

## 5. Gathering of Information on Emergency Relief by Countries during Disasters

### 5-1. Latest Disaster Information

ADRC's efforts in gathering and providing the latest information on disasters are aimed at providing the materials for decision making when affected countries and concerned organizations need to make emergency responses and when related countries, organizations, NGOs, and individuals provide emergency relief, by gathering and providing information on the status of ongoing disasters and required emergency relief. It is equally important to gather information on disasters, which have occurred in member countries and promptly make it available, as it is for member countries to gather information on ongoing disasters. For this reason, we collect information on not only member countries but other countries as well.

#### 5-1-1. Gathering Method and Gathered Information

The latest disaster information is frequently updated, but is valid for only a very short period of time. This requires the prompt updating of information when a disaster occurs. In order to satisfy this requirement, the ADRC database adopts a system, which updates information via the network, and a team of staff and ten part-time employees monitor the latest disaster information around the clock.

Fig. 5-1-1-1 First Screen of Latest Disaster Information (User Side)

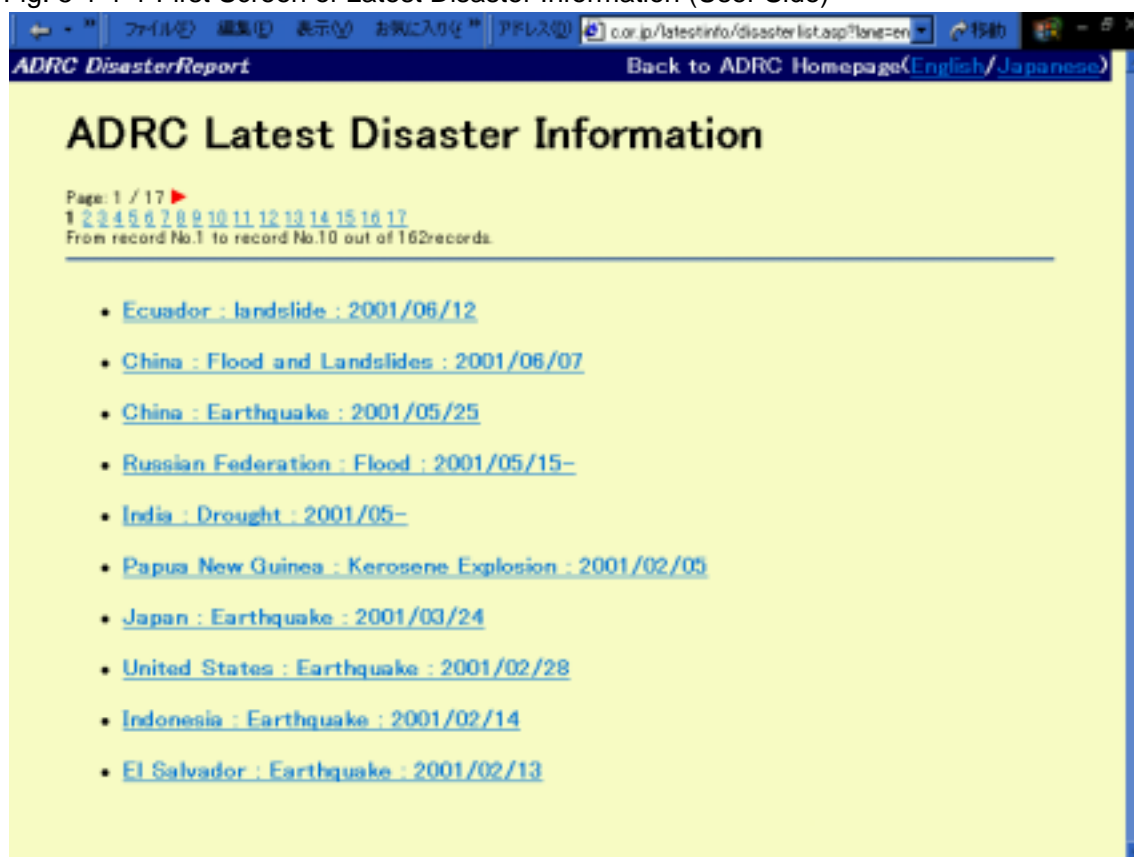


Fig. 5-1-1-1 shows the screen, which appears immediately after the user name and password are entered and “Edit Latest Disaster Information” is selected. This screen lists disasters that have already been entered. To add to or correct the information of these disasters, the corresponding disaster is chosen from the list. To add a new disaster, “new” is selected. Fig. 5-1-1-2 shows the screen for entering the new disaster after clicking “new”. On this screen, the country (selected from menu, the database contains ISO codes), type (multiple selections are allowed), name (Japanese and English), time (Japanese and English), and outline of the disaster (Japanese and English) are entered. The date and time the data was created and updated are automatically recorded. The person creating the data and the person updating the data are also automatically added according to the login information. These operations can be performed from anywhere via the Internet. In the case of the Taiwan earthquake, information was available 4 hours after occurrence despite it being midnight.

In FY2000, information on 48 disasters was gathered. It included 16 floods (including landslides caused by floods), 13 earthquakes, six cyclones, typhoons, four droughts, four volcanic eruptions, two floods caused by torrential downpours and heavy rain, and one incident of landslide, tsunami, and sandstorm, respectively. By region, 31 occurred in Asia, four in North America, one in Africa, six in South America, one in Europe, one in Oceania, and one in the Middle East. 30 disasters had occurred in the ADRC member countries.

