6. Planning of Materials for Dissemination of Knowledge on Disaster Reduction, and Increased Awareness

6-1. Policies on Pinpointing Challenges

In the planning of materials for disseminating knowledge on disaster reduction and increasing awareness, ADRC will pinpoint the needs for these efforts in Asian countries. The ADRC will also collect dissemination materials, such as tools and PR materials for increasing awareness and educational materials. A database will be created based on the results, and the information will be shared on the ADRC homepage.
In addition, ADRC will develop materials such as guidelines and manuals, etc., which will serve as references for member countries to compile materials to spread disaster reduction knowledge. We will be involved in the process independently from the planning stage, and effectively use the above resources.

6-2. Methods for Pinpointing Needs

Considering the diverse nature of natural disasters in Asia, and that many of the disaster-prone countries are developing countries, the spread of disaster reduction knowledge to citizens who are the direct victims of disasters and the enhancement of disaster reduction awareness are vital to reducing natural disasters in Asia.
However, owing to the different situation of each country, needs on the dissemination of disaster reduction knowledge and enhancement of disaster reduction awareness also differ by country. From this standpoint, ADRC must identify the needs of each country and implement the appropriate measures.
The ADRC therefore conducted a survey on the situation of each country regarding the spread of disaster reduction knowledge and enhancement of disaster reduction awareness using the following methods, in order to determine the needs of each country.

- Collection and analysis of existing materials
- Interview of disaster reduction personnel in each country
- Country report
- Expert meeting

Table 6-2-1 shows the situation of each country that has grasped its situation, based on these results.

Table 6-2-1 Raising Awareness on Disaster Reduction in Member/Advisory Countries

Country	Description
Armenia	1) National Earthquake Disaster Reduction Center NSSP (core organization involved in activities to raise disaster reduction awareness) Airing of radio program “Seismic Wave” every week (15 minutes). Articles to raise disaster reduction awareness in Armenian newspapers (every month). Dispatching lecturers to government organizations, universities, schools, and regions. Use of educational videos, earthquake reduction textbooks in schools and kindergarten. Implementation of national level large scale earthquake training once a year. Local bureaus promote regional awareness activities. 2) Emergency Agency Airing of TV program “Emergency Channel” every week (15 minutes). 3)Close collaboration with NGO “Armenia Red Cross” and “Spitak Rescue Team”.

Country	Description
Bangladesh	1.Public information about cyclone/tidal bore 2.Public information about flood 3.Outline of Thana Disaster Response Plan 4.Outline of Union/Pourashava Disaster Response Plan 5.Publishing Bangladesh Calendar/Posters each year depicting disaster points 6.Procurement and distribution of coloured base maps of Thana 7.Publishing Newsletters on Disaster Management.
China	1) Use of such multi-media as TV broadcasting and newspapers and periodicals to present timely reports in forms which appeal to the people involved in disasters that have already occurred. The appropriate activities to reduce disasters and give various courses and special programs and items on disaster reduction. 2) The educational department has added new contents to curriculum relating to disaster reduction in middle and primary schools, thus enabling teenagers to understand the cause and universal law governing the occurrence of disasters and the preventives taken when disasters occur. Institutions of higher education have carried out education on disaster reduction at all levels, and brought up a number of supporting organizations in disaster reduction.
India	A Central Sector Scheme on Natural Disaster Management Programmes (NDMP) has been implemented since December 1993. The major achievements of the programme so far are :- 1) Establishment of the National Centre for Disaster Management in the Indian Institute of Public Administration , New Delhi, in 1995. 2) Establishment of separate Disaster Management Faculties in Training Institutes in 16 out of 25 States in the country, 3) Documentation of major events like Uttarkashi and Latur earthquakes, research studies on land-slides in Kerala and Sikkim, droughts in Rajasthan and cyclone mitigation in Andhra Pradesh. 4) Preparation of source book for use of trainees of the Lal Bahadur Shastri National Academy of Administration, 5) Organising/Sponsoring of training programmes/seminars dealing with various aspects of natural disaster management, 6) Public education and community awareness campaign through newspapers, postal stationery, observation of World Disaster Reduction Day and films, 7) Reprinting of 45,000 copies of IDNDR publication for children in English and Hindi for distribution among school children.
Indonesia	1.All members of BAKORNAS can organize education activities themselves such as staff training, citizen training or public awareness campaigns. 2.Educational activities in connection with floods, droughts and land slides done by Department of Public Works with provincial/district level staff and other institution such as Universities. 3.Geological disaster education done by Department of Energy and Mines, Meteorology and Geophysics Board, Universities etc. 4.Education of forest fire and smoke hazard, in connection with operations/activities done by the Department of Forestry and monitoring, early detection, advocation implemented by the State Minister of Environment in cooperation with Universities. 5. In 1999, the BAKORNAS Secretariat organized a Forest Fire Awareness Campaign and Training of Trainers' "Quick Response Team" (QRT).
Japan	Japan declared September 1 as "Disaster Prevention Day," and January 17 as "Disaster Prevention and Volunteer Day". A series of events to spread awareness and training are held from one week before both events. In particular, the former is participated by the prime minister to help promote the awareness of the people. Though literacy rate is nearly 100%, to further enhance disaster reduction awareness, comics, photographs, and pictures will be used as educational materials in the future. Various guides, pamphlets, and educational storybooks for schools are compiled by municipals. Earthquake, tsunami, volcano, and flood hazard maps are also compiled as they serve as useful information on dangers of natural disasters and can also be applied in preventive measures.

