP.
- Explains the structure of the earth and its plates.
- Demonstrates how a plate springs up using a notebook.
- The class is divided into four groups to think about and discuss four different topics: the warning signs of a tsunami, what to take with you when evacuating, documents to take with you when evacuating, and tsunami response measures.
- Discuss and prepare an emergency kit ahead of time, and pay attention to information provided by the mass media.
- The teacher uses a diagram to explain the relationship between the monsoons and rain.
- Explains the reasons that floods and mudslides occur.
- Students think about how to protect themselves from natural disasters and write up their conclusions.
- Confirms the eight warning signs of a landslide disaster using the OHP.
- Distributes the lyrics to a song about rain and storms, and leads a discussion about storms.
- Explains storm electricity.
- Two students from each group go up to the stage to give presentations on how to protect oneself.
- Explains tips for protecting oneself in a storm.



### Strengths

- The introductory skit was really fantastic. It was a shame it was only being used to introduce the lesson.
- Splitting the students up into four groups and having them give presentations about their ideas was an effective way of getting the students to think carefully on their own.
- The teacher did well at providing additional explanations on the topics being considered by each group.
- The teacher did well to emphasize the need to watch for flooding and mudslides during all seasons, not just the rainy season.
- The demonstration of how to protect oneself during a storm seemed useful.



### Areas Needing Improvement

- The OHP projection should not have been so distorted.
- The teacher should have had students carefully examine diagrams and materials one at a time so that they could understand what they were looking at.
- The teacher should consider incorporating question-asking as a core part of the lesson to increase students' opportunities to share their ideas.

**(12) St. Antonies M.V: 14-Feb-2007**

Lesson Flow

- Students watch a skit that shows human beings who are destroying the environment, in spite of God's efforts to stop them, being caught up in a tsunami.
- The teacher introduces students to natural disasters using PowerPoint slides.
- The teacher divides up newspaper articles brought by the students from home, and posts them up in five categories: earthquakes, tsunamis, flooding, landslides, and storms.
- Explains continental drift by moving the continents using styrofoam cut-outs of a world map.
- Explains the earth's interior, plate movements, and the relationship between plate boundaries and earthquake epicenters using slides and videos.
- Shows a tsunami video, discusses the receding tide, and explains how tsunamis can occur from the destruction of undersea volcanoes.
- Explains the tsunami warning system, the characteristics of tsunamis, and evacuation locations using videos and slides.
- Describes what should be included in an emergency kit by pulling items out of a prepared kit.
- Students demonstrate the tsunami generation devices that they have made.
- The skit performed at the beginning of the lesson is performed again, showing what happens both when people evacuate and are rescued, and when they panic and are not rescued.



Strengths

- Since the newspaper headlines are printed in large bold font, hanging them up by category was a good idea.
- The slides filled up the entire screen and the room was darkened, so the presentation was very easy to see.
- Creating continents out of styrofoam and moving them around was easy to understand.
- Because the teacher carefully explained each of the materials as they were used, the students seemed to have a good understanding of the lesson.
- Showing the same skit at the beginning and end of the class using different patterns was effective.



Areas Needing Improvement

- The students' seats were not very well arranged. Half of the students were facing the back of the room.
- The teacher did not ask questions or provide instructions that required the students to speak.
- The diagram of the plate boundaries and epicenter was colored such that it looked as though the epicenter extended to the Sahara Desert.

**(13) Sangamitta Balika M.V: 14-Feb-2007**

Lesson Flow

- The teacher explains the characteristics of a tsunami using diagrams.
- Shows emergency items written on a card, and asks the groups to decide whether the item is necessary. The teacher presents the results.
- Uses a diagram to make students think about where they should go if they learn that a tsunami is coming, and asks students to present their answers orally.
- After showing what they have learned in the skit, the contents of the bag is checked.
- Each group has to suppose they are in different locations and then think about what they would do if that's where they were when they learned of an oncoming tsunami.
- Photos of flooding and landslides are distributed to each group, and they have to compile and present their impressions.
- A map is hung that shows annual average rainfall and another of Sri Lanka shows the landslide disaster risk. Students are then asked how they are related.
- The teacher asks about the signs of flooding.
- Students think about what they would do in the event of a flood.
- Students imagine what it would be like after an evacuation, and their sense of crisis is increased.
- Five types of landslide disaster categories are distributed to each group and explained.
- Pictures of the eight warnings are distributed to each group, and they are encouraged to use them.
- A graph showing the number of storms per month is distributed to the students and they confirm that most storms occur in April, October, and November.
- Explains the different levels of danger and safety by area. The experience of being in a storm is depicted in a dramatic skit.
- The students are tested on what they've learned based on two questions given to each group, and a representative of each group presents the answers.



Strengths

- The students did a good job of exchanging ideas within their groups.
- The teacher used a pleasant tone when joining each group's discussion.
- The teacher gave good advice to ensure that everyone could hear the presenter, to warn students who were not paying attention, to encourage presenters to speak in a loud voice, and to facilitate good communication.
- Showing items that would be contained in an emergency kit on cards and making students think in their groups about whether each item was necessary helped increase the students' concentration.

Areas Needing Improvement

- When assigning different topics to different groups, it would be useful for everyone to know what topics the other groups were working on.
- Because the teacher asked a lot of specific questions but did not take enough time to have students talk about their answers, it was unclear what the teacher expected the students to learn in the class. Lessons should be structured to have one or two major objectives.
- A two-and-a-half hour class is too long. A break should have been taken.
- When giving their presentations on their respective topics, the groups should have clarified the topic.



(14) Nabadawa Sri Sumangala: 15-Feb-2007

Lesson Flow

- The teacher explains the tsunami warning signs in a skit in which people are saved when children, seeing their parents chasing after fish as the tide recedes, say "Watch out! A tsunami is coming! I learned about it in school!"
- A world map is hung on the board. Students focus on both coasts of the Atlantic Ocean and each group cuts up a map.
- The teacher explains continental drift, the earth's interior, and the earth's plates using diagrams.
- Demonstrates how a plate springs up by bending a long ruler.
- One person in the group for each diagram gets up in front of the class to describe the characteristics of tsunamis.
- A demonstration is given using a mini tsunami experimental device.
- Students confirm that Sri Lanka is an earthquake-prone country using the map of plate boundaries and epicenters.
- Explains the arrival of the Chilean earthquake tsunami and the Sumatra coastal earthquake tsunami.
- Explains the speed of a tsunami using diagrams.
- Students think about their evacuation options by looking at diagrams.
- At the sound of a drum, the students crawl under their desks, hold their schoolbags over their heads, and conduct an evacuation drill.



Strengths

- The teacher asked a lot of questions and there were plenty of student presentations and chatting among the students. The teacher tries to get the students to express themselves.
- The tsunami-creation experiment was handmade, and thus seemed to heighten the students' interest.
- The use of magnets was an efficient way to attach diagrams to the whiteboard. Summarizing the students' responses up on the whiteboard was a good idea.
- The evacuation drill was executed nearly perfectly. The students did not push one another, as they were holding their schoolbags above their heads, did not chat with one another, and walked in line all the way to the center of the yard.
- The introductory skit was very easy to understand, and taught the students the necessity of teaching their parents correct information.

Areas Needing Improvement

- Not all of the students seemed to understand how the map clippings were supposed to fit together.
- Should the earth's interior really be compared to a soft-boiled egg?



**(15) Lankagama K.V (at Neluwa M.V): 15-Feb-2007**

Lesson Flow

- The male students perform a song they created in front of the class. The song is about the sadness of losing one's mother in the tsunami.
- The teacher hangs a world map and a diagram showing continental drift.
- Maps clippings of the Americas and Africa are distributed to the groups, and the students are instructed to piece them together.
- The group with the correct answer calls everyone over and shows them how to do it.
- The teacher explains the earth's interior, plates, why earthquakes occur, and the relationship between epicenters and the plate boundaries.
- One person in the group for each diagram gets up in front of the class to describe the tsunami characteristics.
- The teacher explains the differences between a tsunami and a normal wave.
- Explains the arrival of the Chilean earthquake tsunami and the Indian Ocean tsunami.
- Has children think about an evacuation site diagram and about evacuation tips.
- Emphasizes that people should pay attention to media information and that tsunamis do not always start with a receding tide.
- The teacher talks about her/his personal tsunami experience, and students select cards showing the items in an emergency kit.
- A representative of each group makes a presentation.
- All of the students think about the contents of the emergency kit, and listen to a song about waves that has been handed down through the generations.
- The teacher explains photos of a disaster caused by rainfall while asking the children to discuss their impressions.
- The students get an idea about Sri Lanka's rainfall from graphs showing the rainfall of various countries, and a graph comparing the rainfall in Japan and Sri Lanka.
- Explains the relationship between the length and incline of rivers to flooding.
- Students think about the order in which the three stages of a landslide occur, and present their conclusions.
- Explains the eight warning signs of a landslide and tips for selecting an evacuation route.



Strengths

- Everyone understands the sadness caused by the tsunami described in the opening song, and this prepares the class for the lesson.
- Having the group with the correct answer show everyone else how they did it is more effective than an oral explanation.
- The teacher's enthusiasm could be felt in the eloquent description of his/her own experience.
- To let everyone else know which group had selected which item out of the emergency kit, the results were noted on the whiteboard.
- It was good to have the students think about the order in which the three stages of a landslide occur, and to show the images to all the students so they could all understand.



Areas Needing Improvement

- The teacher spent a lot of time talking. Greater effort should be taken to incorporate the students' interests and ideas.
- The students spoke in soft voices. The students should become used to expressing their opinions in louder (stronger) voices.

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All the pilot schools conducted very unique and well-developed workshops, including model lessons for children that utilized the new information that had been gained at the December workshop, as well as demonstrations of existing native Sri Lankan materials on natural disasters like songs, dances, and other materials on the tsunami, and lectures for the participants (school teachers) to teach them about natural disasters and how to protect themselves during one.

All of the pilot school teachers clearly understood that in spite of our inability to reduce natural hazards, we are able to reduce natural disaster risks and prepare for future occurrences. People in Sri Lanka were deeply impacted by the tsunami, but the teachers also focused on other natural disasters that frequently occur in their country, such as landslides and flooding.

Some teachers have developed original educational materials on natural disasters that can be used by school teachers at other schools in their school divisions. We learned that they visited the library in Colombo or searched for information on the Internet to develop these materials.

One of the schools utilized booklets entitled "Inamura no Hi" (a tsunami story based on a historical event in Japan), which were distributed by the ADRC during the December workshop. They converted the pictures contained in the booklet into PowerPoint slides and then narrated the story themselves while showing the PowerPoint presentation. Furthermore, one teacher developed a lesson plan on earthquakes and tsunamis.

Each school has different facilities and equipment, but the teachers are very adept at developing their lessons within the capacities of their respective schools. After observing the pilot lessons, we were convinced that school education for natural disasters can be continued without a large budget, as long as a system is established for conducting disaster education in the schools. Such efforts are sure to have a significant impact on local children and the broader community.

#### **Points to be Reviewed**

A few teachers still have misconceptions about natural disasters, so some basic information will be briefly reviewed at the Second Consultative Meeting, particularly regarding:

- the mechanisms of tsunamis
- the signs of a tsunami

#### **Next Step: Second Consultative Meeting**

To conclude this program and to develop the mechanisms for promoting disaster education in Galle District, the Department of Education and the ADRC agreed to hold a Second Consultative Meeting, as described below.

Tentative schedule: 26-27 March 2007

Expected participants: Two representatives from the 15 pilot schools, officials from the Southern Provincial Department of Education, Southern Provincial Education Ministry, the division directors for education of Galle District, National Institute of Education, USAID, DMC, NDMC, ADRC, and others.

Tentative program:

Day 1

AM: Overview of the pilot lessons

PM: \*Brief review of information on natural disasters, focusing on the points that are being incorrectly taught by some teachers.

\*Action Plans for further development of disaster education by the 15 pilot schools and division/zonal directors

Day 2

AM: Action plan for Galle District and Southern Province by the Department of Education

This will be a great opportunity to show officials from the central government and disaster-related organizations what Southern Province has achieved.

#### **Educational Materials for Natural Disasters**

Time constraints made it impossible to print the materials by the time the pilot lessons were conducted. We will distribute the completed materials at the Second Consultative Meeting in March.

#### **Conclusion**

All 15 of the pilot schools understood their roles in this project and also were very enthusiastic about conducting lessons on natural disasters. They all developed very informative lessons on the topic. We believe that they will be great leaders in further promoting disaster education in Galle District in the future.