Fig. 5-1-1-2 Screen for Entering New Disaster

### 5-1-2. Obtaining Data on the Latest Disasters in 2000

The task for FY2000, cooperating and sharing information with the Asia Unit of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) was accomplished. This has enabled accurate and up-to-date information gathered by OCHA to be obtained via disaster management regional advisors deployed in the Asia Unit, and as a result, led to a sharp improvement in ensuring the acquisition of first reports.

From this fiscal year, the ADRC worked hard to collect reliable and unique data. One example of recent disaster information is the damage report by the Indian Government. After the disaster took place, the Indian government sent a report two or three times a day for approximately two weeks, and then once a day thereafter. These reports were translated by the ADRC and released. Specifically, from January 28 (immediately after the earthquake) to February 12, we received reports two to three times a day at 8 am, 9 am, 12 noon, 2 pm, 8 pm, or 10 pm. It is useful to have updates arrive this frequently, particularly from developing countries, which tends to take time in providing disaster information. There are few research organizations, which are able to send and receive information in real time as this case, making it unique among the numerous disaster cases experienced. Another unique feature of recent disaster information is the use of geographical information links as shown below.

University of Texas Central Library Bhuj area map

[http://www.lib.utexas.edu/Libs/PCL/Map\\_collection/middle\\_east\\_and\\_asia/Bhuj\\_1955.jpg](http://www.lib.utexas.edu/Libs/PCL/Map_collection/middle_east_and_asia/Bhuj_1955.jpg)

Past earthquake map of Gujarat by ASC

<http://www.geocities.com/stasertin/gujarat.htm>

Retrievable maps in India

<http://www.mapsofindia.com/maps/india/h3i00.htm>

Latest seismic maps from around the world using the Internet GIS by IRIS Consortium Seismic Monitor

[http://www.iris.washington.edu/seismic/60\\_2040\\_1\\_8.htm](http://www.iris.washington.edu/seismic/60_2040_1_8.htm)

Earthquake epicenter by UK Edinburgh University seismic map search

<http://pubweb.parc.xerox.com/map/color/all/ht=20/wd=40/mark=23.40,70.32,2,12/lat=23.40/lon=70.32>

US National Earthquake Information Center, World Data Center for Seismology

<http://neic.usgs.gov/neis/bulletin/010126031641.HTML>

The user is able to obtain various geographical information on the concerned region from multiple sources, which is useful from the viewpoint of GIS as well.

