3. Collection and Dissemination of Disaster Information

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

3-1. Disaster Risk Reduction Activities of Member Countries

With assistance from its 30 member countries, ADRC has been collecting information on systems, plans, and specific measures of each country's disaster risk reduction as well as the situation of natural disasters. ADRC has also been collecting information from related materials, various countries/organizations and through Visiting Researchers from the ADRC member countries and UNOCHA Office in Kobe.

ADRC will continue collecting and sharing information on the following items mainly:

1) Disaster management systems (legal frameworks, organizations, basic plans, and disaster management manuals), 2) Experiences of disaster response, and 3) Information on natural disasters (descriptions of natural disasters such as earthquakes, floods, cyclones, etc., and resulting damages).

3-1-1. Information Collection from Member Countries

In fiscal year 2017, as in the previous year, ADRC collected disaster risk reduction-related information on member countries through the following methods.

(1) Information provided from ADRC Member Countries

Besides the voluntary provision from the member countries, ADRC collected the information on systems, plans, and specific measures of each country's disaster reduction as well as situations of ongoing natural disasters through Visiting Researchers (VR).

(2) Collecting Information through Participation in International Conferences

ADRC has been working to collect disaster risk reduction-related information about current status, challenges, policies, actions and others in related countries and organizations. ADRC held, in particular, the Asian Conference on Disaster Reduction 2017 in Baku, Azerbaijan, October 2017. And ADRC had been working to provide and share the information such as national or local DRR strategies on implementation of the Sendai Framework, the effective emergency response to survive mega disasters and advanced technologies facilitating DRR and climate change adaptation.

(3) Utilization of Internet

Taking advantage of internet, ADRC has been collecting disaster related information efficiently. Internet will be more important to facilitate technical support and construct disaster information databases. Internet also helps ADRC to collect related information provided by

academic research institutions and international organizations. Recently, ADRC has using Facebook as one of major social network services for providing latest activities of Visiting Researchers. In fiscal year 2017, ADRC continued gathering information on disaster risk reduction systems of member countries through requesting information, field surveys, international conferences, and internet. Furthermore, ADRC updated country reports in cooperation with Visiting Researchers.

Table 3-1-1lists the reports provided by counterparts in member countries. All these reports are made available on ADRC website. Over recent years, disaster risk management organizations in many countries have been actively promoting information dissemination on the internet. ADRC website developed direct links to these websites which offer access to the latest information.

Table.3-1-1. List of reports from ADRC member countries

Country	Year prepared
Armenia	2001, 2002, 2003, 2005, 2006, 2010, 2012, 2015, 2016, 2017
Azerbaijan	2011, 2014
Bangladesh	1998, 1999, 2001, 2003, 2005, 2006, 2010, 2011, 2013
Bhutan	2008, 2013, 2014, 2017
Cambodia	1998, 1999, 2002, 2003, 2005, 2006, 2013
China	1998, 1999, 2005, 2006, 2012
India	1998, 1999, 2002, 2005, 2006, 2008, 2012, 2015
Indonesia	1998, 1999, 2002, 2003, 2004, 2005, 2006, 2012, 2016
Iran	2013
Japan	1998, 1999, 2002, 2005, 2006, 2012
Kazakhstan	1998, 1999, 2002, 2005, 2006
Korea	1998, 1999, 2001, 2002, 2005, 2006, 2008
Kyrgyzstan	2005, 2006, 2012
Laos	1998, 1999, 2003, 2005, 2006
Malaysia	1998, 1999, 2003, 2005, 2006, 2008, 2009, 2011
Maldives	2013, 2014, 2015
Mongolia	1998, 1999, 2002, 2005, 2010, 2011, 2013
Myanmar	2002, 2005, 2006, 2013