The Department of Education has also been very keen on working with the schools in Galle District and the ADRC to promote this project. They have been putting a lot of time and effort into making things happen in Galle District and into expanding disaster education to other parts of Southern Province as well. They said that although they are unable to directly integrate disaster education into the school curriculum, they can make the central government aware of the importance of this topic through this education program in Galle District.

This program is scheduled to conclude in March, but the ADRC, together with Mr. Kanda and the Department of Education, would like to take advantage of the final meeting in March to develop some kind of concrete action plan that the schools in Galle District and the Department of Education can use to continue developing this project with less external support.

**V. Second Consultative Meeting on  
the Development of Disaster Education**

## Introduction

The Second Consultative Meeting was held at Wakwella Training Centre, Galle District from 26 to 27 March 2007 following the implementation of the pilot lessons in February 2007. At this meeting, we reviewed the lessons created by the 15 pilot schools in February and provided feedback to help the schools implement better disaster education. As the wrap-up event of this program, this meeting was also intended to help participants identify ways in which to move forward on further efforts to promote disaster education in Galle District, as well as in Southern Province, after the end of the program.

## Purposes of the Meeting

- Review the pilot lessons conducted by the 15 pilot schools in February 2007
- Provide feedback for improving the lessons for disaster risk reduction
- Review the whole program
- Identify ways to move forward on further efforts to promote disaster education in Galle

## Participants

We invited two representatives from each of the 15 pilot schools, 15 division directors and four zonal directors of Galle District, as well as relevant officials from the Southern Provincial Department of Education, Disaster Management Centre (DMC), National Disaster Relief Services Centre, National Institute of Education (NIE) and others who were involved in this program throughout the year.

We also invited three zonal directors from Hambantota, another district in Southern Province, to show them what has been done in Galle District and to motivate them to promote disaster education in Hambantota District as well.

Meeting participants from Japan were Mr. Koji Kanda (Hyogo Prefectural Board of Education), Mr. Makoto Ikeda (ADRC Researcher), and Ms. Maki Yoshida (ADRC Researcher).

### Participants List of the Second Consultative Meeting (26 March 2007)

1.	Mrs. D. M. Ranasinghe	G/Kandegoda M.V.
2.	Mrs. K. M. Gratika	
3.	Mr. J. De. L. Jayasekara (Principal)	G/Gurusinghegoda K.V.
4.	Mrs. D. T. P. Senevirathna	
5.	Miss K. D. Disna Priyanjanie	G/Mapalagama M.M.V.
6.	Mr. W. G. A. Pushpakumara (Principal)	
7.	Mrs. A. A. Padma	G/Poddiwela M.V.
8.	Mrs. Shantha Nayana Premarathne	
9.	Mr. G. Edirisinghe (Principal)	G/Ganegoda K.V.
10.	Mr. R. L. Kariyawasam	
11.	Mr. O. K. D. Wimalarathna (Principal)	G/Martin Wickramasinghe
12.	Mrs. P. Helabage	
13.	Mr. K. H. D. Kumara	G/Elakaka M.V.
14.	Mrs. L. U. S. Ariyasiri	
15.	Mr. M. K. Gamini	

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16.	Mrs. H. K. N. Kariyawasam	
17.	Mr. S. P. Abeysinghe (Principal)	G/Madakumbura M.V.
18.	Mrs. H. A. Sitha Kalyani	
19.	Mr. K. T. C. Abrew	G/Deerananda M.V.
20.	Mrs. I. Wewalla	
21.	Mr. T. G. Sunil	G/Nabadawa Sri Sumangala M.V.
22.	Mr. P. G. Ajith Priyantha	G/Lankagama M.V.
23.	Mr. B. K. Rathnapriya	
24.	Mr. S. M. C. G. Bandara (Principal)	G/Kalehe Sri Sumangalodaya V.
25.	Mr. B. A. D. Nagahawaththa	
26.	Mrs. W. P. G. C. Jayawardena	
27.	Miss K. K. S. Sandya	
28.	Mr. A. J. L. Chandrasingha	G/Anthonies M.V.
29.	Mrs. S. M. Dahanayaka (Principal)	G/Sanghamitta Balika M.V.
30.	Mrs. S. N. Amarakoon	
31.	Mr. P. H. Sumanasiri (Principal)	G/Saralankara M.V.
32.	Mrs. L. I. D. Abeysekara	
33.	Mrs. Visaka Manawadu	
34.	Mrs. U. R. N. Waidyanatha	
35.	Mr. J. K. Rajapaksa	Division Director (Habaraduwa)
36.	Mr. K. D. M. Pathmalal	Division Director (Akmeemana)
37.	Mr. M. P. G. Indradasa	Division Director (Baddegama)
38.	Mr. Sumith Liyanage	Division Director (Ambalangoda)
39.	Mr. G. G. Somapala	Division Director (Hikkaduwa)
40.	Mr. W. Thabrue	Division Director (Balapitiya)
41.	Mr. D. W. Sunil De Silva	Division Director (Elpitiya)
42.	Mr. P. Senadeera	Division Director (Karadeniya)
43.	Mr. S. W. Umagiliyage	Division Director (Bentota)
44.	Mr. S. M. Gunaratne	Division Director (Walivitiya Divithura)
45.	Mrs. G. D. P. K. Nanayakkara	Division Director (Niyagama)
46.	Mr. K. G. Premadasa	Division Director (Mapalagama)
47.	Mr. P. Koswatta	Division Director (Tawalama)
48.	Mr. R. J. Bandula	Zonal Director (Walasmulla)
49.	Mr. D.V. Ariyasena	Zonal Director (Hambantota)
50.	Mr. M. G. Dayananda	Zonal Director (Elpitiya)
51.	Mr. M. W. Piyatissa	Deputy Secretary, Southern Provincial Ministry of Education
52.	Mrs. U. H. Chandanie	Deputy Director, Southern Provincial Department of Education
53.	Mr. W. D. D. Gunathilaka	Assistant Director, Southern Provincial Department of Education
54.	Mrs. H. T. L. Gunawardena	Southern Provincial Department of Education
55.	Mr. K. V. Wijesinghe	Assistant Director, Southern Provincial Department of Education
56.	Mr. R. S. Thudugalla	NDMC-Gampaha
57.	Ms. Kuki Hamada	Prarthana Child Club (NGO)
58.	Mr. Koji Kanda	Hyogo Prefectural Board of Education
59.	Mr. Makoto Ikeda	Researcher, ADRC
60.	Ms. Maki Yoshida	Researcher, ADRC
61.	Mr. P. M. Siriwardena	Coordinator, ADRC Galle Office
62.	Ms. Chathuri Panditharathana	Assistant, ADRC Galle Office
63.	Ms. K. P. Chandima	Assistant, ADRC Galle Office

**Participants List of the Second Consultative Meeting (27 March 2007)**

No.	Name	School/Organization
1.	Mrs. S. M. Dahanayaka (Principal)	G/Sanghamitta Balika M.V.
2.	Mrs. U. R. N. Waidyanatha	Divisional Director (Galle)
3.	Mr. J. K. Rajapaksa	Divisional Director (Habaraduwa)
4.	Mr. K. D. M. Pathmalal	Divisional Director (Akmeemana)
5.	Mr. M. P. G. Indradasa	Divisional Director (Baddegama)
6.	Mr. Sumith Liyanage	Divisional Director (Ambalangoda)
7.	Mr. G. G. Somapala	Divisional Director (Hikkaduwa)
8.	Mr. W. Thabrue	Divisional Director (Balapitiya)
9.	Mr. D. W. Sunil De Silva	Divisional Director (Elpitiya)
10.	Mr. P. Senadeera	Divisional Director (Karadeniya)
11.	Mr. S. W. Umagiliyage	Divisional Director (Bentota)
12.	Mr. S. M. Gunaratne	Divisional Director (Walivitiya Divithura)
13.	Mrs. G. D. P. K. Nanayakkara	Divisional Director (Niyagama)
14.	Mr. K. G. Premadasa	Divisional Director (Mapalagama)
15.	Mr. P. Koswatta	Divisional Director (Tawalama)
16.	Mr. R. J. Bandula	Zonal Director (Walasmulla)
17.	Mr. D.V. Ariyasena	Zonal Director (Hambantota)
18.	Mrs. U. H. Chandanie	Deputy Director, Southern Provincial Department of Education
19.	Mr. W. D. D. Gunathilaka	Assistant Director, Southern Provincial Department of Education
20.	Mrs. H. T. L. Gunawardena	Southern Provincial Department of Education
21.	Mr. K. V. Wijesinghe	Assistant Director, Southern Provincial Department of Education
22.	Prof. Kapila Dahanayake	Senior Professor of Geology, University of Peradeniya
23.	Mr. Koji Kanda	Hyogo Prefectural Board of Education
24.	Mr. Makoto Ikeda	Researcher, ADRC
25.	Ms. Maki Yoshida	Researcher, ADRC
26.	Mr. P. M. Siriwardena	Coordinator, ADRC Galle Office
27.	Ms. Chathuri Panditharathana	Assistant, ADRC Galle Office
28.	Ms. K. P. Chandima	Assistant, ADRC Galle Office

**Program**

**Day 1: 26 March 2007**

- 09:00-09:30 Registration
- 09:30-10:00 Opening ceremony  
 - Oil lamp ceremony  
 - Remarks by Mr. M. W. Piyatissa, Deputy Secretary, Southern Provincial Ministry of Education
- 10:00-10:10 Introduction to the meeting by Ms. Maki Yoshida, ADRC Researcher
- 10:10-11:00 Review of the Pilot Lessons by Mr. Koji Kanda, Hyogo Prefectural Board of Education (including a review of information on natural disasters, focusing on points that are being incorrectly taught by some teachers)

11:00-11:20	Tea break
11:20-12:30	Action Plans by 15 pilot schools and each Division/Zonal Director (1)
12:30-13:30	Lunch
13:30-15:00	Action Plans by 15 pilot schools and each Division/Zonal Director (2)
15:00-15:20	Tea break
15:20-16:00	Action Plans by 15 pilot schools and each Division/Zonal Director (3)
16:00-16:15	Comments from Mr. Kanda, Department of Education and ADRC
16:15-16:25	Explanation of educational materials
16:25-16:50	Closing remarks <ul style="list-style-type: none"> <li>- Message from Mr. Charles Aanenson, USAID</li> <li>- Mr. Makoto Ikeda, ADRC Researcher</li> <li>- Mr. M. W. Piyatissa, Deputy Director, Southern Provincial Ministry of Education</li> </ul>
16:50	Distribution of materials

### **Day 2: 27 March 2007**

09:00-10:00	Wrap-up of Day I
10:00-12:00	Action Plan by the Southern Provincial Department of Education & Wrap-up of the program
12:00-13:30	Lunch

### **Overview**

#### **Day 1**

The first day of the meeting started with the review of the pilot lessons conducted by the 15 pilot schools in February. Mr. Koji Kanda gave a presentation and provided feedback to school teachers focusing on the importance of interactive communication in disaster education. He emphasized that disaster education aims to impart not only knowledge about natural disasters, but also knowledge about people's lives, and that it is therefore important to think about linkages between people in the way lessons are taught. He also pointed out errors in some of the information provided by school teachers during the pilot lessons, and taught participants about "O, HA, SHI, MO" (the four rules of evacuation drills: "Don't push," "Don't run," "Don't talk," and "Don't go back") to help them conduct better evacuation drills.



After Mr. Kanda's presentation, each pilot school and division/zonal director developed action plans for their respective schools and divisions/zones. Each school presented concrete plans for promoting disaster education in 2007, including the following:

- Art/speech/essay competitions for disaster risk reduction
- Workshops for neighboring school teachers who did not participate in the pilot lessons conducted in February
- Inclusion of evacuation drills in the school program
- Workshops for students, their parents, and members of the community
- Annual field trips to the Information Center on Tsunami Disaster
- Monitoring of these activities by principals, and division and zonal directors



Some action plans developed by the pilot schools and division/zonal directors are shown in section VI.

One of the issues regarding the pilot lessons that were raised by many pilot school teachers was that the one-day workshops did not provide enough time to impart the knowledge they had gained at the training workshop (District Workshop) to teachers at neighboring schools. They feel that additional workshops need to be conducted so that they have enough time to teach the necessary lessons and so that those who did not attend last time have another opportunity to do so. Some schools intend to hold workshops for neighboring schools again some time in 2007. Some division/zonal directors pointed out that we should first work on raising the awareness of school principals, as they are in key leadership positions in terms of being able to promote disaster education at their schools.

At the end of Day 1, the ADRC asked the pilot schools to write short reports about the activities they will conduct after this program ends. This will allow the ADRC to monitor their activities beyond the end of this program and also to distribute information on the experiences in Sri Lanka to all the readers of the ADRC newsletter (a bi-weekly newsletter read by more than 2,800 readers around the world). It is easy to start a program, but harder to ensure that it will be continued by the next generation. The ADRC emphasized this point and encouraged participants to achieve sustainable disaster education.



