3-2. Datebase on Disaster Risk Reduction

The ADRC has been disseminating many different types of information related to disaster risk reduction on its website (http://www.adrc.asia) aiming at ensuring an appropriate disaster response, mitigation, and preparedness activities.

3-2-1. Current Situation of Disaster Information Sharing

With increasing efforts made in activities regarding disaster risk reduction in Asia, there is a growing need for establishing information network among relevant agencies. This section deals with updates of DRR information sharing of the world and introduces a recent move, DRR Project portal followed by the situation of information sharing activities by ADRC.

The UN/OCHA has long been providing highly reliable disaster information through its website, ReliefWeb covering various disaster information collected from all over the world, including not only national and international/regional organizations but also media and NGOs. Furthermore, its information ranges from immediate reports after disaster occurrences, emergency response and relief activities through mid to long-term recovery and reconstruction phases, satellite images and maps of disaster-hit areas.

Especially since 1980, the UN/OCHA has been releasing Situation Reports on large-scale disasters on document basis, compiling various types of information as stated above.

Prevention Web, operated by UNISDR, offers comprehensive information including disaster occurrence, national disaster management organizations, progress of HFA implementation, training & meeting events, and publication. Prevention Web is also linked to disaster database, EM-DAT, allowing users to access to disaster statistics of countries.

The above-mentioned EMDAT is a database developed by Center for Research on the Epidemiology of Disasters (CRED), Université Catholique de Louvain, Brussels (Belgium). It covers statistical data on both natural and technological disasters from 1900 which meet their registry criteria such as disasters with fatalities of more than 10 people.

DRR Portal made its launch in 2010 as database of DRR projects. The online information sharing system, developed by ISDR Asia Partnership (IAP), aims to promote information sharing among relevant agencies implementing HFA priorities in Asia and Pacific, and efficiently implement DRR programs in the region. With the financial support by Asian Development Bank (ADB), Asian Disaster Preparedness Center (ADPC) mainly operates the system in cooperation with the ADRC and other IAP members.

So far more than 500 projects are registered in DRR Portal including completed, ongoing and planned ones with project titles, target countries, project outlines. Also available in the portal is information on DRR framework in the region and main DRR organizations.

Such information can help promote collaboration with relevant agencies in the region, avoid overlapping activities, and contribute to create better DRR action plans.

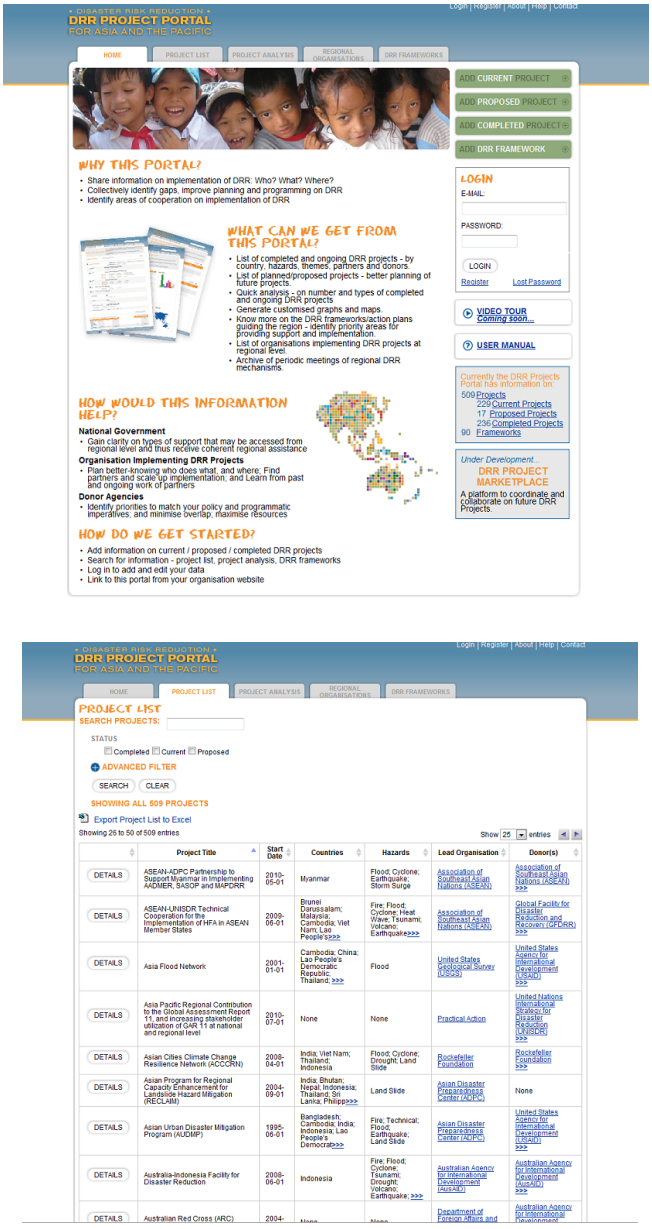

Fig. 1-3-1-1 DRR Portal (above: top page, below: list of projects)

