

2. Highlights of FY2022

Towards the end of Fiscal Year 2022, ADRC activities were gradually implemented in-person, including the Asian Conference on Disaster Reduction (ACDR2022) which was held in March 2023 in Sendai, Japan. It signaled the lifting of restrictions brought about by the COVID-19 pandemic.

2.1 Activities in Figures

At a glance, Figure 2.1 shows the ADRC milestones of FY2022 in three activities areas: 1) information sharing; 2) human resource development; and 3) international cooperation.

ADRC MILESTONES OF FISCAL YEAR 2022

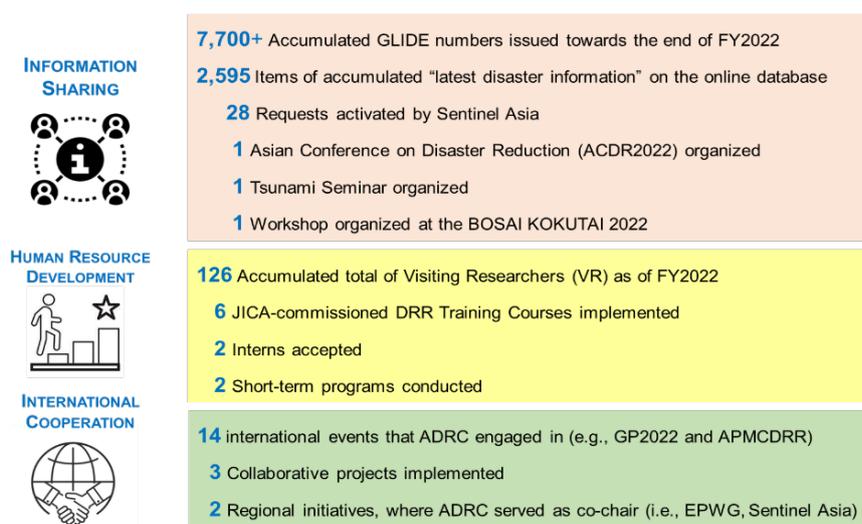


Figure 2.1 Highlights of ADRC Activities in FY2022

2.2 Asian Conference on Disaster Reduction 2022

Organized in a hybrid format to reach a broader participation of member countries, the ACDR2022, held on 10–12 March 2023, gathered 84 in-person participants from 17 countries in Sendai International Center, Miyagi Prefecture and attracted 121 online participants from 22 countries. ACDR2022 adopted the theme, "WHAT IS NEXT? Learning from the Past, Preparing for the Future". Since 2023 marks the 100th year of the Great Kanto Earthquake that struck Tokyo in 1923, ACDR2022 organized a special session to commemorate and discuss the lessons from the disaster. ACDR2022 had three key thematic sessions:

1) Large-Scale Disasters and Countermeasures; 2) Broaden Our Horizons for Disaster Data Linkage in SFDRR Implementation: Application of GLIDE (Global Identifier Number); and 3) The Provision of Information via Satellite for Disaster and Crisis Management.



Figure 2.2 Group Photo at the Asian Conference on Disaster Reduction 2022

2.2.1 Opening and Keynote Speeches

Mr TANI Koichi (Minister of State for Disaster Management and Ocean Policy and a member of the House of Representatives of the Government of Japan), when referring to the Türkiye-Syria earthquakes of 6 February 2023, said that he was saddened by the situation knowing that over 40,000 people died or missing while thousands of houses collapsed. He stressed that the Japanese government is committed to providing the utmost support to the people in the disaster-affected areas based on their needs. He also stated that lessons from recent disaster experiences need to be widely shared in the conference to help strengthen disaster prevention measures and accelerate the implementation of reconstruction projects. He hoped that the conference will serve as a starting point to further enhance disaster risk reduction measures and subsequently strengthen solidarity among countries.

Mr Yunus SEZER (Head, Disaster and Emergency Management Presidency, Türkiye), in his message which was read by Mr SASAHARA Akio of ADRC, expressed gratitude for the solidarity and generosity of the people around the world whom he believed as “a beacon of hope” for the people of Türkiye during the difficult time. The earthquakes, with more than 15,000 aftershocks in four weeks, affected 11 provinces, directly impacting approximately 110,000 km². Turkish government, through the Disaster and Emergency Management Presidency (AFAD) received an overwhelming support from 86 countries that sent search and rescue teams. After the message, a minute of silence was observed for the people affected by the earthquakes.