## **Day 2**

With the participation of division/zonal directors and officers of the Southern Provincial Department of Education, the Department of Education described their action plan for Galle District, as well as other districts in Southern Province. Their action plan aims to support disaster education activities at the school, division, and zone levels in Galle District, to provide appropriate advice and instruction, as well as to allocate necessary resources to schools (see section VI).



In addition, some zones and divisions established Disaster Education Weeks on Day 1. To ensure coherency in Galle District, however, it was declared that the first week of June every year will be disaster risk reduction week in Galle District and this will apply to all the schools in the district. Each school will be required to use this week for raising disaster awareness among school children and their school community, and for teaching the importance of disaster preparedness and risk reduction. Each school is expected to conduct various kinds of disaster education programs on natural disasters and disaster risk reduction throughout the week, including such activities as talks during the morning assembly, special lessons on natural disasters, evacuation drills, and poster contests.



The Department of Education also invited three zonal directors from Hambantota District, another district in Southern Province, to this meeting. The directors learned about what has been achieved in Galle District, but this was not enough for them to promote disaster education in Hambantota. They felt that a similar process should be taken to promote disaster education in their own district, utilizing resources gained in Galle District over

the past year. The Department of Education, with technical support from the ADRC, will work on further promoting this program in other districts of Southern Province.

### Achievement & Outcomes



We were able to obtain concrete outcomes such as action plans for each pilot school, division, and zone, as well as for all of Galle District, and the establishment of a Disaster Education Week (first week of June every year) at schools in Galle. These results were achieved through a one-year program in Galle District, but the efforts will not end here. We will continue to further promote disaster education in Galle, as well as in other districts in Southern Province.



The ADRC, with the support of relevant officials such as disaster experts in Sri Lanka and Japan, developed supplementary materials to be used in disaster lessons in Galle and other districts in Southern Province (see section VIII). We printed 5,500 copies and distributed 100 to each of the 15 pilot schools and approximately 150 to relevant organizations. The pilot schools, as

leaders in their school divisions, are responsible for taking care of these materials and lending them out to other schools that want to use them for lessons. The ADRC kept about 110 copies. Two copies will be distributed to each of the other schools in Galle (about 420 schools). The rest of the materials are being stored by the Department of Education and will be used as needed at schools in other

districts of Southern Province.

We also distributed a teaching tool (OHP sheets) that was developed by Mr. Kanda and adapted for use in the Sri Lankan cultural context to the 15 pilot schools and 15 division offices. The ADRC provided electronic versions of the OHP sheets and other materials so that the Department of Education can print additional copies and continue to develop these materials in the future.

As part of the monitoring system of this program, the ADRC will receive reports from pilot schools on their activities and also will keep in contact with the Department of Education regarding its future activities.

### **Conclusion**

The ADRC would like to thank the officers of the Department of Education as well as the teachers and principals of Galle District for their dedication and eagerness in promoting this program over the past year. This program could never have been so successfully implemented without their support. The ADRC is excited to monitor and follow up on their future activities.

Finally, we would like to express our gratitude for the flexible assistance provided to us by USAID for the implementation of this program.

## **VI. Action Plans**

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## 1. Pilot Schools

### (1) Madakumbura M. V. (Karandeniya, Elpitiya)

#### Proposal for Natural Disaster Reduction 2007

##### Problems

1. Lack of knowledge in the community about natural disasters.
2. Lack of natural disaster awareness among students.
3. To teach students about natural disasters without considering the time, place and the status.
4. Ensuring that future generations are well informed.
5. Students should be taught the knowledge, attitudes and skills they need to protect themselves as well as property according to each disaster situation.
6. Natural disasters can be caused by human activities.
7. Teachers lack sufficient knowledge to improve their students' awareness.

##### Aims

1. Teachers should be well aware of how to minimize natural disasters.
2. Students should be taught about natural disasters in the classroom.
3. Assistance should be given to the teachers of neighboring schools when needed.
4. The community can be made aware of natural disasters through its students.
5. Minimize damage caused by natural disasters.
6. Ensure that students understand that human activities cause natural disasters.
7. Give them the strength they need to face the challenges posed by natural disasters.
8. Minimize damage to the environment through the school community.
9. Encourage their creativity by having them write short stories on the theme of natural disasters.



8. Minimize damage to the environment through students	Develop plans to minimize the damage caused by natural disasters	<ol style="list-style-type: none"> <li>1. List the types of damage caused by N.D.</li> <li>2. Create plans to minimize damage according to the list.</li> <li>3. Implement the plans.</li> </ol>	Students Teachers  Principal Teachers R. persons			-	-					
9.0. Encourage creativity by having them write stories	9.1. Have students write short stories according to specific criteria	<ol style="list-style-type: none"> <li>9.1. Decide the criteria.</li> <li>9.2. Establish the time limit and present the criteria.</li> <li>9.3. Collect the short stories and select the best ones.</li> <li>9.4. Take steps to print the best stories.</li> </ol>	R. persons Teachers  Teachers  Principal Teachers	November " " December								

**(2) Ganegoda K. V. (Elpitiya, Elpitiya)**

**Action Plan**

1. Get teachers to talk about these topics even as they teach other lessons.
2. Create opportunities for children to use their creative talents in school concerts.
3. Award gifts & certificates to winners.

\* This action plan is based on a note taken by the ADRC.

**(3) Elakaka M. V. (Benthota, Elpitiya)**

**Action Plan**

1. Program by school media society
2. Art exhibition in school
3. Sharing knowledge with teachers at neighboring schools
4. Art exhibition on plate movement
5. Street drama
6. Magazines

\* This action plan is based on a note taken by the ADRC.

(4) G/Gurusinghagode K. V. (Welivitiya-divitura, Elpitiya)

Student Awareness Program

Grade	Term	Subject	Unit	Lesson	Subject matter	Tentative date
6	I	Geography	Weather	Floods	<ul style="list-style-type: none"> <li>▪ Causes of floods</li> <li>▪ Flood indicators</li> <li>▪ Disasters</li> </ul>	20.03.2007 25.03.2007
			Weather	Landslides	<ul style="list-style-type: none"> <li>▪ Causes of landslides</li> <li>▪ Landslide indicators and related hazards</li> <li>▪ Explain various climate conditions</li> </ul>	03.04.2007 05.04.2007
7	II	Geography	Weather	Weather environment around school	<ul style="list-style-type: none"> <li>▪ Indicate rain specially</li> <li>▪ Damage caused by rainy conditions</li> <li>▪ Discuss ways to avoid damage</li> </ul>	21.05.2007 23.05.2007
8 8	I II	Geography	Physical features	Continents at the formation changes in physical features	<ul style="list-style-type: none"> <li>▪ Continents were connected</li> <li>▪ Later continents drifted apart</li> <li>▪ Explain that the continents are now separated</li> <li>▪ Introduce Pangia as an example and discuss</li> </ul>	13.03.2007 21.03.2007
		Geography	Influence of physical reactions on and around Indian Ocean		<ul style="list-style-type: none"> <li>▪ Earthquakes</li> <li>▪ Ocean currents</li> <li>▪ Tsunami waves</li> <li>▪ Storms</li> <li>▪ Landslides</li> <li>▪ Effects of earthquakes</li> <li>▪ Steps taken to reduce damage</li> </ul>	14.05.2007 18.05.2007
9	I	Geography	Physical reaction on earth	Main components of the earth	<ul style="list-style-type: none"> <li>▪ Components of the earth</li> <li>▪ Geo plates</li> </ul>	05.03.2007 07.03.2007
9	III	Geography	Natural Disasters	Natural Disasters	<ul style="list-style-type: none"> <li>▪ Floods</li> <li>▪ Tsunamis</li> <li>▪ Landslides</li> <li>▪ Earthquakes</li> <li>▪ Stages of disaster management</li> </ul>	08.10.2007 18.10.2007
10	I	Geography	Formation of the earth	Physical features of the earth	<ul style="list-style-type: none"> <li>▪ Layer</li> <li>▪ Cover</li> <li>▪ Main plates</li> <li>▪ Geo-physical action</li> <li>▪ Earthquakes</li> </ul>	12.03.2007 21.03.2007

Grade	Term	Subject	Unit	Lesson	Subject matter	Tentative date
10	II	Geography	Physical features of earth	Climate	<ul style="list-style-type: none"> <li>▪ Rain system</li> <li>▪ Floods</li> <li>▪ Landslides</li> <li>▪ Landslide hazards</li> </ul>	09.07.2007 13.07.2007
11	I	Management of all natural disasters	Natural disasters	Floods	<ul style="list-style-type: none"> <li>▪ Causes of floods</li> <li>▪ Damage caused by floods</li> <li>▪ Flood hazards and hazard reduction</li> </ul>	19.03.2007 21.03.2007
				Landslides	<ul style="list-style-type: none"> <li>▪ Stages of a landslide</li> <li>▪ Identify landslide indicators</li> <li>▪ Hazard reduction</li> </ul>	28.03.2007 30.03.2007
				Earthquakes	<ul style="list-style-type: none"> <li>▪ Formation of the earth</li> <li>▪ Geo-physical effects</li> <li>▪ Methods of reducing the impact of earthquakes</li> </ul>	11.06.2007 29.06.2007
11	I			Tsunami	<ul style="list-style-type: none"> <li>▪ Reasons for tsunamis</li> <li>▪ Tsunami indicators</li> <li>▪ Tsunami hazards</li> <li>▪ Protection against tsunamis</li> <li>▪ Steps to reduce damage caused by tsunamis</li> </ul>	10.09.2007 22.09.2007
				Lightening & storms	<ul style="list-style-type: none"> <li>▪ What are storms and lightning?</li> <li>▪ How are they created?</li> <li>▪ Periods of lightning and storms</li> <li>▪ Safety measures</li> </ul>	05.11.2007 23.11.2007

**Teachers at G/Gurusinghagoda College who participated in the Natural Disaster Reduction workshop on 26.03.2007 and 27.03.2007**

- |                                     |   |                   |
|-------------------------------------|---|-------------------|
| 1. Mr. Jayantha De Alwis Jayasekara | - | Principal         |
| 2. Mrs. D.T.G. Senevirathna         | - | Assistant Teacher |
| 3. Mrs. K.G. Disna Priyanjane       | - | Assistant Teacher |



(6) G/Saralankara M. V. (Ambalangoda, Ambalangoda)

**Programs carried out during the First Term 2007**

- Increase children's awareness at Wednesday meetings.
- Increase children's awareness during recess periods
- Make preparation of the children when the teachers are absent
- Daily exhibitions of articles, newspapers, and posters depicting natural disasters

**Tentative Program**

- March 30 - Program to raise teacher awareness
- April 01 - Program to raise parent awareness – School Development Society
- June 05 - Practical training on what to do in an emergency
- June 9, 10, 11 - Competition at class level
- Minimizing Natural Disaster Hazards
  - Stop Natural Disaster Damage
  - Preparation for Disaster Hazards
- July 17, 18 - Field trip to sites where natural disasters occurred  
(Emergency signals, train damaged by a tsunami, Hikkaduwa Paraliya)
- September 30 - Have poems, essays, and art selected from the competition printed in a magazine  
Editing a wall newspaper
- October 12 - "Do you know?" contest- School level
- October 30 - "Do you know?" contest- Inter-scholastic
- November 15 - Presentation of certificates

**Programs completed during the first term**

- Increase children's awareness at Wednesday morning class meetings
- Increase children's awareness during recess periods
- Preparation of the children when the teachers are absent
- Exhibition of articles, newspapers, posters on ways to minimize natural disaster hazards

- March 30 - Program for teacher awareness
- April 01 - Program for parent awareness through School Development Society

**Tentative Program for Second Term 2007**

<b>Date</b>	<b>Time</b>	<b>Topic</b>	<b>For whom</b>
05.06.07	12.30 p.m. 2.30 p.m.	Identify natural disasters Minimize their impact	Staff
09.06.07	08.30 a.m. 10.30 a.m.	Management of natural disasters Essay competition	Parallel classes
10.06.07	11.00 a.m. 12.00 p.m.	Management of natural disasters Poetry competition	Parallel classes
11.06.07	10.30 a.m. 1.30 p.m.	Art competition	Parallel classes
17.07.07	7.45 a.m. 1.30 p.m.	Organize the natural disaster hazard observation tour	Grades 6-13
30.09.07		Edit magazine, Edit wall newspaper	Grades 6-13 Grades 6-13
12.10.07	12.00 p.m. 1.30 p.m.	"Do you know?" contest	Grades 6-13
30.10.07	12.00 p.m. 1.30 p.m.	Interscholastic "Do you know?" contest	Grades 6-13
15.11.07 12.07	1.15 p.m.	Presentation of certificates Year-end drama	Grades 6-13