The ADRC has put the latest disaster information mainly of its member countries in Asia and the world on its website. The information is continually revised based on various reports from the ReliefWeb and the International Federation of Red Cross and Red Crescent Societies (IFRC) etc. When Sentinel Asia emergency observation is conducted by earth observation satellites, such satellite imageries are available through the links.

In addition, the ADRC offered a variety of information on past disasters, disaster management systems and country reports of its 29 member countries and 5 observers in Japanese, English and Russian (partially), serving as an effective site for obtaining disaster occurrence and disaster risk management information of the ADRC member countries

3-2-2. Data Book on Asian Natural Disasters

Every year natural hazards hit the Asian region, causing tremendous loss of life and livelihood, and jeopardizing potential sustainable development. As part of its information sharing activities, ADRC has been compiling a data book annually since 2002, which includes the overview of the disaster occurrences and impacts of the world and Asia, based on the data accumulated from EM-DAT, along with numerous other statistics and analyses.

In 2010, ADRC published the data book in which natural disasters occurred in fiscal year 2009 were analyzed. The number of killed in 2009 was about 15,000, far less than the number in 2008, when Cyclone Nargis in Myanmar (app. 138,000 people killed) and Sichuan Earthquake in China (app. 87,000 people killed) occurred. In 2009, Typhoon Morakot in Taiwan in August (app. 630 people killed), Typhoon Ketsana in the Philippines in September (app. 510 people killed), and earthquake in Sumatra in September (app. 1,200 people killed) ranked in the worst 5 disaster based on number of people killed.

The analysis in the data book suggests that Asia region accounts for 35.8% of the disaster occurrence in the year while that of the killed people is 52.1% and that of the affected people is 78.3%. This shows the vulnerability to disasters in the region.

3-2-3. Current Status of "GLIDE"

GLIDE is the acronym for the GLobal unique disaster IDEntifier system, in which commonly formatted but unique numbers are assigned to disasters all over the world. The GLIDE system was first proposed by ADRC and has been adopted and used by more than 20 international organizations and research institutes.

ADRC has its own criteria for how new GLIDE numbers are generated. In Japan, a new GLIDE number will be generated if a disaster occurs in which either five or more people are killed or 100 or more people are injured. In other countries, a new GLIDE number will be generated if a disaster occurs in which either 10 or more people are killed or 100 or more people are injured.

3-2-3-1. Disaster Information Sharing Using GLIDE Numbers

There are many organizations around the world that design and develop their own disaster databases that are freely accessible online. When a disaster occurs, information is distributed over the Internet not only by organizations in the affected countries but also by organizations and the mass media in other countries. Whenever a disaster occurs in any part of the world, ADRC collects information from websites of relevant organizations and worldwide news agencies, or by sending e-mails to contact persons in the affected area. Over the course of its experience, ADRC has come up against several problems in collecting disaster information using these conventional methods, including the following.

(1) Considerable manpower is needed to search the Internet for websites of relevant individual organizations every time a disaster occurs.
(2) There is no standardized naming protocol for disasters. As many different names are given to a certain single disaster by various organizations, even search engines such as Google or Yahoo sometimes return no results.
(3) Website links may be lost when the structure of particular organization's database or website is modified.

The GLIDE system offers a solution to these problems. It will significantly improve the efficiency with which information on historical and ongoing disasters can be retrieved from databases and websites.

At the Global Disaster Information Network (GDIN) Conference held in Canberra, Australia in March 2001, ADRC proposed the development of a standardized coding system for managing information on disasters around the world. This proposal was accepted for implementation as a pilot project by the GDIN. In 2004, glidenumber.net was jointly developed by the ADRC and OCHA ReliefWeb, with technical assistance provided by LaRED. It is designed to issue new GLIDE numbers to disasters immediately after they occur. Moreover, ADRC, the CRED, IRI/Columbia University, the USAID/OFDA, the WMO, IFRC, UNDP, and ISDR Secretariat have agreed to use the GLIDE number format as the standard for assigning disaster identification numbers.