In addition to these improvements in 2000, the ADRC will continue further reviews to obtain more accurate and rich information resources and provide them from the viewpoint of those who access them.

## 5-2. Collection and Analysis of Disaster Response Information

### 5-2-1. Analysis of Relief Web Financial Tracking

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) is appealing to organizations that provided aid to countries hit by a disaster or to the relevant organizations in the respective country to register details of their contributions with it, then discloses the summarized results on the OCHA Relief Web Financial Tracking database.

Although this enables the tracking of international support and contributions to the country in crisis, it should be noted that this system sums up only contributions in cash in U.S. dollars, and does not track humanitarian or material support. With the start of the Financial Tracking database at the Relief Web since last year, the ADRC analyzed the countries and organizations, which contributed to disasters hitting the ADRC member countries using the Financial Tracking Tables.

In totaling the donations made, governments, international organizations in the respective countries, NGOs, and various organizations were included under Donor Countries, and international organizations of unknown nationality were placed in "OTHER" category.

These figures show that considerable contributions were made by Europe and the U.S., in addition to Asian regions for disasters in Asia. The trends observed are:

\*In 2000, the main countries receiving aid (80% out of the total) were Cambodia (19%), Mongolia (18%), Armenia (15%), Tajikistan (14%), and India (14%), demonstrating the magnitude of the disasters in these countries.

Of the contributions made, UN organizations and NGO is made up 37%. By region, the European countries provided considerable aid (26%), followed by the U.S. (17%), and Japan (12%).

These tables can be read from various other perspectives.

### 5-2-2. Emergency Aids for India Gujarat Earthquake

The Gujarat Earthquake in West India marked the second largest earthquake in India, taking away more than 20,000 lives on January 26, 2001. The largest earthquake recorded was the Calcutta Earthquake in 1,737, which caused approximately 30,000 deaths. The Gujarat earthquake incurred damage over a broad area in the province. Kachchh-Bhuj, Ahmedabad, Rajkot, Jamnagar, and Surendranagar were particularly devastated by the quake.

According to the Indian Government Disaster Report No. 73 (dated March 16, 2001) and OCHA reports, etc., Gujarat earthquake damages were as follows:

Table 5-2-2-1 Gujarat Earthquake Damages (March 16, 2001)

Deaths	20,005
Injured	166,000
Missing	247 (Kachchh)
Evacuees	15.9 million
Lost livestock	20717
Completely damaged homes	367000
Partially damaged homes	921000
Estimated damage	4.6 billion US dollars (Approx. 560 billion yen)

Table 5-2-2-2 Deaths from Gujarat Earthquake (February 26, 2001)

Region	Total Deaths	Percentage (%)
Kachchh(Bhuj)	18,416	92
Ahmedabad	751	4
Rajkot	433	2
Jamnagar	119	1
Surendranagar	113	1
Others	173	1
Total	20,005	100

\*For Percentage, decimals are rounded to the nearest whole number.

In this unparalleled earthquake disaster, the Indian government, Gujarat province government, and local NGOs played a very important role in disaster relief.

They made every effort to aid victims, and restore and recover damaged areas. This included searching for and rescuing victims, providing relief goods such as water, food, and medical supplies, providing medical care, and removing debris; also, providing emergency shelter, economical support to victims, support to school education, and planning the resettlement of victims. The following outlines the emergency measures of India.

#### **Measures by the Government of India**

- Deployed Defense Services to provide assistance to the stricken area, and started relief activities with the Air Force Base at Bhuj as the primary base and Ahmedabad airport as the secondary base.
- The Ministry of Agriculture served as the base for coordinating relief operations on the national level, and set up a National Disaster Management Control Room in the Department of Agriculture and Co-operation in Delhi.
- Deployed specialists in fire defense, relief, power, communication, railway, and medical personnel.
- Transported and provided special equipment for rescue, heavy machinery, water tank, medical supplies, food, blankets, cloths, tents for shelter, and other supplies

#### **Measures of the Government of the Gujarat Province**

- As many of the government staff were affected, response time was delayed.
- Within 48 hours, a State Control Room for rescue activities was established in Gandhinagar to coordinate response activities.
- An External Aid Co-ordination Cell was set up in Ahmedabad.
- A Chief Relief Coordinator was stationed in Bhuj to coordinate relief activities.
- Following search and rescue operations, cleared debris on roads and removed dangerous buildings.
- Restored electricity and water supply.
- Deployed police, state army, and other administrative officers.