**(7) G/Kandegoda M. V. (Balapitiya, Ambalangoda)**

**Objective: Raise disaster management awareness among children and parents**

**Participating Teachers**

1. Mrs. K. M. Gretika
2. Mrs. D. M. Ranasinghe

**Action Plan**

- Raise awareness of school teachers
- Raise awareness of parents
- Raise awareness of student at each grade level
- Raise awareness of students

**Time allocated**

Two periods per week

**Includes**

- Identifying types of disasters
- Introducing precautions
- Reviewing past situations
- Help with rehabilitation
- Re-enactment of a pre-disaster situation.
- Drawing pictures to express feelings

Activity	Responsibility	M	J	J	A	S	O	N	Action Index
1. Raise awareness of teachers	Subject teachers								Action papers    Use the equipment that would be needed in a disaster in demonstrations  White paper, pastel
2. Raise awareness of parents	School teachers								
	Teachers								
3. Raise awareness of students	Subject teachers								
4. Re-enact pre-disaster situation									
5. Art competition									

(8) G/Sri Deerananda M.V (Hikkaduwa, Ambalangoda)

Disaster Management Program

Activity	Time Frame												Cost
	J	F	M	A	M	J	J	A	S	O	N	D	
1.Raise awareness of teachers in the division		==											5000.00
2. Raise awareness of children					==								3000.00
3. Raise awareness of teachers					==								2000.00
4. Activities related to disaster management								==					3000.00
5. Raise awareness of parents			==		==	==	==		==	==	==	==	1000.00
6. Conduct art competition related to disaster management						==	==						2000.00
7. Organize speeches related to disaster management									==				1000.00

Prepared by

Mr. S. I. Wewalwela  
Mr. K. T. C. Abrew  
Mr. D. A. N. Dilrukshi

## (9) Martin Wickramasinghe Vidyalaya (Habaraduwa, Galle)

### Natural Disaster Management Program

#### Introduction

The topic of disaster management was widely discussed after the 26.12.2004 tsunami disaster. We discussed ways to protect people from natural and human-made disasters. Martin Wickramasinghe school was selected to represent the Habaraduwa Division at the workshop conducted by the ADRC at the Wakwella Management Training Centre conducted on 6-8 December 2006. The teachers who were trained there were to train the teachers at the school and the teachers and students who participated in the discussion.

#### Objectives

1. Identify disasters and how they are created
2. Find ways to reduce hazards and protect people
3. Raise awareness of the objectives among the teachers and students
4. Ensure that knowledge is passed down to future generations and disseminated to the broader society by students

#### Project Supervision

1. Mrs. U. H. Chandani, Southern Provincial Department of Education
2. Mrs. Saraswathi Dahanayake, Principal, Sanghamitta Girls School, Galle
3. Mrs. H. T. L. Gunawardena, Southern Province Department of Education
4. Mr. J. K. Rajapaksha, Divisional Director of Education, Habaraduwa

#### Organisation and implementation

1. Mr. K. H. Dinesh Kumara
2. Mr. L. U. S. Ariyasiri
3. Mrs. S. R. Vidanage
4. Mrs. Devika Dias

#### Action Plan

	Activity	Period	Responsibility	Supervision	Progress
1	Raise awareness of school children	3 months 02.Jan.'07 to 31.Mar.'07	Committee members	Principal	Already finished
2	Raise awareness of teachers	3 months 02.Jan.'07 to 31.Mar.'07	Committee members	Principal	In progress
3	Raise awareness of teachers in the division	2 months 02.Jan.'07 to 28.Feb.'07	Committee members	Provincial Education Department	Finished
4	Raise awareness of parents	3 months 31.Mar.'07 to 30.Jun.2007	Committee members	Principal	
5	Check the damaged areas of the school and marking evacuation routes	6 months 02.Jan.'07 to 30.Jun.'07	Committee members	Principal	

(10) G/Kalehe Sri Sumangalodaya M. V. (Akmeemana, Galle)

Natural Disaster Reduction Awareness Workshop

**Good indications when teaching lessons**

1. Select a good, clean environment
2. Class environment that teacher's voice reaches every student
3. Use audio/visual equipment and graphs
4. Group teaching
5. Have principal participate as supervisor
6. New methodology and management in teaching
7. Children remain attentive throughout the lesson
8. Distribution of diagram and pamphlets
9. Scheme for evaluation and feedback
10. Group activities

**Following shortcomings should be avoided**

1. Failure to select a clean room
2. Using a TV screen that is too small
3. Lack of adequate supplies (every child should have a workbook and instruments)
4. Using text that is too small in the diagrams
5. Not using the discussion method
6. Teachers speak in a low voice
7. Song is not taped – "Muhuda hri lokui"
8. Not motivate children equally
9. Not use the audio/visual media
10. Printed materials are not used in evaluation and feedback

**Action Plan for 2007**

Date	Name of school	Activity
04 Apr. 2007	G/Kalehe Sri Sumangalodaya M. V.	Workshop for teachers
02 May 2007	G/Kalehe Sri Sumangalodaya M. V.	Workshop for students of grades 6 & 7
12 May 2007	School nominated by Division	Workshop for students and teachers
17 May 2007	G/Kalehe Sri Sumangalodaya M. V.	Workshop for students of grades 8 & 9
25 May 2007	G/Kalehe Sri Sumangalodaya M. V.	Workshop for students of grades 10 & 11
30 May 2007	School nominated by Division	Workshop for students & teachers
01 Jun. 2007	Workshop for students of Grade 10 & 11	Workshop for students and teachers
14 Jun. 2007	G/Kalehe Sri Sumangalodaya M. V.	Workshop for students of grades 12 & 13
29 Jun. 2007	School nominated by Division	Workshop for students & teachers
06 Jul. 2007	School nominated by Division	Workshop for students & teachers
20 Jul. 2007	School nominated by Division	Workshop for students & teachers
01 Aug. 2007	G/Kalehe Sri Sumangalodaya M. V.	Evacuation drill (grades 6,7,10,11)
12 Sep. 2007	G/Kalehe Sri Sumangalodaya M. V.	Evacuation drill (grades 8,9,12,13)
22 Sep. 2007	School nominated by Division	Workshop for students & teachers
05 Oct. 2007	School nominated by Division	Workshop for students & teachers

12 Oct. 2007	School nominated by Division	Workshop for students & teachers
02 Nov. 2007	School nominated by Division	Workshop for students & teachers

### **Workshop on Natural Disaster Reduction**

These are the remarks from the workshop on natural disaster reduction held at G/Kalahe Sri Sumangalodaya M. V. on 13 Feb. 2007 for the teachers of Akmeemana Division, with the help of the divisional director & school principal, organized by the ADRC.

### **Strengths of the Pilot Lesson**

- Relevant visual aids were used.
- Students were selected for group activities randomly.
- The presentation was given by the principal and the teachers as a group.
- The scene of the lesson was set well and all the material was able to be covered during the given timeframe.
- Students remained attentive during the whole lesson.

### **Weaknesses of the Pilot Lesson**

- There were not enough activities for students.
- Multimedia projectors, OHP and computers were not used.
- Lesson was somewhat monotonous.
- Flow charts were not very clear.
- Lesson did not incorporate the active participation of the students.

### **Program**

01. Mechanisms of earthquakes & tsunamis
02. Characteristics of tsunamis & evacuation methods
03. Disasters caused by heavy rain
04. How to protect oneself from floods & sediment disasters

### **Visual Aids**

- World globe
- Structure of buildings
- Flowcharts
- Handouts for activities
- VCD player, OHP

### **What we need from outside**

- Multimedia projector

### **Special Support**

- Principal of the school (Mr. Chandana Gunarathna Bandara)
- Resource persons
- Director of Akmeemana Division
- Director of Galle District

**(11) G/St. Anthonies College (Baddegama, Galle)**

**Workshop on Natural Disaster Reduction Awareness for Teachers**

**Action Plan**

1. Separate schools into five groups
2. Conduct workshop again at lead school of each group
3. Members of the school prepare the program
4. Members conduct awareness program at school level
5. Program supervision system organized by five lead schools
6. Divisional progress monitoring programs prepared by five lead schools

**(12) Sangamitta Balika M. V. (Galle, Galle)**

**Action Plan**

**Project Title:** Program to Raise Awareness of Natural Disaster Management

**Teachers' Responsible:** M .S. F. Hasana, Nilmini Amarakoon, Dilahan

**Participants:** Students of Sanghamitta College, Galle from grades 5 to 12

**Method of Implementation:**

<b>Plan</b>	<b>Expected Date of Implementation</b>
Conduct a descriptive lecture for grade 12 students and select 50 volunteers to continue the program for the other the grades	4 May, 2007
Hold a workshop for the selected students	25 May 2007
The selected students implement the program for the other grades according to the following schedule	
Grade 08	05 July 2007
Grade 10	02 August 2007
Grade 11	11 September 2007
Grade 09	12 September 2007
Grade 07	13 September 2007
Grade 06	18 September 2007
Grade 05	19 September 2007
Present certificates to student volunteers.	24 September 2007
Hold a school-wide art competition on natural disasters and evacuation	In the month of November 2007

**Outcome:** Students throughout the school will be aware of natural disasters and will be equipped to take prompt action in case of an emergency.

**Evaluation Criteria:** Art competition, Students' view, Photos

**(13) G/Mapalagama Central College  
Natural Disaster Management Program  
2007 Annual Plan**

No	Objective	Activity	J	F	M	A	M	J	J	A	S	O	N	D	Cost	Responsibility
1.	Raise natural disaster awareness among children	Workshop for raising awareness of natural disasters	X													Principal 3 trained teacher
2.	Raise natural disaster awareness at the zonal level	Raise awareness of two teachers from each school in the zone and produce a model lesson		X											2000	Principal 3 trained teacher
3.	Define natural disasters	School Development Society holds "Do you know?" contest			X											Principal 3 trained teacher
4.	Protecting yourself from disasters and minimizing damage	Drama by students				X									1000	Principal 3 trained teacher
5.	Raise awareness of the damage that can be caused by tsunamis	An exhibition of pictures and posters at the primary level					X								2000	Principal 3 trained teacher
6.	Raise awareness of floods and landslides	An exhibition of posters at the senior level						X							3000	Principal 3 trained teacher
7.	Raise tsunami awareness	Video presentation							X						500	Principal 3 trained teacher
8.	Raise awareness of floods in other countries	Video presentation								X					500	Principal 3 trained teacher

9.	What to do in an earthquake	Earthquake evacuation drill								X						Principal 3 trained teacher
10.	Raise awareness of natural disasters	Lecture by ADRC official									X			1000		Principal 3 trained teacher
11.	Raise awareness of natural disasters	Class level wall newspapers – Grades 6-10										X		2000		Principal 3 trained teacher
12.	Actions taken to minimize natural disasters and related damage	School magazine including student submissions											X	2000		Principal 3 trained teacher

**(14) G/ Sri Sumangala M. V. (Yakkalamulla, Udugama)**

**Workshop for the Reduction of Natural Disaster Hazards  
Action Plan**

Terms	Date	Description	Participation
I	08.02.2007 09.02.2007 12.02.2007 13.02.2007	Raise awareness of students Earthquakes, tsunamis, floods, landslides, lightning Lightening Conduct two drills to show students what to do in an emergency	6-13 grade students
II	23.05.2007 01.06.2007	Raise awareness of floods and lightning	8-13 grade students
II	06.2007	Program to raise parent awareness implemented by School Development Society	Parents
II	24.04.2007	Conduct workshops for selected schools 1. Magedara M.V - Magedara 2. Polpagoda M.V - Yakkalamulla 3. Dutugamunu M.V.- Tellambura 4. Kottawa K.V - Kottawa	Students in the above school

**Teacher Participating Instructions Workshop for the Reduction of Natural Disaster Hazards**

1. Mr. T. G. Sunil
2. Mr. P. G. Ajith
3. Mr. G. G. S. Renuka
4. Miss A. G. D. Priyadarshani

**(15) G/Lankagama K. V. (Tawalama, Udugama)**

**Program for Natural Disaster Management Action Plan for 2007**

Period	Program
First Term 2007	Raise awareness of teachers and students about natural disasters in this area
Second Term 2007	Conduct one-day program at school on what to do in the event of a disaster
Third Term 2007	Organize workshop to train school children in first aid
Last Term 2007	Encourage children to gather information and prepare reports on natural disasters in the area
Last Term 2007	Raise community awareness of disaster through school children
Second Term 2007	Visit several schools and observe their programs
Second Term 2007	Have students create posters and display them
Last Term 2007	Produce a street drama to raise awareness among villagers and children of the importance of minimizing natural disaster hazards