Country	Description
Kazakhstan	In training citizens in actions required during emergency events, information is provided on natural disasters characteristic to the region. 1. The republic's 27 training centers have trained more than 50 thousand trainees annually. Among these people are officials from different levels. 2. Practical instruction and realistic exercises form the basis of Civil Defense training. The main effort has been directed towards the preparation of rescue, engineering, reconnaissance, and other specialized formations. Training has focused on practical actions to be taken in the event of emergencies. 3. For the training of school children and students in different institutes, a special course was designed. It is called "Protection of Critical Life Support". Specialized schools and colleges follow another course called "Basics of Life Support". 4. The mass media is actively involved in the training of the population. Hundreds of announcements and short topical advisories are presented by specialists from the Agency on radio and TV annually. Ongoing dialogue with the population is carried out through booklets, videos and pamphlets. 5. Specialized training is conducted for headquarters staff. Also military training and exercises are ongoing. These measures are undertaken to train the emergency rescue teams and other related personnel.
Malaysia	1. In order to enhance disaster preparedness, the Malaysian Government has continuously carried out public education on disaster prevention to the people living in flood prone areas with the ultimate objective of protecting of human lives and property, as well as avoiding or minimizing social disruption and economic losses. 2. Public education and awareness programmes are carried out through various media including TV and radio broadcast, aimed at enhancing public awareness of the dangers of natural disasters. 3. Civic education and practical training in life-saving techniques are also conducted in the natural disaster prone areas. 4. In addition, presentations on life-saving during floods have been made and pamphlets on disaster prevention targeted at children in flood prone areas during the monsoon season were also circulated. 5. Agencies such the Malaysian Red Crescent Society and Civil Defence Department have also played their part in educating the public, especially children on how to protect themselves against floods. Therefore, public education and awareness on disaster reduction in Malaysia is aimed at creating a higher level of community awareness including the ability of putting into place appropriate emergency measures, so that they could withstand the impact of natural disasters and prepare for and survive disasters.
Mongolia	The activities organized for public awareness of natural hazards are insufficient. Warnings and alarms for all types of natural disaster are transmitted through radio and television over the entire territory of the country. However, there is no activity for increasing public awareness among the people in non-disaster times. Unfortunately, radio, television and newspapers provide special programs only after a natural disaster has already occurred. No propaganda is provided on natural disaster-related problems. No books or brochures for public awareness have been produced. Warning and alarm systems can effectively work in big cities and settlement areas, but due to scarce population density and inadequate communication systems, people in the countryside sometimes cannot be informed in time.
Korea	1) Disaster reduction training Every year government officers receive training to enhance their ability to cope with natural disasters. The program includes planning, managing critical situations, reporting damage, working on recovery plans, and studying relevant laws. 2) PR activities for disaster reduction Korea has designated May 25 as "National Disaster Prevention Day" to promote public participation and awareness of disaster prevention The main events for the "National Disaster Prevention Day" are inspection of disaster prevention facilities and equipment, drills, a campaign for disaster prevention, photo display of disaster stricken areas and their recovery processes, and a contest for disaster prevention posters.

