

3. Information Sharing on DRR

ADRC shares disaster risk reduction (DRR) information, including those on ADRC website <https://www.adrc.asia/latest/>, to member countries and the general public. Information shared online includes documented experiences, lessons, tools, practices, and analyses of data that are useful for preparedness, mitigation, response, and recovery activities.

3.1 Information Collection

Basically, ADRC collects the following types of DRR information through the contributions and reports from member-countries, partner organizations, and networks:

- Disaster risk management systems (e.g., legal and institutional frameworks, disaster management plans, and manuals)
- Disaster response and recovery activities (e.g., emergency response activities in affected area/country)
- Disaster events due to natural hazards (e.g., descriptions of natural disasters such as earthquakes, floods, cyclones, and so on, and the damages)

The Visiting Researchers (VRs) and the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) play important role in the information collection.

3.1.1 Country Reports on DRR

Member countries regularly provide an updated Country Report to ADRC, which include information about natural hazards, disaster management systems, DRR strategy/plan, recent disasters, and progress in implementing the Sendai Framework for Disaster Risk Reduction. Table 3.1 shows the updated record for FY2022.

Table 3.1. List of reports from ADRC member countries

Country	Year prepared (Update frequency is different as it is made by VRs of the year.)
Armenia	2001, 2002, 2003, 2005, 2006, 2010, 2012, 2015, 2016, 2017, 2021, 2022
Azerbaijan	2011, 2014
Bangladesh	1998, 1999, 2001, 2003, 2005, 2006, 2010, 2011, 2013, 2020, 2021
Bhutan	2008, 2013, 2014, 2017, 2019
Cambodia	1998, 1999, 2002, 2003, 2005, 2006, 2013
China	1998, 1999, 2005, 2006, 2012
India	1998, 1999, 2002, 2005, 2006, 2008, 2012, 2015, 2018, 2020, 2022
Indonesia	1998, 1999, 2002, 2003, 2004, 2005, 2006, 2012, 2016
Iran	2013
Japan	1998, 1999, 2002, 2005, 2006, 2012, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022

Country	Year prepared (Update frequency is different as it is made by VRs of the year.)
Kazakhstan	1998, 1999, 2002, 2005, 2006
Republic of Korea	1998, 1999, 2001, 2002, 2005, 2006, 2008
Kyrgyz Republic	2005, 2006, 2012
Lao PDR	1998, 1999, 2003, 2005, 2006
Malaysia	1998, 1999, 2003, 2005, 2006, 2008, 2009, 2011, 2018
Maldives	2013, 2014, 2015, 2018
Mongolia	1998, 1999, 2002, 2005, 2010, 2011, 2013, 2021, 2022
Myanmar	2002, 2005, 2006, 2013, 2018, 2020, 2021, 2022
Nepal	1998, 1999, 2005, 2006, 2009, 2010, 2011, 2014, 2019
Pakistan	2005, 2006, 2009, 2015, 2016, 2017, 2021, 2022
Papua New Guinea	1998, 1999, 2005, 2006
Philippines	1998, 1999, 2002, 2003, 2005, 2006, 2009, 2010, 2011, 2012, 2014, 2016, 2017, 2018
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, 2019
Tajikistan	1998, 1999, 2003, 2005, 2006
Thailand	1998, 1999, 2003, 2004, 2005, 2006, 2008, 2010, 2011, 2012, 2016, 2017, 2018, 2019, 2020, 2021, 2022
Türkiye	2019
Uzbekistan	1998, 1999, 2005, 2006, 2013, 2015
Viet Nam	1998, 1999, 2005, 2006, 2017, 2021, 2022
Yemen	2009, 2012, 2014

3.1.2 Latest Disaster Information (FY2022)

Information on the latest disaster is immediately posted on ADRC website (Figure 3.1). Every latest disaster information contains: date of occurrence, location, impacts, and links to reports, articles, maps, relief efforts, and satellite images. ADRC is able to compile a comprehensive information of each disaster event due to its wide range of reliable partners that provide the data. As of 28 February 2023, ADRC registered a total 2,595 disaster information items in the database.