## 2. Division Level

### (1) Karandeniya Division (Elpitiya Zone)

**Aims**

1. Raise awareness of all natural disasters
2. Implement school program to minimize natural disaster damage
3. Develop students' ability to face unexpected circumstances

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame												
					J	F	M	A	M	J	J	A	S	O	N	D	
1. Raise awareness of natural disaster damage	<b>1.1</b> Raise awareness of the teachers who did not participate in the first program	Resource persons	Divisional Director of Education														
	<b>1.2</b> Two teachers who participated the workshop conduct activities to raise awareness	Principal	Same as above														
	<b>1.3</b> Raise awareness of students in the morning assembly	Principal	Same as above														
	<b>1.4</b> Raise parents' awareness through activities conducted by the School Development Society	Principal	Same as above														
2. Implement school-based program	<b>2.1</b> Present dramas about natural disasters at student meetings	Principal	Same as above														
	<b>2.2</b> Entertainment programs at school level from selected dramas	Principal	Same as above														
	<b>2.3</b> Hold camps on minimizing natural disaster damage	Principal	Same as above														

**(2) Elpitiya Division (Elpitiya Zone)**

**Objectives**

1. Increase knowledge of natural disasters
2. Raise awareness of ways to minimize damage caused by natural disasters
3. Raise awareness of the need to save important documents
4. Enlist the principal to serve as a resource person
5. Conduct rehabilitation work
6. Protect school premises and equipment, and use them to hold a welfare camp

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame											
					J	F	M	A	M	J	J	A	S	O	N	D
1. Advance preparation	1. Accommodation	Divisional Director of Education Clerk	Zonal Director of Education	Letters												
	2. Prepare documents	Divisional Director of Education		Do												
2. Identify resource persons and places	3. Inform resource persons	Divisional Director of Education		Do												
3. Organize workshop	4. Obtain resources	Divisional Director of Education Clerk		Do												
4. Conduct workshop	5. Inform principals	Resource Persons Divisional Director of Education	Divisional Director of Education Zonal Director of Education	Do												
	6. Conduct workshop	Divisional Director of Education		Do												
5. Get ready for school program	7. Supervise school programs			Do												
6. Assign dates for the school program	8. File reports on the school programs	Clerk		File												

### (3) Benthota Division (Elpitiya Zone)

- Objectives**
1. Impart knowledge of all types of natural disasters.
  2. Implement programs to minimize disaster damage at the school level under leadership of the principal & teachers.
  3. Implement programs to teach students how to handle disasters and emergencies.

### (4) Walivitiya-divitura (Elpitiya Zone)

- Aims**
1. Raise disaster awareness of all the schools and communities in the division.
  2. Identify the various types of natural disasters.
  3. Raise awareness of the actions that should be taken when a natural disaster strikes.
  4. Alert on natural disasters for locals and foreigners. Train students and the community.

**Target Groups:** Principals, teachers, students and the communities in the Walivitiya Divithura Division

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame												Cost	
					J	F	M	A	M	J	J	A	S	O	N	D		
1. Raise awareness	1. Of those who were absent from prior workshop			File of reports records														Present attendance certificates, catering expenses
	I. Principal	D.D.E	D.D.E															
	II. Teachers	D.D.E	D.D.E															
	III. Students	Principal	Principal															
2. Implement school-level programs effectively	Principal, teachers conduct competition, train street drama, Days saying	D.D.E Principal Teachers	D.D.E															
3. Tsunami memorial day	Morning assembly	Principal Teachers	Do															
4. Street drama	Teachers, councilors, students	Do	Do														Transport & catering	

(5) Niyagama Division (Elpitiya Zone)

**Programs**

1. Hold sessions to train all the teachers
2. Conduct programs at the school level to raise student awareness – assemblies, meetings
3. Conduct programs to raise community awareness – Exhibitions, dramatic performances
4. Conduct competitions at the divisional level – Distribute prizes and certificates

**Conduct Sessions**

<u>Date</u>	<u>Venue</u>	
14.05.2007	G/Niyagama Vijith M.M.V	Teacher awareness
12.06.2007	G/Hattaka M.V	Do
09.08.2007	G/Wayihena Sri Gunarathana M.V	Do
10.09.2007	G.Poddiwela M.V	Community awareness
11.09.2007	G.Vidyadarsha K.V	Do
02.11.2007	Conduct Competition	
30.11.2007	Distribution of presents and certificates	

(6) Ambalangoda Division

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame													
					J	F	M	A	M	J	J	A	S	O	N	D		
1. Raise awareness of natural disaster damage among teachers	Principals who are trained at the divisional level will raise awareness of all school teachers.	Divisional Director of Education	Zonal Director of Education	940														
		Class teachers	Principal Do	11536														
		Geography teachers Art teachers	Principal															
2. Raise awareness of natural disaster damage among students in grades 6-13 in the division	1. Teachers raise awareness of students. 2. Raise student awareness through art competitions 3. Raise student awareness through "Do you know?" contests conducted at the interscholastic level	Social studies teacher	Principal															
		Subject teacher	Principal															
		Subject teacher	Principal															
3. Raise awareness of natural disaster damage among the community	1. Children help raise parent awareness. 2. Community awareness is raised through parades by students carrying posters and banners. 3. Community awareness is raised through street drama performances.	Subject teacher	Principal															
		Subject teacher	Principal															
		Subject teacher	Principal															

**(7) Balapitiya Division (Ambalangoda Zone)**

Plan to minimize the damage caused by natural disasters at the divisional level: Balapitiya Education Division

Objectives: To raise the disaster awareness of students, teachers and parents

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame																	
					J	F	M	A	M	J	J	A	S	O	N	D						
1. Raise awareness of natural disasters among teachers	Teachers trained at the school level should train all the teachers in the schools.	Principal	Divisional Director of Education	475 teachers																		
2. Raise awareness of natural disasters among children in the division in grades 6-11	<ol style="list-style-type: none"> <li>Class teachers raise awareness of students at the class level</li> <li>Students speak at the morning assembly about natural disasters</li> <li>Raise awareness using posters and pictures</li> </ol>	Class teachers	Principal	6-11 4871 Students																		
3. Raise awareness of natural disasters among parents	<ol style="list-style-type: none"> <li>Students help raise awareness of parents</li> <li>Evaluation</li> </ol>	Class teachers	Principal, Divisional Director of Education																			

**(8) Hikkaduwa Division (Ambalangoda Zone)**

Awareness of natural disaster damage minimization by students, teachers, parents  
Tsunami, floods, lightning, tornadoes, etc.

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame												
					J	F	M	A	M	J	J	A	S	O	N	D	
1. Raise awareness of natural disasters among teachers	Teachers trained under this program should train all the other teachers in the schools	Principal	Divisional Director of Education	890 Teachers													
2. All students in grades 6-11 in the division should be aware of natural disasters	Class teachers should raise awareness of students regarding natural disasters and related damage. 1. Morning assembly 2. Posters and pictures 3. School level competitions: essays, posters, art 4. Student camp 5. Drama	Principal, Teachers, Divisional Director	Principal, Divisional Director of Education	6-11 9650 students													
3. Raise awareness of natural disasters and related damage among parents	1. Children help raise awareness of their parents 2. Evaluation	Class teachers	Principal, Divisional Director of Education	All parents													

## (9) Habaraduwa Division (Galle Zone)

### Proposals for Year 2007

#### 1. Objectives

To raise the awareness of natural disasters among all the students/ teachers in this educational division.

To minimize disaster damage and devastation by promoting awareness and preparedness.

#### 2. Target Group

Teachers and students in 35 type-one and type-two schools in Habaraduwa Division.

#### 3. Duration

January 2007 to December 2007

#### 4. Measurable goals

To train 640 teachers in the division and educate 4,000 students.

#### 5. Activities

Date	Place	No of participants	Resource persons	Monitoring
May 2007	Batemulla M.V Imaduwa	80	ADRC-trained R, P and school level R, P	D. Director Zonal Director
Jun 2007	Dikkumbura M.V. Angulugaha	-do-	-do-	-do-
Jul 2007	Rohana M.V. Ahangama	-do-	-do-	-do-
Aug 2007	Shariputra M.V. Ahangama	-do-	-do-	-do-
Sep 2007	Martin Wick M.V Habaraduwa	-do-	-do-	-do-
Oct 2007	Dombagoda M.V. Ahangama	-do-	-do-	-do-
Nov 2007	Unawatuna M.V Unawatuna	-do-	-do-	-do-
Dec 2007	Dorape M.V. Angulugaha	-do-	-do-	-do-

Declare December 1 to 7 to be Disaster Education Week in the division. During this week:

- Students will give speeches in the morning assembly on natural disasters and disaster management
- Students will speak about disasters in the literary society, science society, etc.
- A school level art competition will be organized to allow students to express their feelings on paper.
- A school-wide speech competition will be organized.
- At the end of the year, the best productions will be exhibited and certificates will be presented to the selected artists to encourage them.

#### 6. Monitoring and Budgeting

Activity	Monitoring	Expenses will be born
Divisional level activity	Div. Director, Zonal Director	
School level activity	Principals and ADRC-trained key teachers	School funds

**(10) Akmeemana Division (Galle Zone)**

- Objectives**
1. Raise awareness of natural disasters among the school community at all schools in the division
  2. Raise awareness of the various types of natural disasters
  3. Raise awareness of the actions to be taken when a natural disaster strikes
  4. Encourage students to gather information about natural disasters in Sri Lanka and abroad
  5. Remind students to be on the alert for natural disasters

**Target Group:** Principals, teachers, students and communities in the Akmeemana Education Division

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame											
					J	F	M	A	M	J	J	A	S	O	N	D
1. Raise awareness of the:	1. Principals	Divisional Director of Education	Zonal Director of Education	38												
	2. Schools that did not attend the workshops	Divisional Director of Education Resource persons	Divisional Director of Education	06												
	3. Teachers	Principals, Teachers	Divisional Director of Education													
	4. Students	Principals	Divisional Director of Education	19558												
2. Establish disaster management circles	1. Create circles at schools	Principals	Divisional Director of Education													
	2. Gather data	Teachers	Principal	38												
	3. Students awareness of information	Leaders	Principal													
3. Organize exhibitions on natural disasters	1. the school level	Management Circles	Principal													
	2. the divisional level	Divisional Director of Education	Zonal Director of Education													
	3. evaluation	Divisional Director of Education	Zonal Director of Education													

**(11) Baddegama Division (Galle Zone)**

**Activity** - Implement program to minimize damage caused by natural disasters

**Objectives** -  
- Raise awareness of natural disasters among all students  
- Raise awareness of natural disasters among all teachers  
- Involve the school community in efforts to protect the environment

**Sub activity** -  
- Collect data and information  
- Establish "Natural Disaster Reduction" Day  
- Organize poster and essay competitions  
- Allocate display room for annual exhibitions  
- Visit places that have faced natural disasters  
- Organize "Do you know?" contests

Participating schools - 29  
Teachers - 889  
Students - 15000

**Time frame** - Natural Disaster Reduction Day in March

Essay and poster competition - Two terms  
"Do you know?" contest - For one term

**Responsibility** -  
- School  
- Divisional Director of Education  
- Zonal Director of Education

**Supervision** - Divisional Director of Education

**Cost** - Zonal Director of Education

**Evaluation** - Zonal Director of Education / Divisional Director of Education

**(12) Galle Division (Galle Zone)**

**Objectives** Minimize the damage caused by natural disasters by raising the awareness of teachers, students, parents and school communities; develop local knowledge of natural disasters; and transmit that knowledge to future generations.

**Target Group** All teachers, students, parents and school communities of the 30 schools in the division

**Expected period** May 2007 to December 2007

**Activities**

1. Train resource persons: two teachers from each school
2. Trained resource persons conduct activities to raise awareness of the community, parents, students, schools
3. Establish Disaster Management Circles at every school and make the students explore and study new topics.
4. Conduct speech and art contests at the interscholastic level and present certificates to the winners.

No	Activity	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	Teacher training sessions	04	04	04	04	04			
2	Disaster management circles								
3	Presentation of certificates							X	

**Supervision:** School-level contests to be supervised by trained principals and teachers.  
Divisional-level contests to be supervised by the Divisional Director.