#### **Local Response**

- Rescue, transportation of families and neighbors, emergency aid, and other mutual support.
- Due to damage to both residents and local officers themselves, failure of power, water, and other lifelines, relief response in Bhuj was very difficult.
- Relief response became active with the arrival of local municipals, state government, and UN Disaster Management team members.

However, these responses were not sufficient for an earthquake of such magnitude and emergency aid from the international community played an important role.

The relief activities of the international community are outlined below.

#### **Search and Rescue Phase**

- Search and rescue: Teams from Switzerland, United Kingdom, Russia, Turkey, Armenia were deployed
- Disaster assessment: UNDAC (United Nations Disaster Assessment and Coordination) team
- On-Site Operations Coordination Centre (OSOCC)

#### **Rescue Phase**

- Emergency food aid: WFP, others.
- Medical care and supplies: WHO, others.
- Rescue supplies: UNICEF, others.

- Medical support: International Red Cross, others.
- Donations: World Bank, Asia Development Bank, U.S., EU, Japan, others.
- Aid and support for the above: International NGOs, others.

Affected areas are gradually being restored with both domestic and overseas support, but continued domestic and international aid is necessary to support the lives of many of the victims, resettlement planning, and recovery of the local economy and industries.

The ADRC plans to examine the needs of the Indian Government, state government of Gujarat, and residents of the affected areas. It must also find potential means for providing the cooperation and support required for mid- to long-term recovery and restoration, rather than just limiting its activities to short-term rescue. This will be done with the cooperation of member countries, and relevant countries and organizations.

Using the Gujarat Earthquake as an example and through the sharing of information with related countries and organizations, the ADRC also plans to explore policies which can contribute to preventing and reducing the damage caused by similar disasters in the future.

The measures implemented for the Gujarat earthquake progress on a daily basis, and the latest information on the Gujarat earthquake rescue and relief activities are available at the following websites:

Government of India website

<http://www.ndmindia.nic.in/>

State Government of Gujarat website

<http://www.gujaratindia.com/>

Website on activities of UN organizations in India

<http://www.un.org.in/>

UN ReliefWeb website

<http://www.reliefweb.int/>

### **5-2-3. Emergency Aids Received from Other Countries During the Great Hanshin-Awaji Earthquake**

#### **5-2-3-1. Global Assessment of Earthquake Countermeasures**

When a major disaster occurs, relief and aid to victims are rushed to the affected country by international organizations such as the UN, countries from around the world, NGO's, and various organizations and individual volunteers.

These activities are basically implemented from a humanitarian standpoint, in other words through goodwill, and thus have not been actively evaluated or analyzed until now. In particular, negative assessment of support tends to be difficult to publicize.

The Great Hanshin-Awaji Earthquake in 1995 was an unparalleled major disaster which hit a metropolitan area with a large aging population. It is very important that the lessons learnt from this earthquake be utilized as a common asset around the world, and made use of in disaster management worldwide. From this viewpoint, Hyogo Prefecture established the "Committee for Global Assessment of Earthquake Countermeasures" in April 1995 to mark the fifth anniversary of the earthquake. It then lay down 20 verification themes which are universal and whose results can serve as future models. Verification work was carried out by Japanese and foreign verification committee members in a period of one year, the final verification recommendations were summarized in Spring 2000, and the results were published in August.

One of the 20 themes included "problems and ideals in receiving relief troops from overseas". For this theme, the analysis and evaluation of emergency aid from abroad were summarized by Professor Yoshiaki Kawada of Kyoto University, Department of Disaster Management Research, who is a member of the Japanese verification committee; Mr. Richard Isner, a member of the overseas verification committee and California State Emergency Operations Bureau Coastal Area Administrator,

and Professor Haruo Hayashi of Kyoto University, Department of Disaster Management Research who is in charge of the verification council theme.