Dr HAMADA Masanori (Chairman of ADRC and Professor Emeritus at the Faculty of Science and Engineering of Waseda University), in his remarks, said that the Türkiye-Syria earthquakes revealed that there remains a huge number of vulnerable houses and buildings all over the world without reinforcement. Since Türkiye is member of ADRC, and in his capacity as chairman, he encouraged all member countries to further strengthen their partnerships to assist and support the people in affected areas and to provide guidance for a resilient recovery.



Figure 2.3 Keynote Speakers at the Opening Session of ACDR2022

Ms KORI Kazuko (Mayor of Sendai City) said that March 11 marks the 12th year of the Great East Japan Earthquake, and once again DRR practitioners, experts, and officials from different countries gathered in Sendai to learn and discuss preparedness measures against earthquakes, tsunamis, and the intensifying storms and floods. Corollary to this, and in accordance with the midterm review of the Sendai Framework for DRR 2015–2030 (SFDRR), she noted that Sendai City drafted an interim report on the progress of implementing the SFDRR from the perspective of the local government. She ended her remarks with a

commitment that Sendai City will pass on the lessons from the Great East Japan Earthquake to Asian countries and the world.

2.2.2 Special Session on the Centenary of the Great Kanto Earthquake

This special session comprised three discussion topics: 1) Lessons learned from the 1923 Kanto earthquake and subsequent countermeasures; 2) New findings and remaining challenges from the 1995 Great Hanshin-Awaji Earthquake and the 2011 Great East Japan Earthquake; and 3) What needs to be done to mitigate damage in disaster-prone Asia. Panel members comprised four renowned experts: 1) Dr HAMADA Masanori, Chairman of ADRC and Professor Emeritus at the Faculty of Science and Engineering of Waseda University; 2) Dr ITO Shigeru, President of ADRC and Professor Emeritus at the University of Tokyo; 3) Dr HASEMI Yuji, Professor Emeritus at the Faculty of Science and Engineering of Waseda University; and 4) Prof SHIGEKAWA Kishie, Professor at the Faculty of Social and Environmental Studies of Tokoha University. Mr YOSHIMURA Hidemi, former Chief Commentator at NHK Japan Broadcasting Corporation moderated this special session. Outcomes of the special session highlighted the following observations and lessons.



Special Session on the Centenary of the Great Kanto Earthquake: What can we learn from past disasters and how can we apply the lessons learned?
10:30 - 12:00 (UTC+9)

Moderator

Speakers

YOSHIMURA Hidemi
Former Chief Commentator
NHK (Japan Broadcasting Corporation)

ITOH Shigeru
President
Asian Disaster Reduction Center (ADRC), Professor Emeritus of the University of Tokyo

HAMADA Masanori
Chairman
Asian Disaster Reduction Center (ADRC), Professor Emeritus, Faculty of Science and Engineering, Waseda University

HASEMI Yuji
Professor
Emeritus Faculty of Science and Engineering Waseda University

SHIGEKAWA Kishie
Professor
Faculty of Social and Environmental Studies, Tokoha University

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Figure 2.4 Speakers of the Special Session on the Centenary of the Great Kanto Earthquake

Observations

- The Great Kanto Earthquake was seen as the catalyst for a major step-up in architecture and urbanism in Japan
- It inspired efforts for safe town planning, embracing modern urban design for reconstruction
- It inspired seismic design, leading to the enforcement of Urban Building Act in 1920
- It inspired the introduction of fire control measures in metropolitan areas
- It inspired improvement in legal systems for assisting victims and maintaining records

Lessons

- Large-scale disasters could inform disaster preparedness efforts, particularly in the areas of town planning, building safety, and development of parks and disaster prevention centers
- Recovery from large-scale disasters could trigger societal and technological changes (e.g., providing tax exemption incentives/preferential loan interest rates for earthquake-resistant buildings or promote the construction of tsunami evacuation towers/breakwaters)
- Large-scale disasters could also inform the mitigation measures against major earthquakes that are predicted to occur in the future (e.g., Nankai Trough)

Mr YOSHIMURA concluded the special session by proposing the concept of “Ethical DRR”. This concept means that all DRR efforts should not be confined within the scope of legal regulations but they should also promote ethical perspectives such as saving lives, leaving no one behind, and ensuring that people are safe from disasters through investments prevention and mitigation efforts.