The screenshot displays the ADRC website's 'Latest Disaster Information' and 'What's New' sections. The 'Latest Disaster Information' section features four entries:

- 2023/06/02 Japan: Heavy rain**: Heavy rain lashed wide areas of Japan on 2 June 2023 including in Kyushu, Kansai, Tokai and Kanto, with authorities urging residents of nearly 1.3 millions to be advised to evacuate. The active rain front, as well as moist air carried by Tropical Storm Mawar as it moves through the Pacific south of Japan, brought heavy rain in areas from Shikoku to Tokai along the Pacific coast.
- 2023/05/29 Philippines (the): Typhoon**: According to the forecast from PAGASA on 29 May 2023 at 1000 HRS UTC+7, Tropical Cyclone (TC) MAWAR (local name: Betty), currently as a typhoon category, slightly decelerates while moving northwestward over the waters east of Cagayan. As of 29 May, the NDRRMC reported the following: 1.17K families (4.6K persons) affected in 15 barangays
- 2023/05/11 Bangladesh: Tropical Cyclone**: Cyclone Mocha has hit the coastal areas along the Bangladesh-Myanmar border on 14 May 2023 at around 15:00 hrs, bringing heavy rainfall, strong winds, and causing landslides in some areas.
- 2023/05/11 Myanmar: Tropical Cyclone**: On 14 May 2023, Tropical Cyclone Mocha, with wind speeds of about 250 km/h, made landfall on the coastal areas from Rakhine State, Myanmar to Cox's Bazar District, Bangladesh, displacing over 100,000 people in Myanmar. Damage is extensive and may further escalate in the future.

The 'What's New' section includes:

- Tsunami Preparedness Day November 5th**: Implementation of disaster prevention drills. We hold symposiums and so on.
- Newsletter**: ADRC Highlight vol.362 [English], ADRC Highlight vol.359 [Russian]
- Publications 2022/12/09**: NEW! [Annual Report] ADRC Annual Report 2021 >>Read more
- Publications 2022/12/09**: NEW! [Databook] Natural Disasters Data Book-2021 edition >>Read more
- Events 2023/03/11**: NEW! Asian Disaster Reduction Center (ADRC) organized the Asian Conference on Disaster Reduction 2022 (ACDR2022) on 11-12 March 2023 in Sendai, Japan. >>Read more
- Events 2022/10/22**: As a side event of the "BOSAI KOKUTAI 2022", ADRC organized a workshop titled "Differences of DRM in Japan as seen by Foreign Residents in Japan - DRM Cooperation Starting from Understanding the Differences -". >>Read more

Figure 3.1 Latest Disaster Information on ADRC Website

The three most notable disasters in FY2022, as registered in the database, are:

- **Türkiye Earthquakes, 6 February 2023**

Türkiye was hit by a series of debilitating earthquakes in February 2023. It caused the deaths of 50,090 people and over 3.3 million people were displaced. Most of apartments and houses across a vast territory of 110,000 km² collapsed. Considering the disaster damages and losses, it was estimated that the total financial burden amounting to 103.6 billion USD, which is equal to 9% of GDP forecast for 2023, is needed for recovery (GLIDE number: [EQ-2023-000015-TUR](#)).

- **Tropical Storm Nalgae (Paeng) in the Philippines, 27 October 2022**

Tropical storm Nalgae (locally named Paeng) made landfall on 29 October 2022 in Catanduanes, Philippines. About 6 million people were affected, 164 dead, 28 missing, and 270 injured. Estimated damage to infrastructure was about 107 million USD (PHP 6 billion). TS Nalgae totally damaged 6,634 houses and partially damaged 61,788 other houses. (GLIDE number: [TC-2022-000352-PHL](#))

- **Floods in Pakistan, June–July 2022**

Heavy rains impacted multiple areas for weeks since June 2022. Downpour wreaked havoc in Khyber Pakhtunkhwa (KP), Balochistan, and parts of Sindh, where the local administration faced challenges in dealing with the emergency. Prolonged flooding caused severe impacts, including the deaths of 1,678 people. It also injured 12,864 and affected 33,046,329 in 84 districts. About 767,488 houses were fully destroyed while 1,277,861 houses were partially destroyed (GLIDE number: [FL-2022-000270-PAK](#)).