**Evaluation:** ADRC – Zonal Director of Education Southern Province planning Director.

**(13) Mapalagama Division (Udugama Zone)**

Implementation Plan - Disaster Management 2007-

**Objective:** Develop the skills, knowledge & attitudes of students, teachers and the community regarding disaster management

Activity	Time frame												Responsibility	Cost	
	J	F	M	A	M	J	J	A	S	O	N	D			
1. Train teachers in 20 schools (two teachers from each school)														Zonal Director of Education	15000.00
2. Teach students the skills they need														Principal	1000.00
3. Raise community awareness														Principal	
4. Co-curricular activities														Principal	
1. Drama															10000.00
2. Poster competition															5000.00
3. Drawing competition															5000.00
4. "Do you know?" contests															5000.00
5. Magazines															8000.00

**(14) Yakkalamulla Division (Udugama Zone)**

*\*Absent*

**(15) Thawalama Division (Udugama Zone)**

**Disaster Management Implementation Plan**

**Objectives**

1. Identify natural disasters
2. Minimize natural disaster damage
3. Emphasize priority on saving lives during natural disasters
4. Facilitate rehabilitation work after disasters

**Activities**

1. Raise awareness of principals
2. Train two teachers from each school
3. Supervise school activities

**Sub activities**

Implement special activities in the schools  
Program on lightning – May, June  
Program on floods, landslides – May, June  
Program on tornadoes – October, November  
Program on tsunamis – December



### 3. Zone Level

#### (1) Elpitiya Zone

**Theme:** Program for minimizing the impact of natural disasters

**Aims**

1. Raise awareness of all natural disasters
2. Implement school programs to minimize the damage caused by natural disasters
3. Develop students' ability to face unexpected circumstances.

Activity	Sub Activities	Responsibility	Supervision	Activity Index	Time frame											
					J	F	M	A	M	J	J	A	S	O	N	D
1. Raise awareness of natural disasters	1.1 Raise awareness of teachers and councilors	Development Director	Zonal Director of Education													
	1.2 Raise awareness of principals	Divisional Director of Education	Zonal Director of Education													
2. Implement school programs	2.1 Conduct art competition	Divisional Director of Education	Zonal Director of Education													
	2.2 Conduct essay competition	Divisional Director of Education	Zonal Director of Education													
	2.3 Conduct "Do you know?" contests	Divisional Director of Education	Zonal Director of Education													

(2) Ambalangoda Zone

*\*Absent*

(3) Galle Zone

**Objectives:** To minimize the damage and devastation caused by natural disasters through promoting awareness and preparedness among the teacher/student population in the Galle Educational Zone.

No	Activity	Scheduled date	No of participants	Venue	Monitoring
01	Zonal art competition	Nov 2007	Three divisional level winners from each lower secondary, upper secondary and senior section will be entitled to participate in the zonal level competitions. 3 x 3 x 4=36 participants	Zonal office Galle	Zonal Director Divisional Director
02	Speech competitions	Nov 2007	-Do-	-Do-	-Do-
03	Refresher course for resource persons	Oct 2007	3 ADRC-trained teachers from each division 4 Divisional Directors =16 participants	-Do-	ADRC Representatives Provincial Director

**Expected Results:** Students will be involved and encouraged.

Teachers will add more details, and will upgrade the school's programs by taking the refresher course.

(4) Udugama Zone

**Aims**

1. Train all the teachers in disaster management
2. Train all the students
3. Train all the officers in the zone

Activity	Time frame												Cost	Responsibility
	J	F	M	A	M	J	J	A	S	O	N	D		
1. Train 150 teachers in 75 schools through 3 workshops													50000.00	Zonal Director of Education
2. Train all the students													1000.00 × 75	Divisional Director of Education Principal
3. Train the officers														Southern Province Director of Education
4. Co-curricular activities														Director Zonal Education
1. Drama													10000.00 × 3	
2. Poster competition													5000.00 × 3	
3. Drawing competition													5000.00 × 3	
4. "Do you know?" contests													5000.00 × 3	
5. Magazines													8000.00 × 3	

#### 4. Southern Provincial Department of Education

##### Implementation Plan

Objectives :

1. To raise the awareness of the core groups of higher education officials regarding natural disaster management
2. To enhance the basic knowledge of natural disasters and disaster risk management within the school community.
3. To develop a continuous system for imparting knowledge about natural disasters to the next generation.

Main Activity	Sub-activity	Performance Indicator	Responsibility	Time Targets												Expenditure
				J	F	M	A	M	J	J	A	S	O	N	D	
1. Update knowledge about natural disaster	(a) Update the natural disaster knowledge of divisional and zonal officials.	Participant list	DDE Planning		-											
	(b) Give instructions regarding the insertion of a program on minimizing the damage caused by natural disasters into the annual implementation plan.	Prepared annual implementation plan.	Do			-										
	(c) Declare a Disaster Education Day and launch various disaster education programs at the school, divisional, zonal and provincial level.	Declaration of a Disaster Education Day	P.D					-								



## **VII. Program Summary**

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Below is a summary of the disaster education program for Sri Lanka, arranged in the order of the program's objectives:

1. To support efforts by the Southern Provincial Department of Education to design a model school curriculum for disaster education in Galle District

Through this program, the ADRC actively communicated information regarding Japan's disaster education system to people in Sri Lanka. Having come to a full understanding of the fact that continuous disaster education is an effective means of passing down lessons from contemporary disasters to future generations, the Southern Provincial Department of Education formulated the following action plans to develop a disaster education curriculum:

- (a) Engage in continuous follow-up to develop a curriculum for disaster education
- (b) Prepare educational guidelines for disaster education in schools
- (c) Deploy a teacher in charge of disaster education to each school.

The curriculum is established by the board of education, and the efforts conducted in Galle District were limited to that district. Those disaster education efforts were based on components of the existing educational framework (such as the integrated learning period, topography, the morning assembly). The ultimate goal of this program was the ongoing promotion of disaster education by the central government leadership and the integration of disaster education into the school curriculum. However, it proved very difficult to get the National Institute of Education (NIE) and the Ministry of Education, both of which have many other objectives and priorities, to act. If this program were to be continued in another region in the future, it would be best to work closely with the central government on scheduling.

Also, the education systems in all countries are top-down, but in many cases the efforts conducted in one region can be communicated to the central government as "good practices," such that they can then be reflected in national educational policies. It might also be effective to adopt a bottom-up approach in which successful efforts conducted at the local level stimulate the central government to move forward. If localities are passionate about conveying their efforts to the central government, the government is more likely to be compelled to act. Rather than adhering to the stereotype of the central government giving instructions to various regions, it is important to recognize the effectiveness of launching efforts from the local level.

2. To support the development of basic action plans for incorporating disaster education in the school curriculum in Galle District

Please see the section VI entitled "Action Plans."

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To follow up on these activities, we have asked pilot schools and division/zonal directors to submit progress reports to the ADRC. The ADRC will follow up on the progress made and will communicate information about their efforts to the world through the ADRC Newsletter. This will ensure that good practices can be shared among all the relevant parties. It might be difficult to receive reports from all the pilot schools due to limited communication resources, but we would like to try to keep in close contact with them via email, fax and postal mail.

In addition, the ADRC will conduct a questionnaire via email or fax at the end of this year or the beginning of next year to assess the implementation of the action plans and the progress that has been made since the end of the program.

### 3. To build teachers' capacity for disaster education in Galle District

Through this program, the teachers of the pilot schools learned a great deal about disaster education and how people can protect themselves against natural disasters. This is evidenced by the outcomes of the Pilot Lessons and their experience acting as leaders to promote disaster education among other teachers in Galle.

Other school teachers in Galle District also gained knowledge from the pilot schools during the Pilot Lessons and developed a greater capacity for disaster education than they had at the beginning of the program. However, considering the amount of time that teachers (except those from the pilot schools) spent in lectures and disaster education training, we must admit that one day of Pilot Lessons is not enough to sufficiently cover the material.

Reflecting the lessons learned, the pilot schools have been sharing the knowledge they gained from the program by conducting disaster education workshops for other schools in their divisions since the program ended. In addition, division and zonal directors have been monitoring the activities taken by pilot schools and other schools in Galle.

Aid providers tend to underestimate the abilities of local people, who actually have a great deal of local knowledge, educational tools, and creativity. We should help them utilize what they already have and use it to further develop their capacity to conduct disaster education.

### 4. To provide basic knowledge about natural disasters and natural disaster risk management for the school community in Galle

The District Workshop and Pilot Lessons, and the efforts of the pilot schools after the program ended in March, made it possible for basic knowledge about natural disasters and disaster risk management to be communicated throughout Galle District. It was good to have a chance, after the Pilot Lessons, to correct the misinformation that had been conveyed by the pilot schools.

Based on the action plans formulated by the pilot schools, some of which will be conducting programs for neighboring schools through 2007, all the teachers in Galle will benefit even further from this

program. As mentioned above, they should utilize the resources they already have available to them. We should not provide anything new, but simply fill in any gaps or correct any misinformation that is being taught.

5. To introduce Total Disaster Risk Management (TDRM), a comprehensive and sustainable approach to disaster risk reduction to improve the capacity of the school community in Galle

Through this program, we introduced the concept of Total Disaster Risk Management, particularly the importance of disaster mitigation and prevention, to school teachers, principals, and education officials in Galle District. The scope of this program was limited to the schools, and did not incorporate social actors beyond the school, but in the future, the pilot schools are planning to conduct activities that involve the local community. Schools should play a central role in disaster education not only in the schools, but also in their communities.

6. To make recommendations for incorporating disaster education into the basic school curriculum in Sri Lanka

The Southern Provincial Department of Education is not in a position to create the school curriculum in Sri Lanka. However, it can propose that the Galle Program be used as a model for promoting disaster education and incorporating it into the school curriculum at national level. We invited an officer from the National Institute of Education (NIE) to observe the program as it was being conducted in Galle District. This was a great opportunity for us to inform the central government of what we were doing and of how the program could serve as a model for promoting disaster education in Galle.

The involvement of the central government is essential for sustainable disaster education. If disaster education were to be integrated into the school curriculum in Sri Lanka, school communities would be able to learn how to protect themselves from natural disasters and disaster education would become sustainable. Once it is incorporated into the school curriculum, disaster education would not require much additional funding, since many materials that already exist in Sri Lankan schools can be utilized for disaster education.

The Department of Education has been planning to promote this program in Hambanthota District as a means of further promoting disaster education in Southern Province. Of course, the involvement of central government officials is essential for the next steps to be taken as well for disaster education to be integrated into the school curriculum in Sri Lanka.

7. Main Objective: To raise the awareness of school communities regarding various types of natural disasters and regarding the value of disaster reduction efforts

This program has certainly raised the level of natural disaster awareness to some extent among the school communities in Galle District. Now that the program has ended, the people of Galle District will have to play a leading role in promoting this objective in Galle, as well as other areas of Sri Lanka, by conducting other activities in the future. In addition, the ADRC is keen on using its newsletter to publicize and support these efforts, so that the world can learn about their good practices in the field of disaster education.

\*\*\*\*\*

To implement even better programs in the future, the following should be noted:

Program flexibility

Programs need to be flexibly designed so that they can be modified, even after they are begun, based on input provided by local educators. There are few opportunities for local people to provide input on a program before it is launched, but there are plenty of opportunities to obtain their direct input after the program begins. Programs need to be implemented such that they reflect the opinions of local people and satisfy all of the parties involved.

Conducting the next program

If similar programs are conducted in other districts, the ADRC or other Japanese experts should participate as advisors. In the future, such programs should be implemented under the guidance of the Southern Provincial Department of Education and the pilot schools in Galle District.