2.2.3 Session 1: Large Scale Disasters and Countermeasures

This session shared information on the current situation and responses to large-scale disasters, which are intensifying around the world due to the climate crisis and increasing economic damage due to the progress of urbanization, and the cascading and compounding of disasters. Furthermore, it provided an opportunity to learn about disaster risk management (DRM) systems, including more effective investment in advanced DRR and DRM measures.

Session 1
Large-Scale Disasters and Countermeasures
13:30 - 15:40 (UTC+9)

Moderator

Speakers

SAKAMOTO Mayumi
Professor
Graduate School of Disaster Resilience and Governance,
University of Hyogo

ARASHIMA Chizu
Professor
Faculty of Global Communication,
Kobe Gakuin University

Saleem Shahzad Malik
Director
Disaster Risk Reduction, National
Disaster Management Authority,
Prime Minister's Office, Pakistan

Le Minh Nhat
Deputy Director
Deputy Director, Department of
Natural Disaster Response and
Recovery, Viet Nam Disaster
Management Authority (VNDMA),
Ministry of Agriculture and Rural
Development(MARD)

Serik Aubakirov
Acting Director
The Center for Emergency
Situations and Disaster Risk
Reduction (CESORR)

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Figure 2.5 Speakers of Session 1 of ACDR2022

Dr SAKAMOTO Mayumi (Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo) moderated this session. She stressed the importance of improving the countermeasures for large disasters. For instance, water-related disasters, such as the unusually prolonged floods in Pakistan in 2022, are getting more frequent and intense. Earthquakes, such as those in Türkiye and Syria in February 2023,

were shown to have unknown dynamics and unpredictable occurrence. It was noted that these disasters often cross-national borders and affect people living in different countries.

Dr ARASHIMA Chizu (Professor, International and European Union Law, Faculty of Global Communication, Kobe Gakuin University) presented the issues in transboundary disaster governance from the perspective of international law. She highlighted the importance of science-based data in negotiating treaties or bilateral agreements between countries on addressing transboundary disasters.

Mr Saleem Shahzad Malik (Director, Disaster Risk Reduction, National Disaster Management Authority, Prime Minister's Office, Pakistan) presented the disaster risk reduction and climate change adaptation activities in Pakistan. In particular, the government is strengthening its disaster management system to address extreme events such as the prolonged and devastating floods in 2022. Additionally, the government has been adopting new technology in disaster risk management as well as utilizing scientific data to further enhance its disaster risk reduction strategies.

Dr Le Minh Nhat (Deputy Director, Department of Natural Disaster Response and Recovery, Vietnam Disaster Management Authority, Ministry of Agriculture and Rural Development, Vietnam) presented an overview of the disaster risk management system in Vietnam. He said that flood is the most frequent disaster in the country. To address this, major financial and structural investments have been promoted in flood control and management. In fact, Vietnam's National DRR Plan 2021–2025 puts greater priority on flood control projects.

Mr Serik Aubakiro (Acting Director, Center for Emergency Situations and Disaster Risk Reduction) introduced the roles and functions of the Center for Emergency Situations and Disaster Risk Reduction (CESDRR), which is a permanent intergovernmental body to help address transboundary disasters and emergencies. CESDRR was established through the agreement between the Government of the Republic of Kazakhstan and the Government of the Kyrgyz Republic to achieve the following objectives: 1) cooperation in disaster risk reduction, prevention, and elimination of emergency situations; 2) mitigate factors of disaster risk, identify, assess, forecast and monitor emergency situation hazards; 3) coordinate mutual efforts and strengthen preparedness for effective and timely response to emergencies; 4) implement regional and international cooperation in DRR and emergency management; and 5) increase the safety of life activities of the population during natural and man-made disasters.

Outcomes of Session 1 called for the following actions: 1) Strengthening transboundary disaster governance, such as the CESDRR initiative in Central Asia; 2) Improving the disaster risk management systems as shown in the flood disaster experience in Pakistan using science-based data on climate change; and 3) Investing more in DRR, such as the financial investment in flood control and management in Vietnam.

2.2.4 Session 2: Disaster Data Linkage: Application of GLIDE

This session reviewed the current status of disaster data management in Asia and introduced some tools and practices to effectively deal with the data from a wide range of stakeholders. It aimed at contributing to the SFDRR Target G-5: Number of countries that have accessible, understandable, usable, and relevant disaster risk information and assessment available to the people at the national and local level.