3.1.3 Natural Disaster Databook

ADRC retrieves and analyzes natural disaster data from the Emergency Events Database (EM-DAT) to better understand the occurrence, deaths, people affected, and economic losses of disaster events. The Natural Disaster Databook 2021 (Figure 3.2) contains analytical overview of disaster data that are shown in graphs with textual explanations. For instance, in analyzing climate-related disasters (particularly flood, storm, and drought), the data shows an increasing trend of occurrences of storm and flood since the last 30 years from 1991. Not only that, the impacts of climate-related disasters are also becoming more destructive, accounting for the highest number of people affected as well as economic losses both in the last 30 years (1991–2020) and in 2021, signifying a continuing trend (Figure 3.3).

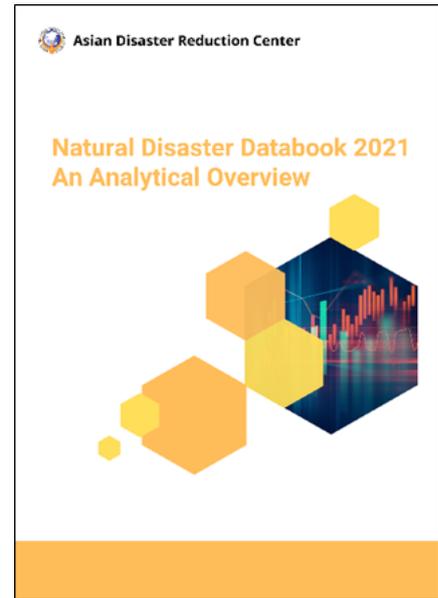


Figure 3.2 Cover of Natural Disaster Databook 2021

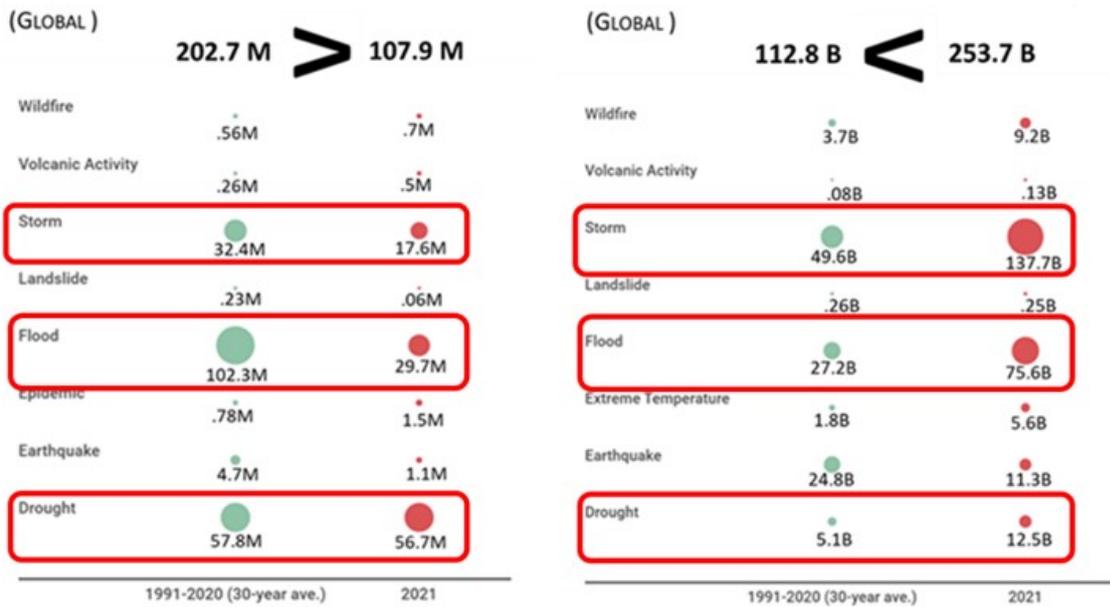


Figure 3.3 Data showing that climate-related disaster affected more people and causing greater economic losses

In 2021 alone, extreme cold waves (e.g., France in April) and heat waves (e.g., Canada in July) were recorded in many parts of the world. In Asia in 2021, aside from heat wave, India was severely impacted by floods and cyclones, affecting more than 18 million people. Bangladesh and Nepal were hit by floods that impacted millions of people. Floods affected 14 million people in China and over 1 million people in Indonesia. Furthermore, drought has been affecting millions of people during the past 30 years, and it incurred economic losses affecting more than 28 million people in Asia in 2021 alone.