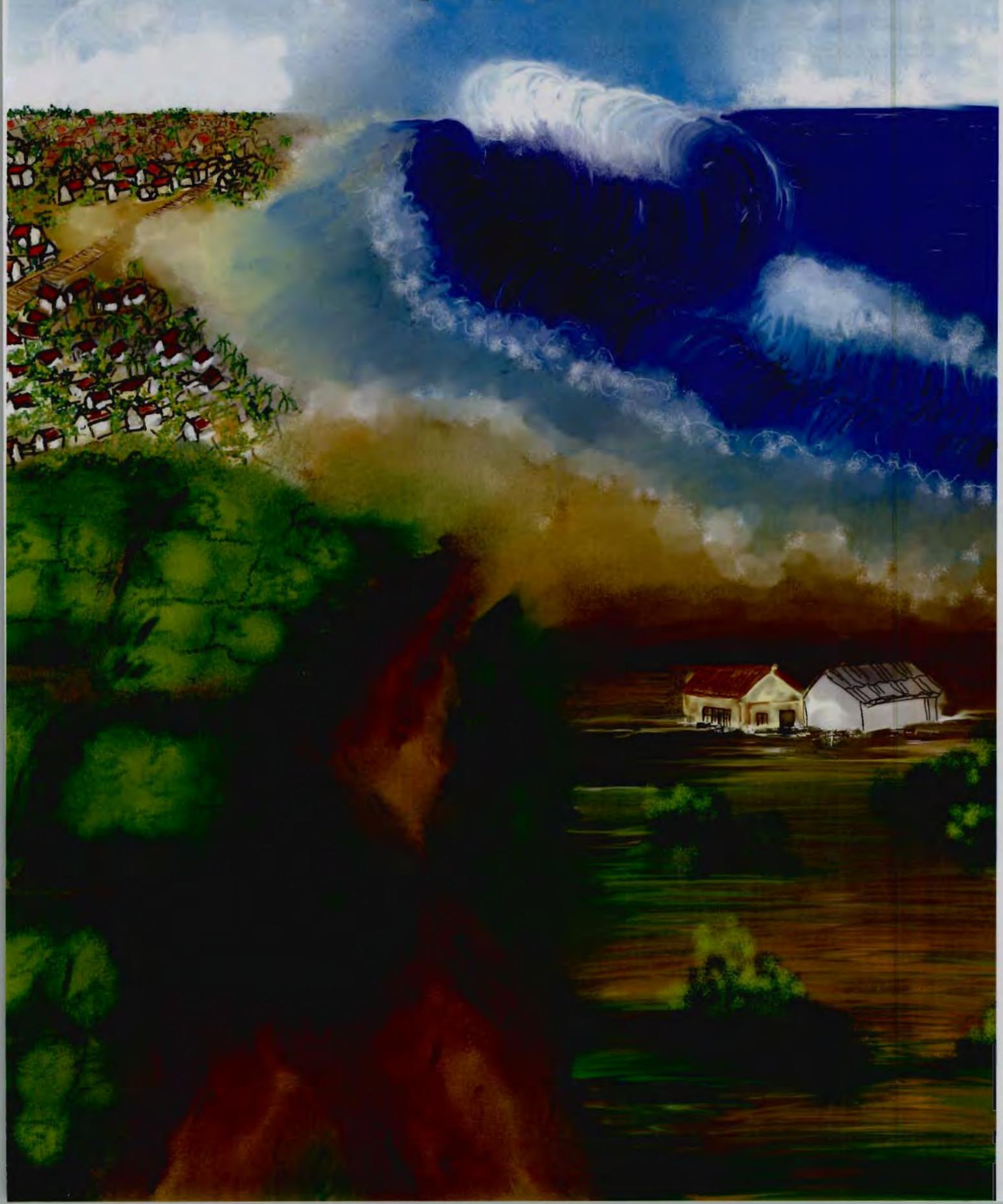
This program was divided into four separate workshops and meetings, but the implementation of the pilot lessons and the Second Consultative Meeting need to be held in conjunction with one another. Enabling participants to provide feedback and the pilot schools to receive feedback immediately after the pilot lessons would be both more efficient and better for the instructors' schedules.

Program duration

Given that the ultimate goal of this disaster education program is to ensure that disaster education becomes an established part of the educational curriculum in a given region, one year is a very short time. Programs should be developed that last two to three years, and that cover issues like monitoring and assessment, in addition to implementation.

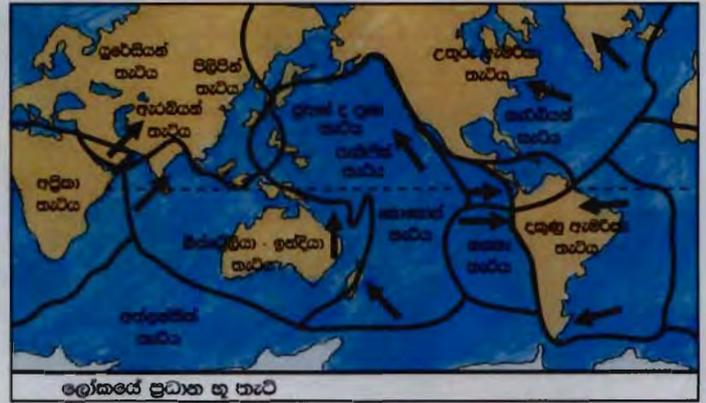
## **VIII. Supplementary Material**

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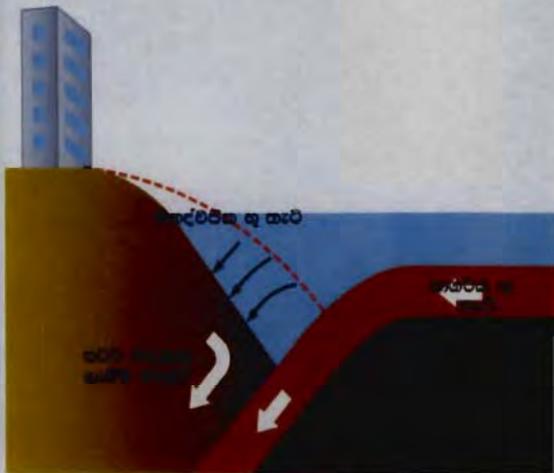
## නුම්කම්පන හා සුනාමි

පෘථිවි පෘෂ්ඨය සැදුම් ගෙන ඇත්තේ භූ තැටි නමින් හඳුන්වනු ලබන පාෂාණ කොටස් ගණනාවකි. මෙම භූ තැටි පෘථිවි පෘෂ්ඨය හරහා ඉතා සෙමින් චලනය වේ. සමහර විට මෙම භූ තැටි තුල හෝ එකිනෙකට සමීප භූ තැටි අතර අභිච්ඡාල බලශක්තියක් එක්රැස් වීමට පුළුවන. ඒකරාශී වූ පීඩනය හෙවත් ආතතිය එම පාෂාණවල ශක්තිය ඉක්මවා යන්නේ නම් එහි ගබඩා වී තිබූ බලශක්තිය භූමි කම්පාවක ස්වරූපයෙන් පහ කර යවමින් එම භූ තැටි හඳිසියේම කැඩී යාමට පුළුවන.



ලෝකයේ ප්‍රධාන භූ තැටි

## සුනාමියක් උත්පාදනය වන්නේ කෙසේද?



සුනාමියක් උත්පාදනය වන ආකාරය පිළිබඳ උදාහරණයක් ඉහත සඳහන් විටුවලින් පෙන්වුම් කෙරේ. සාගරික තැටියක් වසරකට අඟලක් හෝ දෙකක් පමණ, මහාද්වීපික තැටියක් තුලට චලනය වේ. මහාද්වීපික තැටිය සාගරික තැටිය සමඟ යටට ඇදී ගොස් අවසානයේ දී වසර සිය දහස් ගනනකට පමණ පසු ඒකරාශී වන ආතතිය හෙවත් පීඩනය භූ තැටියට දරාගත නොහැකි තරම් විශාල වූ කල භූ තැටිය මිදී දුන්නක් සේ ගැස්සී නිදහස්ව උඩ අතට පැන නැඟී යන්නේ මුහුදු තලය හා ඊට ඉහලින් ඇති ජලකඳ ඉහළට ඔසොවාරුමිනි. මෙම වසවීම මගින් සුනාමියක් ආරම්භ වන්නේය.

## සුනාමි විපත



සුනාමියෙන් විනාශ වූ ඉන්දුනීසියාවේ ඩන්ඩාපාවේ මෙහිත් හෝටලය සහ මාළු අල්ලන ලද බෝට්ටුවක්



සුනාමියෙන් විනාශ වූ තායිලන්තයේ කොහැලැක් පොත්ගර ප්‍රදේශයේ හිටි තිබූ නිකේතනයක්

සුනාමියේ අංග ලක්ෂණ



(1) වෙරළ තීරයට ආසන්න විමත් සමගම සුනාමිය එක්වරම විශාල රැල්ලක් බවට පත් වේ.



(2) සුනාමියේ ගත්ගිඩලය සාමාන්‍ය මුහුදු රළට වඩා අතිශයින්ම මහත්ය.



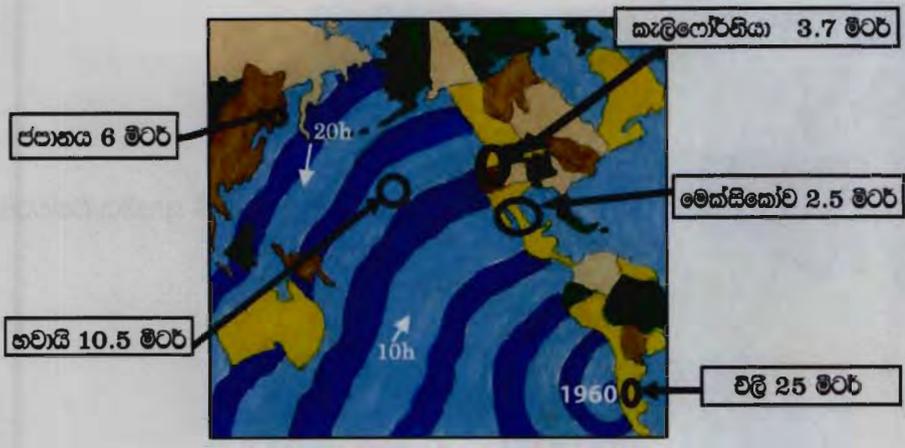
(3) බොහෝ විට සුනාමි රැළි, මාලාවක් ඇති වන්නේය.



(4) සුනාමිය ගංගාවන් හා ජලමාර්ග ඔස්සේ ආපසු ගලා යයි.

(5) සාපේක්ෂ වශයෙන් කුඩා භූ කම්පනයකින් වුවද සුනාමියක් පැන නැගීමට පුළුවන.

# යුනාම් ප්‍රචාරණය



1960 භූමිකම්පාවෙන් උත්පාදනය වූ විලි රටේ මහා සුනාමිය පැසිපික් සාගරයේ කි.මී. 17000 ක් දුරක් ගමන් කළේය. භූමිකම්පාව සිදු වී දිනකට (පැය 22) පසු මීටර් 6 ක් පමණ උස මුහුදු රැළි ජපානයේ වෙරළබඩ ප්‍රදේශයට ගලාවත් ජනයා 142 ක් පමණ මරණයට පත් වූහ.

## බලේ විවිධය යුනාම්යෙන් ආරක්ෂා කළ හැකිවීම

මුහුදු වෙරළේ සෙල්ලම් කරමින් සිටින අතරේ දී සුනාමියක් පිළිබඳ අනතුරු ඇඟවීම තීවේදනය කරනු ලැබේ. එවිට ඔබ කල යුත්තේ කුමක්ද?

අ. සුනාම් රැළි පෙනෙන තෙක්ම දිගටම සෙල්ලම් කිරීම.



ආ. සිදුවන දේවල් මොනවාදැයි බලමින් පා ගමනින් ඉවත්ව යාම.



ඇ. ඉක්මනින් උස් භූමියක් කරා දුව ගෙන යාම.



**ජල ගැලීම් සහ ගල්, පස්/මඩ නිසා ඇතිවන විපත්**

ශ්‍රී ලංකාව එක්වර ඇතිවන්නා වූ මෝසම් හා සුළි සුළං නිසා හේලිය සාමාන්‍යයට වඩා දෙගුණයක් වර්ෂාව ලැබෙන රටකි. මධ්‍යම කඳුකරයේ මීටර 2000 ට වඩා උස් වූ කඳු පවතී. එහි සිට මහ වැසි ජල කඳුන් ලෙස හානිකර ආකාරයෙන් වේගයෙන් පහළට ගලා බසී. එම නිසා කෙටි කාලයක් තුළදී ගංගාවල ජල මට්ටම ඉහළ ගොස් ගංවතුර තර්ජනය වැඩි කරයි. ඒ අතර කඳුකර ප්‍රදේශවල රොන් මඩ නිසා අනතුරු වැඩි වීමට ඉඩ තිබේ.