Details are provided in the “Disaster Management International Comprehensive Verification Council Report” issued in August 2000.

The following outlines the emergency aid provided by various countries during the Great Hanshin-Awaji Earthquake, taken mainly from Professor Kawada’s report.

### 5-2-3-2. Emergency Aids from Overseas during the Great Hanshin-Awaji Earthquake

#### Activities of foreign emergency and rescue teams

In response to an inquiry by the UN Office for Coordination of Humanitarian Affairs, the Japanese government (then Ministry of Land, Infrastructure and Transport Disaster Management Bureau) replied that it did not require search and rescue teams to be sent to affected sites because teams had already been dispatched from various areas within the nation, and the government had already sent an investigation team. The Japan Red Cross also did not ask for rescue teams from abroad.

Eventually, of the 15 countries which offered to send search and rescue teams, only teams from the three countries shown in Table 5-3-3-1, Switzerland, France, and England, came. As these rescue teams arrived at the sites towards the end of rescue and relief activities, they were not able to rescue survivors. The Swiss team, however, located 9 bodies, the France team, 2 bodies, and the English team, 2 bodies (one according to police records).

Table 5-2-3-1 Activities of Overseas Rescue Teams

Country	Duration	Results	Support
Swiss team 26 members, 12 search dogs	January 19 to 22	Located 9 bodies	Kobe City Fire Bureau and fire department rescue teams of eight cities
France team 63 members, 4 dogs	January 21 to 24	Located 2 bodies	Hyogo Prefecture police headquarters, 27 members of Osaka Mobile Police Team 2; 10 vehicles of local police stations and fire stations
Equipment about 10 tons English team NGO (IRC: International Rescue Corps)	January 23 to 26	Located 2 bodies (One according to police record)	NGOs at affected sites (Hyogo Prefecture, Kobe City)

#### Activities of Medical Team from Abroad

After January 18, many countries including Bangladesh, China, Cuba, Greece, Poland, Thailand, England, Yemen, and Yugoslavia offered to send medical teams if necessary. The Japanese government expressed its gratitude to these countries for their offers, but replied that knowledge of the Japanese language was necessary to examine victims and that there was enough medical personnel from within Japan.

As a result, Japan received a medical team from Thailand that was able to speak Japanese well and had a medical license from Japan, and a medical team of nine from Korea who spoke Japanese. These teams were appreciated by the victims. On the other hand, France’s Medusan de Monde (MDM) visited Japan as a counterpart of the Association of Medical Doctors for Asia (AMDA), but required Japanese and French interpretation. The U.S. also sent a medical team of 22 medical volunteers, but again there were the problems of language and different treatment methods.

#### Supplies from Abroad

Japan did not seek aids from the international community, but many governments offered to provide supplies. 76 countries and regions, the UN, WHO (World Health Organization), and EU offered to send daily necessities such as blankets, goods and supplies such as stationary and cellular phones, and contributions. The Japanese government expressed its deep gratitude for their sincere offers, and decided to accept these supplies and contributions as much as they could for the victims. As a result, Japan accepted offers from 44 countries and regions, beginning with the US which has bases and warehouses to stock emergency supplies in Japan, and made the necessary arrangements for delivery.

### **5-2-3-3. Process to Receiving Emergency Aids from Overseas**

As mentioned earlier, the Japanese government was not planning to receive search and relief teams, and medical teams from overseas immediately after the earthquake. The status report by the UN Office for Coordination of Humanitarian Affairs also indicates that there were no requests for aid from the Japanese government upon confirmation from the Japanese government and Japan Red Cross.