Session 2
Broaden Our Horizons for Disaster Data Linkage in SFDRR Implementation: Application of GLIDE (GLObal IDentifier Number)
 15:50 - 17:20 (UTC+9)

Moderator

Speakers

Julio Serje
 Director
 RobotSearch Software Inc.

Animesh Kumar
 Head
 UNDRR Office in Bonn,
 United Nations Office for
 Disaster Risk Reduction

Demberelnyam Baasansuren
 Director
 Disaster Risk Management
 Department (DRMD), National
 Emergency Management
 Agency (NEMA), Mongolia

Lee Chihun
 Senior Research Officer
 National Disaster
 Management Research
 Institute, Ministry of the
 Interior and Safety,
 Republic of Korea

Rajesh Sharma
 Programme Specialist (Global)
 Disaster Risk Information &
 Application, Crisis Bureau,
 Bangkok Regional Hub,
 United Nations Development
 Programme (UNDP) Bangkok,
 Thailand

Keith Paolo C. Landicho
 Disaster Monitoring and
 Analysis Officer, ASEAN
 Coordinating Centre for
 Humanitarian Assistance on
 disaster management (AHA
 Centre)

SHIOMI Yumi
 Senior Researcher
 Asian Disaster Reduction
 Center (ADRC)

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Figure 2.6 Speakers of Session 2 of ACDR2022

Mr Julio Serje (Consultant of ADRC and Director of RobotSearch Software Inc.) moderated this session. In the introduction, he emphasized the challenges relating to disaster data management in disaster risk reduction. On one hand, there are still gaps in maintaining damage and losses data. On the other hand, most of the disaster data remain aggregated. These challenges exist on top of the fact that disaster data is getting more complex, and therefore, linkages of various data management tools in the region need to be promoted.

Dr Animesh Kumar (Head, UNDRR Office in Bonn, UNDRR) reported the progress in monitoring the SFDRR. He mentioned that as of February 2023, there are already 156 countries using Sendai Framework Monitor to report on SFDRR progress. He also noted the usability of SFDRR targets and indicators such as its application in several intergovernmental processes. Meanwhile, the data has helped on SDGs reporting and are also being used by partner organizations in their thematic reports and programs Dr Kumar also added that the challenge in reporting is that developing countries, especially least developed countries (LDCs) and Small Island Developing States (SIDS), are struggling to provide data to all targets and all indicators for the SFM. To help advance monitoring, new models and tools are being developed particularly in tracking of disaster losses and damages. The new model is expected to link climate-related variables, losses and damages, and disaster events.

Mr Demberelnyam Baasansuren (Director, Risk Management Department, National Emergency Management Agency, Mongolia) presented the practices and challenges of disaster data gathering and sharing in Mongolia. These include the Spatial Information System that National Emergency Management Agency (NEMA) established in 2019 to share hazard information nationwide. She shared that barriers to disseminating the registration templates and guidance to respective stakeholders for collecting raw data are among the challenges in data gathering. In addition, there is limited human and technological capacities to provide an understanding of collecting and generating reliable data. As a way forward, NEMA will strengthen

their knowledge and understanding of data disaggregation and its importance, through training and other outreach activities.

Dr Chihun Lee (Senior Research Officer, National Disaster Management Research Institute, Ministry of the Interior and Safety, Republic of Korea) talked about the international cooperation on disaster risk reduction focusing on flood early warning systems. He highlighted their cooperation project with the Philippine government to install flood early warning systems, with emphasis on communication protocol.

Mr Rajesh Sharma, (Program Specialist (Global), Disaster Risk Information and Application Crisis Bureau, Bangkok Regional Hub of UNDP, Bangkok, Thailand) introduced UNDP's Digital Disaster Risk Reduction Maturity Model (DDRRMM). It is a diagnostic tool for the maturity of the digital ecosystem of disaster risk reduction and management practices. In developing this tool, UNDP conducted in-depth analysis of various national disaster database systems to support the new generation of disaster data and information systems in line with the level of digital maturity in countries. He highlighted the importance of digital and data governance for DRRM and the need for its promotion through legal and institutional frameworks, policies, strategies, action plans, and practical guidelines.