ගංවතුර



කඳු කඩා වැටීම්



නාශයම්



සුන්බුන් ප්‍රවාහය



**ගල්, පස්/මඩ වලට අදාළ විපත් වර්ග 3**

(1) කඳු කඩා වැටීම්



(2) නාශයම්



(3) සුන්බුන් ප්‍රවාහය



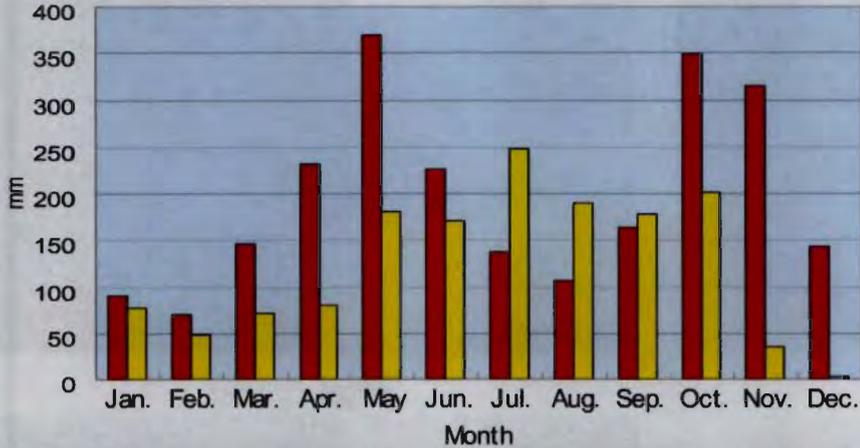
# මෝසම් සුළං හා වර්ෂාව

මැයි සිට සැප්තැම්බර් තිරිතදිග මෝසම්

නොවැම්බර් සිට පෙබරවාරි ඊසානදිග මෝසම්



ගාල්ල ත්‍රිකුණාමලය ගාල්ල ත්‍රිකුණාමලය



■ කොළඹ  
■ වෝඩියෝ

\* Source: Japan Meteorological Agency & Department of Meteorology of Sri Lanka

ඔක්තෝබර් හා නොවැම්බර් වලදී සුළි සුළං හේතුවෙන් මහ වැසි ඇති කරයි.

ජලය සහ ගල්, පස්/මඩ නිසා හටගන්නා වූ විපත් පිළිබඳ අනතුරු ඇඟවීම

අනතුරු ඇඟවීම් 8 ව අවධානය යොමු කරන්න.  
කඳුකර විපත් වලදී අනතුරු ඇඟවීමේ සංඥ කඳු බෑවුම් වලද ගඟේ ගැලීමේ ස්වභාවයෙන්ද පෙන්නුම් කෙරේ.



උල්පත් හතර වේ.



පිං සහ කළ පිං ජලය බොරවේ.

ඔබ අවට පරිසරයේ පවතින විපත් ඇති විය හැකි ස්ථාන කලින් පැහැදිලි වැදගත්ය. හැම විටම ඒ පිළිබඳ අවධානයෙන් සිටින්න.

විපතක් සිදුවන විට පොලීසිය හෝ ගිනිතිවන දෙපාර්තමේන්තුව අමතන්න. විපතට පත්වූ ස්ථාන වලින් ඉවත් වන්න.



දැව කඳක් පාවීමට පටන්ගැනේ



හංහා ජල මට්ටම් අඩුවේ.



උල්පත් ජලය හැසිරීමේ අධික වේ.



බෑවුමේ ඉර තැලීමේ ඇති වේ.



බෑවුමේ පහළට ගල් පෙරෙරේ.



පොළව ඉඳුරන හඬ ඇසේ.

ඉවත් වීදුලියේ හා රූපවාහිනියේ කාලගුණ තොරතුරු වලට අවධානය යොමු කරන්න. ආපදා කට්ටලය සුදානම් කරන්න. ඔබ සුදානම් කරන්නේ කුමක්ද?

සුදානම් කරන්නේ කුමක්ද කියා කල්පනා කරන්න



# අනතුරකදී වහාම ඉවත්වීම

නිවසේ සිට ඉවත්වන පළාත හා මාර්ගය කල් තිසා නිෂ්චය කරන්න. අනතුරකදී වහාම ඉවත්වීමට ක්‍රියා කරන්න.



## වහාම ඉවත්වන්න



ශ්‍රී ලංකාවේ නිතර සිදුවන ස්වාභාවික විපත් අතුරින් අකුණු සැර වැදීම එකකි.

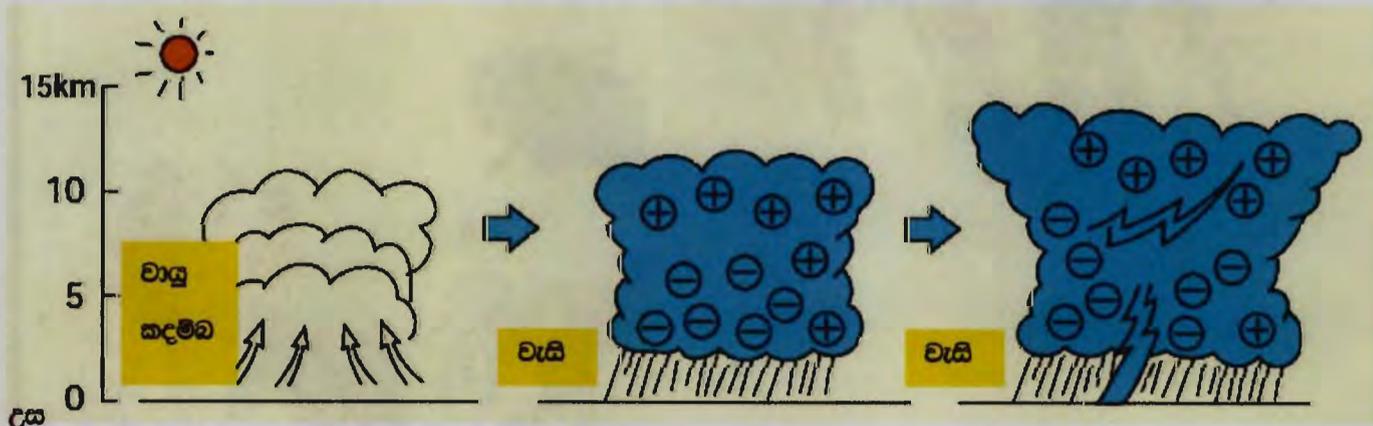
සෑම වර්ෂෙකදීම අකුණු සැර වැදීමෙන් බොහෝ දෙනා මියගොස් ඇත.

අකුණු සැර වැදීමෙන් වැලකීම සඳහා යෝග්‍ය ක්‍රමයන් සලකා බලමු.



**අකුණු සැර/ගෙරවීම හට ගැනීමේ යාන්ත්‍රණය**

අකුණු සැර යනු විදුලි විශේෂයකි. එය වළාකුළු තුළ හට ගනී. මේවා ඇතිවන ආකාරය විස්තර කෙරෙන න්‍යායන් බොහොමයකි. ඒවා අතුරින් වඩා නිරවද්‍ය න්‍යාය ලෙස සැලකෙන්නේ විශාල ගිම් පතනකදී අයිස් ස්පටික එකිනෙක ගැටීමෙන් වළාකුළු තුළ විද්‍යුත් ආරෝපණයන් ඇති වන බවයි. වළාකුළු වර්ධනය වීමේදී මෙම ආරෝපණයන් ද විශාල වේ. වළාකුළු වල පහළ කොටසේ ඇති චර්ණා වූ සහ ආරෝපණයන් සහ ඒවායේ ඉහළ කොටසේ ඇති චර්ණා වූ බහ ආරෝපණයන් එකිනෙකට තෙරපීම සිදු වේ. මෙහිදී හට ගැනෙන විදුලි ධාරා හේතු කොට ගෙන අකුණු සැර සහ විශාල ගිගුරුම් ඉබ්දයන් ඇති වේ. විදුලි කෙටීමක දී එහි ශක්තිය තීරණය වනුයේ පවතින ඝාලගුණික තත්වයන්ගේ බලපෑම මත වුවද සාමාන්‍යයෙන් එය ඇම්පියර් 60000 දක්වා ආසන්න වේ.



විශාල වළා ජෙලි වර්ධනය වනුයේ පොළව මත ඇති සිරස් වායු කඳුම්බයන් රත් වීම මගිනි.

විශාල වළාකුළු තුළ අඩංගු ගිත වූ ලොකු සහ කුඩා අයිස් අංශු එකිනෙක ගැටීමෙන් විද්‍යුත් ආරෝපණයන් ඇති වේ.

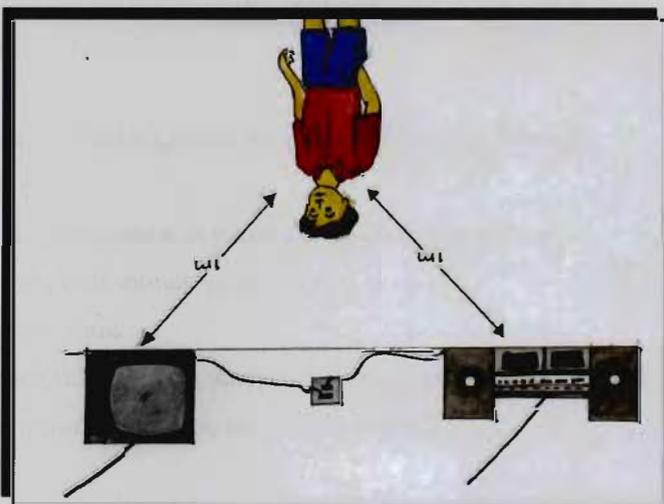
මෙහිදී හට ගැනෙන විදුලිය බැහැර වීම විදුලි කෙටීමක් ලෙස වළාකුළු අතර හෝ වළාකුළු සහ පොළව අතර සිදු විය හැක.

# අලෝච්‍ය චුම්බක ක්ෂේත්‍රයේ මෙහෙයුම් සහ රැකවීමේ පියවර අනුමත පියවර

අනුමත පියවර: අනුමත පියවර සහ අනුමත පියවර.



අනුමත පියවර: අනුමත පියවර සහ අනුමත පියවර.



අනුමත පියවර: අනුමත පියවර සහ අනුමත පියවර.



අනුමත පියවර: අනුමත පියවර සහ අනුමත පියවර.



අනුමත පියවර: අනුමත පියවර සහ අනුමත පියවර.

## Postscript

After we finished the program in Galle District in March 2007, we received the following letters from the Director of the Southern Provincial Department of Education and one of the school principals.

*The ADRC and the Southern Provincial Department of Education of Sri Lanka jointly conducted a disaster education programme in Galle district in March 2007, with the support of the USAID.*

*This programme was very important because such a grass root level programme had never been conducted by the Southern Provincial Department of Education for natural disaster management education.*

*The importance of natural disaster education arose when the Tsunami tidal waves struck Sri Lanka's coastal belt on 26 December in 2004. It took more than 40 thousands of people and did much severe damages to the properties. A large number of students became orphans due to the lost of their parents and another considerable number traumatized.*

*During the school visits and investigations done by the Department of Education we found that the main reason for this severe damage was the unawareness of the public.*

*At this juncture ADRC mediated us in the positive way. We would like to thank ADRC for their guidance, instructions and marvellous ToT programs. As a result of this programme our students are in a good understanding on disaster management and they are ready to transmit this message among themselves elders and to the next generation.*

*Already we have included the disaster management programme for the school annual implementation plan and also programme are conducted in divisional level to aware the teachers and students under the guidance of divisional director of education.*

*I am very pleased to mention here that the conducted programme by the ADRC is very commendable and fruitful. Therefore we understood the importance of extending programme to the highly Tsunami affected Matara and Hambantota district.*

*(Mr. N. J. Karunadasa, Director of Education, Southern Provincial Department of Education)*

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*Now since coming over to the school to work as a principal I am happy to tell you that I am very happy that I was able to be a part of the disaster mitigation program.*

*It is my great pleasure to inform you that Sanghamitta College has been able to launch a Disaster Reduction Program for schools. They conducted another round of training among all the teachers in the division to retrain them so that they are able to carry out the training in their own schools. This was done at the request of the divisional director of the area. At the same session the school trained their student trainers. Then the school implemented their program with the students.*

*They did a similar training session including an evacuation drill. Since the school has a large*

*student population, the session had to be conducted only for one grade, comprised of about 400 students. The first session was for eight grade students who are about 13 years of age. The three teachers who are involved in training the students will be doing the session for all grades in the future.*

*Just after you completed the training we in the Southern Part of the country had to endure a number of rain related small disasters. There were small landslides and floods and three instances of lightening. In the past we were able to handle relief distribution to the satisfaction of many numbers of people, so much so that pupils did not think of carrying water when they evacuate. It is with gratitude I am writing this letter to you to inform we were that much better equipped with information on how to respond to disasters.*

*Please inform the Funding Agency (USAID) that we are better equipped to handle disasters now. Also, since you were able to educate the young generation, we believe that they will pass their experiences on to the next generation as well. Thank you very much.*

*(Ms. Saraswathy Dahanayake, Principal of Sanghamitta College)*

We believe that this program has great potential for further promoting disaster education in Galle District and Southern Province, and throughout Sri Lanka as well, and that it will be supported by school teachers, students and officials in charge of education in Galle, even after the program ends.

Asian Disaster Reduction Center

**USAID – ADRC Cooperative Program**

***"Enhancing Natural Disaster Education in Schools  
in Galle District, Democratic Socialist Republic of Sri Lanka"***

**Project Report**

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