3.2 Information Dissemination

ADRC disseminates DRR information using a range of channels, including: a) regular issuance of ADRC Highlights, a monthly newsletter, b) dissemination via GLIDE, and c) dissemination through Sentinel Asia and space-based platforms.

3.2.1 ADRC Highlights

Every month, the latest issue of the newsletter is uploaded on the ADRC website. Its text version is emailed to all subscribers in three different languages immediately after publication. As of 28 February 2023, the total number of the newsletter subscribers is 3,831 with 2,668 subscribers for English language, 224 subscribers for Russian language, and 939 subscribers for Japanese language. comprise the mailing list. In FY2022, the contents of the newsletter included articles on the latest ADRC activities (including the VR program), the Asian Conference on Disaster Reduction 2022, reports on participation in international conferences, and other events which ADRC staff members attended or gave presentations.



Figure 3.4 Front page of ADRC Highlights Vol. 36, April 2023

3.2.2 Data Sharing through GLIDE Number System

As of March 2023, over 7,700 GLIDE numbers have been issued. A GLIDE number (e.g., [EQ-2023-000015-TUR](#)) comprises the following components: disaster classification (24 types), year of occurrence, serial number in one year, and country code. Once a disaster occurs, an operator issues a GLIDE number by inputting disaster information such as location, time, disaster type, and initial damage and then uploaded on the GLIDE website. The number is automatically sent to its over 2,000 subscribers. GLIDE is linked with other disaster data management tools, including those tools at Reliefweb, Sentinel Asia, UNOSAT, ADINet, and ESCAP. Moreover, GLIDE’s governance and function has been updated. In terms of governance, a steering committee was established in 2021 as well as the three subcommittees: API, SOP, and New Product Development. In terms of functionality, two new manuals were drafted and crowdsourcing was introduced in 2022 to allow users to report “missing disasters in the GLIDE database.”