At the beginning, amidst international coverage of the devastating situation of the affected sites, the Japanese government continued to politely refuse offers from abroad while expressing its gratitude. However with mounting offers from governments of different countries to dispatch rescue teams, and because the Japanese government was being criticized as “closed, isolationistic, and arrogant to refuse goodwill” for declining help from the other nations in some news coverage, the Japanese government decided to accept the mentioned teams from abroad, putting faith in the search techniques of these countries because they differed from Japan’s (such as use of search dogs, etc.).

### **5-2-3-4. Problems in Receiving Overseas Aids at Affected Sites**

For local rescue teams, working with the rescue teams from abroad that were accompanied by search dogs was a first-time experience, and something they had not expected.

The arrangements to receive rescue teams from abroad, such as arranging for interpreters, transportation, and accommodation, as well as determining the locations to be searched and meetings to discuss these decisions proved to be a burden at the site.

In particular, due to the geographical distance between Europe and Japan (it takes at least 36 hours for them to reach the affected sites including the flight time), and the time taken to accept them, the Swiss team, who were the first to come, reached the affected site at 1:20 pm on the 19th (55 hours after occurrence) while the French team arrived on the afternoon of the 21st. By this time, the search of collapsed reinforced concrete buildings, which these teams specialize in had already been completed. For this reason, they participated in the search of wooden constructions and landslides of the Ninagawa River, and though they were unable to rescue survivors, they helped locate the bodies of victims.

Looking at the tragic images of victims left to die under rubble without help reaching them, and of many seriously injured victims on roadsides dying without receiving treatment repeatedly broadcast by international media, the rescue teams entered the affected sites with a strong will to provide aid as quickly as possible. On the other hand, as rescue troops consisting of police, fire departments, and the self-defense force from all over the country had arrived at the affected sites and completed search and rescue activities of all main collapsed reinforced concrete buildings by the 18th, the rescue teams which arrived from abroad after the 18th found they were not able to help in the manner they had expected to.

There were other obvious problems such as: animal quarantine officers had to accompany search dogs from countries infected with rabies, the search dogs were not suited to search wooden houses and landslide sites, and arrangements for interpreters, etc. increased the burden at the sites. On the other hand, some of the problems that were pointed out were the difference in the systems, culture, and ideas between the dispatching side and Japanese side; for example contrary to the devastating images of victims broadcast internationally, the search techniques of Japanese teams was much more advanced and experienced than they had expected, and search activities had been conducted swiftly, etc.

### **5-2-3-5. Summary**

At the UN Office for Coordination of Humanitarian Affairs, Switzerland, England, the U.S, and Germany form an international search and rescue group, INSARAG, to serve as a protocol when international aid is requested. According to this protocol, the following are the key requirements for dispatching rescue teams:

1. Requests by the affected country
2. Sufficient logistics
3. Sufficient and no local burden is imposed

In the Great Hanshin-Awaji Earthquake, the purpose of dispatching rescue teams was also to aid the affected areas. However, when disasters are broadcast internationally, the countries dispatching rescue teams felt obliged to help in some way, and help diplomatically. It is therefore difficult for the affected country to completely refuse rescue teams from overseas. To prevent such aid from going to waste, it is important to bring only what is useful to the affected areas. It may also be useful for the affected area to



indicate at an early stage what is needed. Another problem is that sometimes the actual situation and progress of rescue activities at the affected area is not understood by other countries, especially by the rescue related parties of advanced countries. Since this experience also showed that there was a lack of understanding of Japan as a country which can independently dispatch rescue teams without outside assistance, the filling of such information gaps poses as a future task.

Regarding medical aid, on January 17, the Japan Red Cross appealed to the International Red Cross and Red Crescent in Geneva that it did not want to request international aid, and informed them that it would ask for financial aid.

When considering future tasks, some of the advantages of rescue teams which were observed are:

1. Rescue serves as a liaison which links the affected area and area providing aid
2. Aid from abroad helps encourage the affected site

Those prove to be advantageous only when sufficient relief is being provided to victims and when the affected site has sufficient capacity to receive the goodwill offered. In the future, to enable many individuals to participate in relief activities, management must be adequate and relief must work positively.