The GLIDE number format was revised in 2004 as follows:

AA-BBBB-CCCCCC-DDD-EEE
AA: Disaster classification
→→→→→→→→
BBBB: Year of occurrence
(4-digit numeric figure)
CCCCCC: Serial number by year
DDD: Country code
(ISO code. e.g., JPN for Japan)
EEE: Region code
(e.g., 013 for Tokyo)

Drought	DR
Heat Wave	HW
Cold Wave	CW
Tropical Cyclone	TC
Extratropical Cyclone	EC
Tornado	TO
Violent Wind	VW
Severe Local Storm	ST
Flood	FL
Flash Flood	FF
Land Slide	LS
Snow Avalanche	AV
Mud Slide	MS
Volcano	VO
Earthquake	EQ
Fire	FR
Tsunami	TS
Storm Surge	SS
Epidemic	EP
Insect Infestation	IN
Wild Fire	WF
Others	OT
Complex Emergency	CE
Technological	AC

Fig 3-2-3-1 Structure of GLIDE

The local code at the end can be added for the convenience of user countries in organizing their national databases. This format is still in use among GLIDE-issuing organizations.

Databases that incorporate GLIDE numbers will have the following advantages:

(1) A parameterized search function allows user organizations to easily connect pieces of disaster information archived by various organizations.

(2) A search engine, developed to focus on particularly important information for user organizations, allows a one-stop search and display of all the necessary data, eliminating the need to conduct additional searches for data independently archived by individual organizations.

The current status of GLIDE use by partner organizations is described in the table below.

Table 3-2-3-2 Current Glide Partnerships

	Name of organization	Status of GLIDE utilization
GLIDE number issuance & utilization on disaster website/database	Asian Disaster Reduction Center (ADRC)	Uses GLIDE numbers to report latest disasters, in conjunction with ReliefWeb.
	OCHA ReliefWeb (Office for the Coordination of Humanitarian Affairs)	Issues GLIDE numbers and creates linkages using GLIDE numbers.
	LaRED	A disaster database in Latin America. Issues GLIDE numbers to its own database records.
	International Federation of Red Cross and Red Crescent Societies (IFRC)	Issues GLIDE numbers when transmitting disaster information for Red Cross activities.
	JRC/GDACS (EU)	Disaster information website in the EU
	Caribbean Disaster Emergency Response Agency (CDERA)	GLIDE numbers are utilized in the disaster databases of Caribbean countries.
	OCD, NDCC (Philippines)	Issues GLIDE numbers to records on disasters over the past 35 years in a joint project with ADRC and publishes them online.
GLIDE number utilization on disaster website/database	UN Food and Agriculture Organization (FAO)	Uses GLIDE numbers to link existing disaster records to the FAO's Mapping System of agricultural disasters.
	Japan Aerospace Exploration Agency (JAXA)	Scheduled to provide satellite information linked to the latest disaster information of ADRC.
	Dartmouth Flood Observatory (Dartmouth University, USA)	Uses GLIDE numbers to floods recorded worldwide.
	UNOSAT	Utilizes GLIDE numbers in the provision of satellite images.
	Benfield (UK)	Research agency of a reinsurance company in UK that utilizes GLIDE numbers on its disaster website (inTERRAgate).

	SHELUDUS (South Carolina University, US)	Uses GLIDE numbers to disaster data in US. GLIDE can be used as a search term.
	PDC (Pacific Disaster Center)	Uses GLIDE numbers to disasters on its website.
	National Research Institute of Earth Science & Disaster Prevention (NIED)	Uses GLIDE numbers to disasters in its database.
GLIDE-supporting international organizations	United Nations Development Programs (UNDP), International Strategy for Disaster Reduction (ISDR), CRED, WMO	GLIDE propagation and promotion are supported by these UN organizations.

3-2-3-2. Way forward

The ADRC has taken an initiative of the promotion of GLIDE. For further developments of GLIDE, there are several points to be improved.

Different international organizations including the ADRC, ReliefWeb of the UN Office for the Coordination of Humanitarian Affairs (OCHA, Relief Web), the International Federation of Red Cross and Red Crescent Society (IFRC) and the LaRED (disaster database in Latin America) are currently entitled to issue GLIDE numbers. One of the operational issues of GLIDE is that each organization has its own standards and criteria for issuance of GLIDE, thus brought about inconsistency among organizations. Yet in the meantime, there is an opposite argument to support the inconsistency from the perspective of promotion of GLIDE. What is needed for the betterment of the GLIDE operation is to hold meetings regularly to discuss about the problems and obstacles that each organization has.