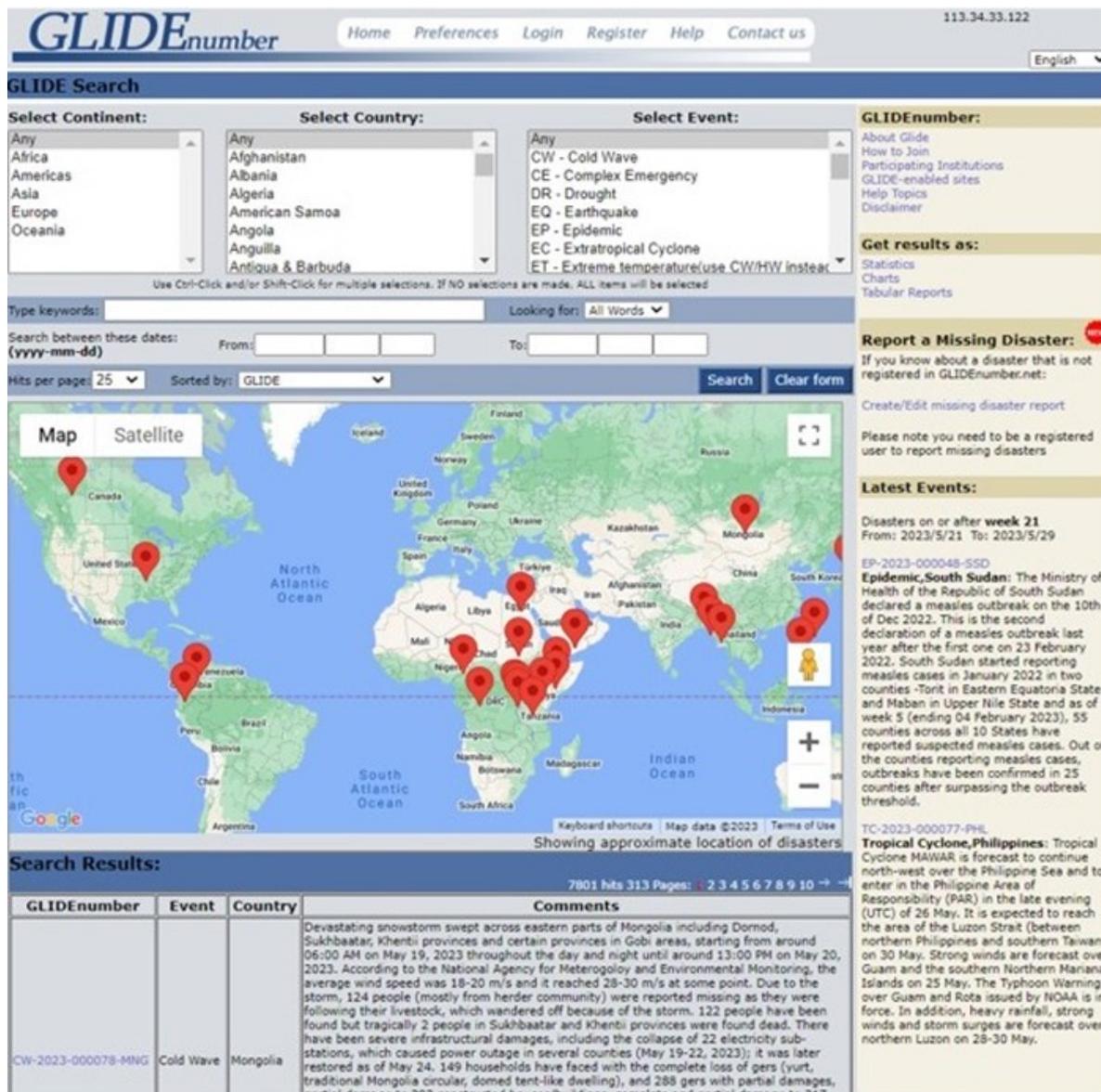


Figure 3.5 Homepage of GLIDE website

3.2.3 Data Sharing through Sentinel Asia

In FY2022, Sentinel Asia received 28 requests from the Joint Project Team (JPT) members and all 28 requests were activated (Figure 3.6). On behalf of its member countries, ADRC forwards the emergency observation request to seven space agencies under Sentinel Asia: ISRO (India), JAXA (Japan), MBRSC (United Arab Emirates), STI/VAST (Vietnam), GISTDA (Thailand), NARL (Taiwan), and CRISP (Singapore). Through the emergency observation satellite imageries, Sentinel Asia supports disaster management activity in the Asia-Pacific region by applying space-based technology (i.e., earth observation satellites data) and WEB-GIS technology. As of January 2023, the JPT membership comprises 112 organizations from 28 countries.

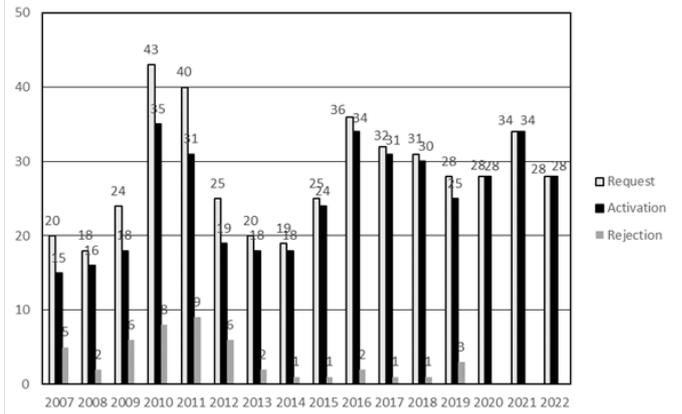
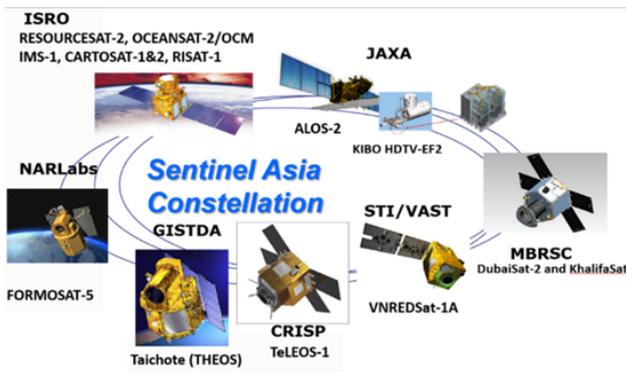


Figure 3.6 Data Provider Nodes and Emergency Observations Records, 2007–2022