Country	Description
Nepal	Disaster management actors, teachers, students, social workers and the public were involved in the IDNDR day programme. Each year various public awareness -oriented programs are being launched on radio and television. Futhermore, posters, pamphlets and notification to the media during the hazardous season are being given to raise public awareness. The media are contributing to raise public awareness in association with various governmental, non-governmental and social organizations.
PNG	1.Since September 1999, PNG and ADRC have been implementing the "PNG Tsunami Awareness Raising Literature Project" jointly. 2.Tsunami disaster reduction pamphlets, posters and videos are compiled. 3. Programs to raise awareness using the media such as TV are also broadcast.
Philippines	Conducts natural disaster reduction drills. Has active communities and NGOs.
Russia	One of the principal directions of EMERCOM of Russia's activities is familiarising the population with the rules of behaviour in extreme situations. This task lies within the mainstream of the state measures system to protect the population and the territories against emergency situations. Several years ago, a new training programme was introduced for high-school and professional education. It is called "Life-support safety basics" and aimed at the development of "human being self-protection skills." Logically, this type of training proceeds with three following stages: ・definition of the threatening situation ・ measures to avoid it; ・sequence of actions in case of personal involvement occurrence. EMERCOM of Russia is working in close contact with mass-media agencies. In accordance with the Ministry's request a special radio programme called "Survival school" and a TV-programme named "TV-guard" have been produced and aired regularly. These programmes explain the correct behaviour of a person in the extreme situation. Furthermore, the Ministry supports printed publications aimed at increasing population's awareness of the proper actions in emergency situations. Its own illustrated magazine, having expensive experience and proved traditions, is serving the same purpose.
Singapore	An effective emergency preparedness programme should involve the population. Since its inception in 1982, the Singapore Civil Defence Force has been implementing community relations programmes for emergency preparedness. The public is regularly kept informed and reminded of the need for and importance of emergency preparedness through various communications tools, e.g. news and press advertisements, posters, leaflets, etc. The underlying message to the public is "Readiness is your only protection." Public education programmes covering fire prevention and safety, evacuation, rescue, first aid, etc. have been developed for different target groups. These target groups include children, housewives, senior citizens, schools, factories and commercial premises. The long-term goal is to have at least one person in each household to be educated or trained in emergency preparedness. An extensive community and grassroots network has also been established by the Singapore Civil Defence Force to promote civil defence and involve the population in emergency preparedness activities, especially exercises, (e.g. rescue, water rationing and blood collecting exercises).
Sri Lanka	The National Disaster Management Center promotes activities of disaster management, disaster preparedness, prevention, migitation and disaster reduction. Efforts also being made to ensure adequate publicity of policies and programmes formulated relating to disaster preparedness, prevention, mitigation and risk reduction through a variety of sources including the media.
Thailand	The Civil Defence Secretariat constantly campaigns disaster reduction through radio, TV, newspaper, pamphlets, and booklets.
Viet Nam	Floods and rainstorm forecasts and warnings are broadcast on the mass media such as TV and radio. Training seminars are implemented at various levels-province, district, regional, the most important of which are the district and regional. The community participates in these seminers
Switzerland	An example of humanitarian rescue is the Swiss rescue unit. Training programs for foreigners are also available.

The following outlines the need for the dissemination of disaster reduction knowledge and enhancement of awareness of disaster reduction in countries which could be surveyed until now.

- Dissemination of disaster reduction knowledge and enhancement of awareness of disaster reduction in multilingual countries, such as India and Papua New Guinea.
- Dissemination of disaster reduction knowledge and enhancement of awareness of disaster reduction in countries with low literary rates, such as India and Nepal.
- Dissemination of disaster reduction knowledge and enhancement of awareness of disaster reduction in countries where most of the people live in remote areas, such as Nepal and Mongol.
- Reinforcement of local communities for the dissemination of disaster reduction knowledge and enhancement of disaster reduction awareness
- Regional cooperation for the development of human resources involved in activities to disseminate disaster reduction knowledge and enhance disaster reduction awareness in each area.