Nepal	1998, 1999, 2005, 2006, 2009, 2010, 2011, 2014
Pakistan	2005, 2006, 2009, 2015, 2016, 2017
Papua New Guinea	1998, 1999, 2005, 2006
Philippines	1998, 1999, 2002, 2003, 2005, 2006, 2009, 2010, 2011, 2012, 2014, 2016, 2017
Russia	1998, 1999, 2003, 2005, 2006
Singapore	1998, 1999, 2001, 2002, 2003, 2005, 2006
Sri Lanka	1998, 1999, 2003, 2005, 2006, 2009, 2010, 2011, 2014, 2015,2016
Tajikistan	1998, 1999, 2003, 2005, 2006
Thailand	1998, 1999, 2003, 2004, 2005, 2006, 2008, 2010, 2011, 2012, 2016, 2017
Uzbekistan	1998, 1999, 2005, 2006, 2013, 2015
Vietnam	1998, 1999, 2005, 2006, 2017
Yemen	2009, 2012, 2014

Country Reports includes the following topics provided by each member country.

I. Natural Hazards in the Country
  1.1 Natural Hazards Likely to Affect the Country village
  1.2 Recent Major Disasters
    (Basic data of disasters, damage situation, response and recovery information)

II. Disaster Management System
  2.1 Administration System
  2.2 Legal System and Framework
  2.3 Structure of Disaster Management
  2.4 Priorities on Disaster Risk Management

III. Disaster Management Strategy, Policy and Plan

IV. Budget Size on National Level

V. Progress of the Implementation of Hyogo Framework for Action (HFA)

VI. Recent Major Projects on Disaster Risk Reduction

VII. Counterparts of ADRC

3-1-2. Natural Disaster Data Book

(1) Background

Past disaster records are critical data in policy making, review, survey and analysis of disaster management plan. ADRC concluded MOU on disaster data utilization with the Centre for Research on the Epidemiology of Disasters (CRED) and has conducted analyses on disaster impacts based on the database, EM-DAT maintained by CRED. For instance, 20th Century Data Book on Asian Natural Disasters, and its revision released in 2000 and 2002 respectively featured disasters which hit its member countries while annual Natural Disaster Data Book covers disaster characteristics in the world.

ADRC continues to provide basic data on natural disasters and making efforts to facilitate use of data.

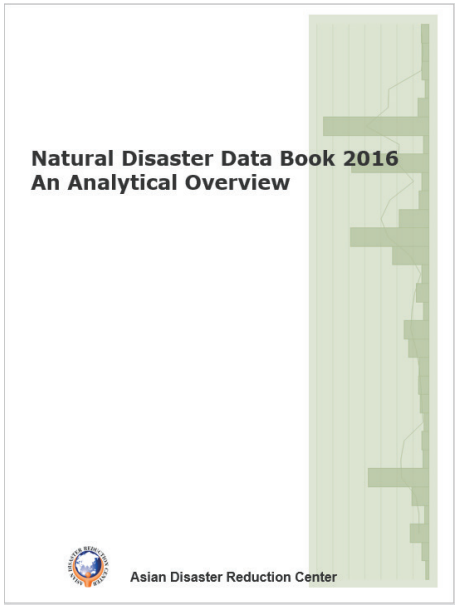
(2) Natural Disaster Data Book 2016

This section presents a summary of Natural Disaster Data Book 2016, which covers regional and disaster-specific issues of the year and long term.

The following Figures 3-1-2 and Tables 3-1-3 depict the results of analyses of national disaster and impacts in 2016 and in the long term.

According to EM-DAT, 350 natural disasters occurred in 2016 worldwide, killing 10,273 people and affecting over 204 million people. The estimated amount of economic damage came close to US$147.4 billion.

In 2016, the earthquake that hit Ecuador in April brought about serious damages to the country. The disaster claimed nearly 670 people. The storm that hit the United States in January has the largest affected people in the world with over 85.0 million. On the other hand, the flood that hit China in June caused the largest economic damage worth US$2.2 billion, which ranked the highest.



By region, Asia is ranked the highest in the indices of disaster occurrences, the number of people killed and economic damage. Asia accounts for 45.1 percent in occurrences; number of people killed, 50.5 percent; and amount of economic damage, 49.5 percent. As for the number of people affected, Americas topped by 46.4 percent.as seen in Figure 3-1-2 and Table3-1-1.

By disaster types, flood is dominant in occurrence, killed, and economic damage at 45.7 percent, 45.3 percent, and 38.7 percent, respectively, while storm tops in number of people affected by 46.0 percent.