Mr Keith Paolo C. Landicho (Disaster Monitoring and Analysis Officer, ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management) presented the evolution of the ASEAN Disaster Information Network (ADINet), which is a repository of information concerning hazards and disasters that occurred in Southeast Asian region. ADINet has two types of linkages. One is "existing linkages" that includes linkages for validation, linkages for research application, and linkages for coverage. The other is "external linkages" that includes linkages for integration and linkages for enhancement. ADINet's linkage with GLIDE is under the linkages for integration.

Dr SHIOMI Yumi (Senior Researcher, ADRC), presented the GLIDE improvements, particularly its open governance and better functionality. 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. Crowdsourcing was also introduced in 2022 to allow users to report "missing disasters in the GLIDE database." Linkages of GLIDE with other disaster data management tools have been constantly coordinated, such as linkage with Reliefweb, Sentinel Asia, United Nations Satellite Centre (UNOSAT), ADINet, and ESCAP.

Outcomes of Session 2 called for the following actions: 1) Making disaster data accessible, understandable, and usable to people at the national and local levels, such as Mongolia's initiative on disaster data governance; and 2) Promoting further linkages of the disaster data management tools, which include: the new model of losses and damage tracking of UNDRR, the DDRMM of UNDP, ADINet of AHA Centre/ASEAN, and the GLIDE of ADRC.

2.2.5 Session 3: Provision of Information via Satellite for DM

This session provided an overview of the utilization of the Quasi Zenith Satellite System (QZSS) for disaster and crisis management (DC Report) and the outcomes of QZSS DC Report demonstrations in some countries.

Session 3
The Provision of Information via Satellite for Disaster and Crisis Management
 09:00 - 10:30 (UTC+9)

Moderator

Speakers

 Gerald Potutan Senior Researcher Asian Disaster Reduction Center (ADRC), Visiting Associate Professor, Kobe University	 HONGO Nobuo Deputy Director National Space Policy Secretariat, QZSS Strategy Office, Cabinet Office, Japan	 Runjie Guo GIS Engineer Social Innovation Division, NTT DATA Corporation	 Hasi Bateer Advanced Technologies Research Laboratory Infrastructure Systems, Development Center, Asia Air Survey, Co. Ltd.	 ICHIKAWA Ryunosuke Assistant Manager Social Innovation Division, NTT DATA Corporation	 Vasiti Soko Director National Disaster Management Office (NDMO), Fiji	 Socheath So Senior Technical Officer The National Committee for Disaster Management (NCDM), Cambodia
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Figure 2.7 Speakers of Session 3 of ACDR2022

Dr Gerald Potutan (Senior Researcher at ADRC and Visiting Associate Professor at Kobe University) moderated this session. He noted that in many remote, mountainous, and island areas of the Asian region, people have limited or no access to internet or cellular communications. Oftentimes, the warning information to evacuate does not reach the people at-risk. Providing the warning information via QZSS helps address this challenge as it directly transmits the message to: 1) individuals with receivers/terminals; 2) outdoor electronic facilities/boards; and 3) ground receivers that activate community alarms (e.g., siren and beam lights).

Mr HONGO Nobuo (Deputy Director, National Space Policy Secretariat, QZSS Strategy Office, Cabinet Office, Japan) explained about the Satellite Report for Disaster and Crisis Management (DC Report), which is one of the services under QZSS. With this service, disaster management agencies can provide warning information via QZSS satellites to at-risk communities, even in the absence of internet or cellular services. He added that as of December 2022, approximately 390 products are compatible with QZSS. Using some of these products (e.g., smartphone apps), demonstrations of QZSS utilization were conducted in Australia, Fiji, and Thailand.

Ms Runjie Gou (GIS Engineer, Social Innovation Division, NTT DATA Corporation) presented the outline and progress of the QZSS Project, which is jointly implemented by five partner organizations: Cabinet Office of Japan, NTT Data Corporation, Keio University, PASCO Corporation, Asia Air Survey, and ADRC. Ms Gou said that the main purpose of the project is to create a system using the QZSS DC Report service that is tailored to each country's needs and environment. It also aims to conduct QZSS DC Report Demonstrations before it officially starts operation in 2024. In the demonstrations, the project will identify requirements and issues for deployment of the system.