6-3. Planning of Materials for Dissemination and Enhancement of Awareness

6-3-1. Papua New Guinea Tsunami Awareness Project

1) Background of project

As mentioned in Chapter 4, on July 17, 1998 a tsunami with a maximum height of 15m struck the Aitape coastal region, northwest of Papua New Guinea (PNG), claiming at least 2,200 lives. The cause of this Aitape tsunami was a submarine earthquake measuring 7 on the Richter scale, but the submarine landslide which occurred at the same time is said to have increased the scale of the tsunami abnormally. Topographically, PNG lies in an area with regular earthquakes and volcanic activity. Though it has experienced tsunamis many times in its history, the people have almost no knowledge on tsunamis, and many residents who felt the earthquake did not seek refuge immediately, which thus led to the large number of casualties. Based on this lesson, the PNG government has started a program to raise tsunami disaster awareness with the participation of specialists.

2) Implementation

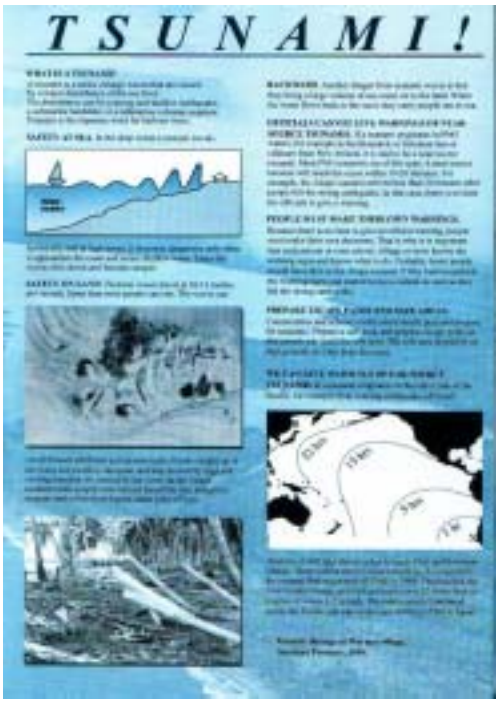
PNG government's Tsunami Disaster Reduction Awareness Program

The government formed a National Disaster Reduction Awareness Committee with Professor Davies of PNG University, held a Tsunami Disaster Reduction Conference in Madang, and implemented a national level Tsunami Disaster Reduction Awareness Program. This program includes the broadcasting of TV programs, compilation and distribution of videos, posters, pamphlets, and booklets, and education at schools. It was vital to spread tsunami disaster reduction knowledge to the inhabitants through all means possible. In answer to the request from Professor Davies, the ADRC jointly compiled a pamphlet with the cooperation of specialists from Japan and the U.S. such as Professor Fumihiko Imamura of Tohoku University.

Tsunami Disaster Reduction Pamphlet

Planning of the pamphlet was started from August 1999. It was agreed that a total of 200,000 issues will be compiled in English and Tokpisin language and distributed to the people and students, as well as used in school education.

Improvement of the contents of the pamphlet was accomplished by visiting PNG twice for discussions, reviewing the experience and materials on tsunami disasters in various countries such as Japan and the U.S., and incorporating in the pamphlet whatever information was deemed appropriate, such as the experience of Japan, an advanced tsunami disaster reduction country, particularly the lessons learned from the damage done by the 1993 Okujiri Island tsunami, and information from the Pacific Tsunami Warning Center, a Pacific Rim tsunami prevention cooperation. The draft version was completed in April 2000. However due to the need for adjustments with Papua New Guinea, the English version was completed in October, upon which distribution in the country was started. This pamphlet is also being used in seminars conducted by the PNG Red Cross in various provinces. The valuable expression, "beware of tsunami when earthquakes occur, always seek refuge in higher places immediately" is gradually spreading to the people even in PNG. Under these circumstances, the following situation occurred and the true value of the Tsunami



Disaster Reduction Awareness Program became to be tested.

3) Achievement of PNG Tsunami Disaster Reduction Awareness Program

Between 2:54 pm on November 16 to 7:01 am on November 18, there were at least five earthquakes at the area ranging from east of the island of New Britain, Papua New Guinea to the south of New Island. The first earthquake measured 8.0, the second 7.7m and the third 7.3 on the Richter scale (USGS Earthquake Information Center). These earthquakes caused tsunamis, and a tsunami measuring 1m was observed at the island of New Britain Rabaul (Rabaul Tidal Observatory report).