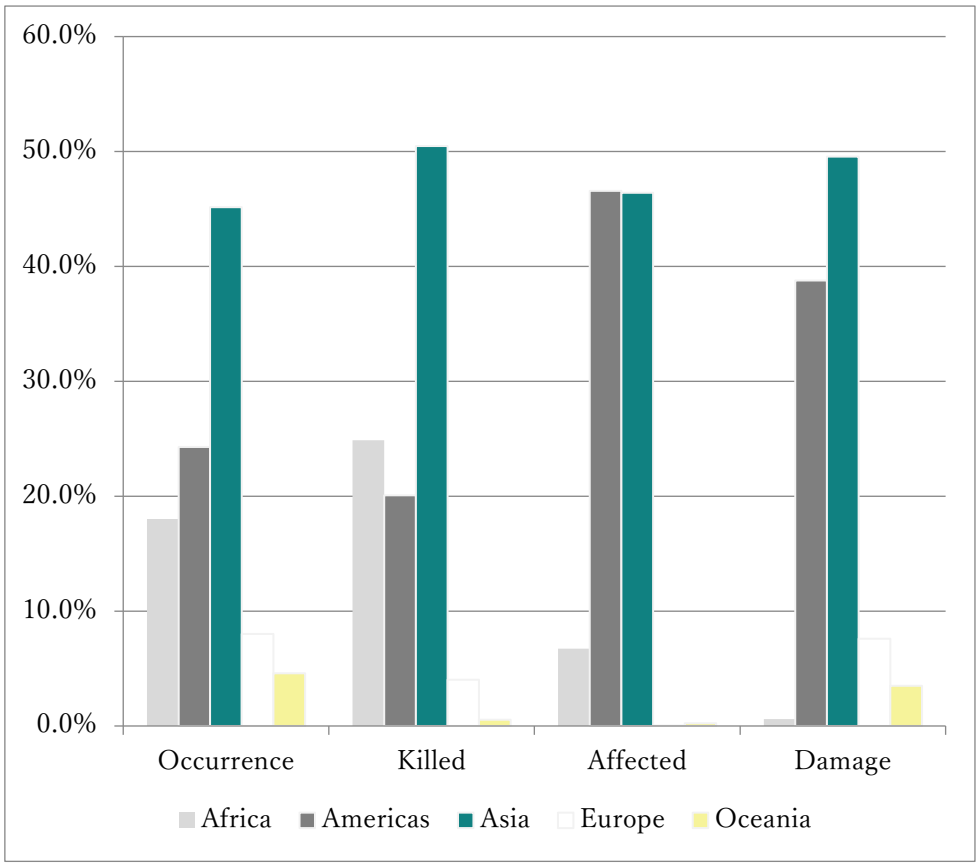


Table.3-1-2. Impacts of Natural Disasters by Region 2016

Fig.3-1-1. Impacts of Natural Disasters by Region 2016

Region	*Impact*							
	Occurrence	(share in %)	Killed	(share in %)	Affected	(share in %)	Damage (US$ million)	(share in %)
Africa	63	(18.0%)	2,554	(24.9%)	13,760,813	(6.7%)	867	(0.6%)
Americas	85	(24.3%)	2,062	(20.1%)	95,038,986	(46.6%)	57,148	(38.8%)
Asia	158	(45.1%)	5,186	(50.5%)	94,718,029	(46.4%)	73,017	(49.5%)
Europe	28	(8.0%)	415	(4.0%)	93,426	(0.0%)	11,179	(7.6%)
Oceania	16	(4.6%)	56	(0.5%)	490,911	(0.2%)	5,160	(3.5%)
Total	350	(100.0%)	10,273	(100.0%)	204,102,165	(100.0%)	147,371	(100.0%)

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

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.

There are many organizations around the world that design and develop their own disaster databases 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 came up against several problems in collecting disaster information using these methods, including the following.

① It requires considerable manpower to search 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, once 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 to develop a standardized coding system for managing information on disasters around the world. This proposal was accepted and implemented as a pilot project by the GDIN. In 2004, glidenumber.net was jointly developed by 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.