Summarizing the information from related organizations such as the PNG government, the series of earthquakes damaged homes, killed at least one, and caused the collapse of electric poles, landslides, road damage, communication breakdown, power failure, and goods in shops and objects in homes to fall off of shelves. The tsunami caused flooding of supermarkets in Rabaul and Cocopo. Homes were also said to have been damaged by the tsunami on New Island and Bougainville Island. Thousands claimed to have lost their homes.

The damage incurred by this tsunami was small compared to the scope of the earthquakes. This may be due to the tsunami's relatively small scale because the earthquakes which occurred this time were of the lateral type. However, it can also be attributed to the warnings sounded by related organizations based on the tsunami warning of the Pacific Rim Tsunami Warning Center (issued immediately after earthquake, stopped later due to no risk of large tsunami), and above all the results of the prompt evacuation actions of the people upon "suspecting the occurrence of tsunamis due to the earthquakes". According to the Rabaul Volcanic Observatory, immediately following the first earthquake, residents in the vicinity evacuated to higher ground immediately and escaped damage from the tsunami. This time, nobody stood on the seacoast to watch the sea after the earthquake, as with the case of the Aitape Tsunami in 1998. No matter how small the tsunami, it can take lives. This time the lesson "evacuate immediately" was put to good use.

As mentioned earlier, the ADRC has cooperated with the Papua New Guinea government in the compilation and distribution of the Tsunami Disaster Reduction Pamphlet. That human casualties from this tsunami were prevented can be attributed to the joint dedicated efforts of the government and people of Papua New Guinea, through their promotion of a thorough tsunami culture throughout the country since the Aitape Tsunami in 1998. The fact that the series of disaster reduction educational activities ranging from the broadcast of special TV programs, video production, distribution of posters and journals, disaster reduction education at schools, and use of the above tsunami disaster reduction pamphlet contributed to such results proved to be a valuable experience and lesson. The ADRC urges related countries to consider and undertake the same efforts in the future.

Papua New Guinea has already started distributing the pamphlet, while the ADRC is distributing it to tsunami-prone countries like the Philippines and Indonesia. It will distribute the pamphlet actively to all related countries and organizations requiring the pamphlet in the future.

The construction of tsunami breakwater, tide walls, and hardware such as earthquake observation systems require financial resources and time. In such cases, spreading and raising the awareness of disaster reduction knowledge, education in the broad sense of the word, is the most realistic disaster reduction measure as well as the most effective over the long run. Papua New Guinea is already producing results in this area.

In the future, the dissemination of disaster reduction knowledge to the people of concerned countries is first and foremost essential for preventing damage from anticipated tsunamis. The ADRC will continue its commitment to provide the results of its cooperation with Papua New Guinea to neighboring countries for the purpose of reducing tsunami disasters, mainly in the Pacific Rim countries.

6-4. Gathering of Information on Workshops and International Conferences

In order to enhance knowledge and awareness concerning disaster reduction, the ADRC is also collecting information on disaster reduction via another indirect route: workshops, international conferences, and other events that deal with disaster reduction. This section describes the method of gathering information, the information gathered, its dissemination on the website, and future challenges.

6-4-1. Gathering Method and Information Gathered

Facts and information were collected from material obtained on the website, material referred to in e-mail or writing such as newsletters, and material that was included in academic journals and related magazines, etc. before it was stored in databases. Table 6-4-1-1 shows the database formats.
For each conference, one set of information shown in the table was gathered. These facts and information, retrieved both in English and Japanese, should be disseminated according to the convention schedules. In fiscal 2000, 11 sets of data were collected.

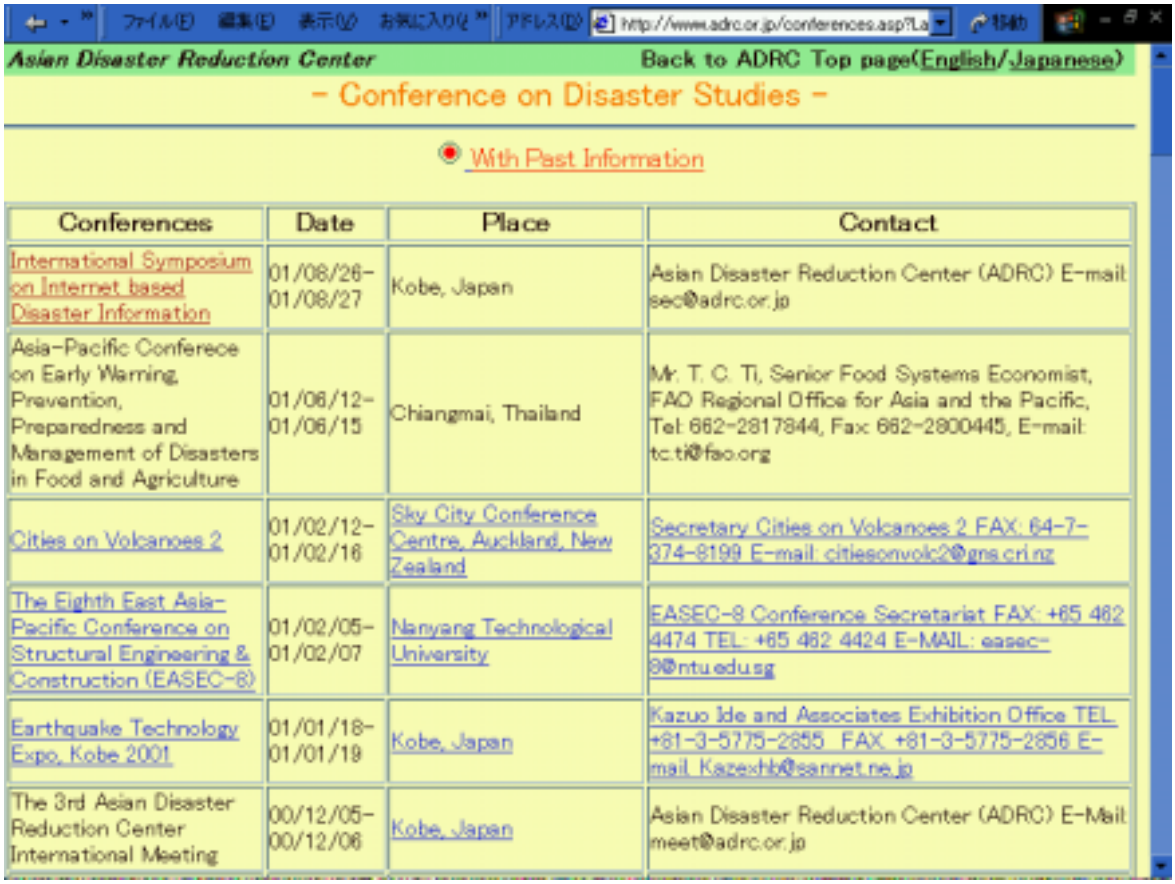
Table 6-4-1-1. Formats of Databases Used for Information Gathering at International Conferences, Etc.

Information	Type of Information	Memo
ID	Number	Number for searching
Conference name (English)	Text	
Location (English)	Text	
Contact person (English)	Text	
Conference URL links in English	Text (URL)	Exists
Location URL links in English	Text (URL)	Exists
Contact person URL links in English	Text (URL)	Exists
Starting time of conference (English)	Text	Based on displayed order
Ending time of conference (English)	Text	
Conference name (Japanese)	Text	
Location (Japanese)	Text	
Contact person (Japanese)	Text	
Conference URL links in Japanese	Text (URL)	Exists
Location URL links in Japanese	Text (URL)	Exists
Contact person URL links in Japanese	Text (URL)	Exists
Starting time of conference (Japanese)	Text	
Ending time of conference (Japanese)	Text	

6-4-2. Disseminating Information on the Website

The website is used to disseminate the information, which will allow every user to retrieve the data. Every time the server receives a request of retrieval, a list of conferences is created based on the contents of the database. A sample of such a list is showed in Fig. 6-4-2-1. The list of conferences, indexed in the reverse order of the dates of conferences, includes the name of conference/workshop, date and time, venue, and contact information . These are accompanied by links if the original website for information is in operation (text is displayed underlined in blue). Clicking on that portion will lead the user to the original information source page on the website.
To exclude the information on the conferences that was already held, a comparison is made between the current date and the starting date of meetings. An option button is, however, provided to display all the information including on the past meetings when clicking the button.

Fig. 6-4-2-1 Dissemination of Information on Workshop and International Conferences via the Web.



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- Conference on Disaster Studies -

With Past Information

Conferences	Date	Place	Contact
International Symposium on Internet based Disaster Information	01/08/26-01/08/27	Kobe, Japan	Asian Disaster Reduction Center (ADRC) E-mail: sec@adrc.or.jp
Asia-Pacific Conference on Early Warning, Prevention, Preparedness and Management of Disasters in Food and Agriculture	01/06/12-01/06/15	Chiangmai, Thailand	Mr. T. C. Ti, Senior Food Systems Economist, FAO Regional Office for Asia and the Pacific, Tel: 662-2817844, Fax: 662-2800445, E-mail: tc.ti@fao.org
Cities on Volcanoes 2	01/02/12-01/02/16	Sky City Conference Centre, Auckland, New Zealand	Secretary Cities on Volcanoes 2 FAX: 64-7-374-8199 E-mail: citiesonvolc2@gns.cri.nz
The Eighth East Asia-Pacific Conference on Structural Engineering & Construction (EASEC-8)	01/02/05-01/02/07	Nanyang Technological University	EASEC-8 Conference Secretariat FAX: +65 462 4474 TEL: +65 462 4424 E-MAIL: easec-8@ntu.edu.sg
Earthquake Technology Expo, Kobe 2001	01/01/18-01/01/19	Kobe, Japan	Kazuo Ide and Associates Exhibition Office TEL +81-3-5775-2855 FAX +81-3-5775-2856 E-mail: Kazexhb@sannet.ne.jp
The 3rd Asian Disaster Reduction Center International Meeting	00/12/05-00/12/06	Kobe, Japan	Asian Disaster Reduction Center (ADRC) E-Mail: meet@adrc.or.jp

6-5. Future Policies

As mentioned earlier, through the tsunami disaster reduction project launched jointly with Papua New Guinea, ADRC has contributed to tsunami disaster prevention in the country. The success of this project can be attributed to the fact that it was implemented through whatever cooperation possible (providing tsunami disaster reduction knowledge and experiences, and materials, etc.) in accordance with the conditions of the project implementation, upon adequate understanding of the country's needs (prevention of tsunami disasters).

Based on the needs of member countries, ADRC hopes to continue contributing to the reduction of damage from natural disasters through appropriate cooperation; providing the required knowledge and technologies upon fully understanding the needs of the concerned countries.

The Gujarat earthquake which hit Western India raised an important and fundamental issue, following the massive earthquake in Turkey and central Taiwan: buildings in many earthquake-prone countries completely lack earthquake-resistance. This problem is not one which can be resolved simply by establishing laws on buildings such as earthquake-resistance regulations, nor by providing the people with information. Improvements will not be easy unless all entities from the contractors of building construction, government, and academic research organizations undertake the issue as their own to prevent earthquake disasters. ADRC believes that it is crucial to review ways of dealing with this fundamental and structural issue carefully with governments of different countries. At the same time, the development and application of appropriate earthquake-resistant architectural and structural technologies as well as the view and observance of earthquake-resistance regulations in related countries and regions should also be included in the review. Since such efforts will require hard-working activities and cooperation over at least several years, it will also be important to build long-term partnerships with related organizations. The ADRC is committed to such reviews through activities related to the Gujarat earthquake.

Finally, the ADRC will continue to review methods for sharing the knowledge and experiences obtained

through such activities with member and related countries extensively. As mentioned earlier, the ADRC saw the Internet as an important tool for providing information. On discovering the limits of the Internet as a source of information, ADRC has also started to provide information on paper. Needless to say, since nothing is more important than sharing knowledge and experience through direct dialogue and cooperation between parties working together, it will become increasingly more necessary to create opportunities for sharing knowledge and experience with member countries, related countries, and organizations, and making full use of the information. The ADRC will continue to actively play this role.