Dr Hasi Bateer (Hasi Lab Director, Advanced Technologies Research Laboratory, Infrastructure Systems Development Center, Asia Air Survey, Co. Ltd.) reported the outcomes of the feasibility study for disaster information system using QZSS. The study covered 21 countries in Asia and the Pacific regions and

investigated the following: 1) Conditions for receiving QZSS, 2) Specific disaster cases and issues; and 3) Early Warning System implementation needs. The outcomes highlighted information transmission issues, which includes: distortion of information as it passes through many channels; delayed arrival of information; and limited coverage of telecommunications network. In order to have an effective transmission of warning information, the study recommended that following characteristics must be present in the information system: robustness, immediacy, correctness, and comprehensiveness.

Mr ICHIKAWA Ryunosuke (Assistant Manager, Social Innovation Division, NTT DATA Corporation) presented results of QZSS validations conducted in Thailand, Fiji, and Australia.

In Thailand, the scenario was forest fire. By using QZSS, rangers can receive information directly wherever they are in the park. In Fiji, the scenario is tsunami and station devices can receive QZSS transmission and transmit it further through low power wide area network (LPWAN). In Australia, the scenario is bushfire. Information from QZSS can be received through smartphones. Following up on these promising results, the next demonstration will be intended to be more practical, which may include residents receiving messages on mobile terminals by using different communication methods (e.g., Wi-Fi, LPWAN, and Bluetooth).

Ms Vasiti SOKO (Director, National Disaster Management Office, Fiji) mentioned that one of the reasons for using QZSS in Fiji is its location in the Pacific Ocean, which is hazard-prone and has limited risk communication system. In addition, Fiji is also situated in between Vanuatu and Samoa that are also prone to disasters. Since National Disaster Management Office Fiji is strengthening its disaster management system, including early warning system, the utilization of the QZSS DC Report service in Fiji is a welcome endeavor.

Mr Socheath So (Senior Technical Officer, The National Committee for Disaster Management, Cambodia) introduced Cambodia's disaster risk management information system called, Platform for Real-time Impact and Situation Monitoring (PRISM). This platform links the field assessment information, early warning systems, satellite data, and baseline population and socio-economic vulnerability data to effectively measure the risk and its impact. QZSS is expected to augment the PRISM by providing a warning information transmission system that is tailored to the local environment.

Outcomes of Session 3 called for the following actions: 1) Promoting the provision of warning information via QZSS to directly transmit warning information to the communities at-risk; and 2) Conducting QZSS Demonstrations in countries of Asia and Pacific regions to tailor the prototype receiver according to the local environmental conditions.

2.2.6 Field Visits

Participants visited three places in Yuriage, Natori City: 1) Earthquake Reconstruction Museum, 2) Teizan Canal and Restoration Public Houses, and 3) Kawamachi Terrace Yuriage. At the Earthquake Reconstruction Museum, the Mayor of Natori City explained the facility's function as a flood defence in times of emergencies. He also noted that the population in the area initially declined after the earthquake but after promoting the town plan, the population in the area gradually increased. At the Teizan Canal and the Reconstruction Public Housing area, participants were able to see works of raising land level and the tsunami emergency evacuation site set up in the public housing. At the Kawamachi Terrace Yuriage, participants witnessed the overflowing influx of locals and tourists. They also learned about the disaster risk reduction function of the commercial center. During the field trip, some participants raised questions about the specific community

development measure and reconstruction policy implemented by Natori City and showed great interest in the reconstruction efforts in the area.



Figure 2.8 ACDR2022 participants during the field visit in Yuriage, Natori City

2.2.7 Side Event: JIPAD Seminar

One of the side events at ACDR2022 was the Japan International Public-Private Association for Disaster Risk Reduction (JIPAD) Seminar, which was organized by the Cabinet Office on March 10, 2023. Participants of ACDR2022 from member countries joined the seminar and learned about the JIPAD's initiatives, as well as introduction of DRR technologies developed by JIPAD participating companies. The main objective of the seminar was to promote Japanese disaster risk reduction (DRR) policies and technologies abroad and build DRR capacity around the world with the aim of contributing to the achievement of SFDRR and the SDGs. The JIPAD Seminar showcased Japanese technologies pertaining to: 1) road development, 2) housing constructions, 3) multi-purpose helicopters, 4) earthquake sensors, and 5) radio communication systems to further enhance disaster management.

Figure 2.9 Agenda of the JIPAD Seminar

2.3 Report on Türkiye-Syria Earthquakes 2023

Türkiye is a member of ADRC since 2018 with the AFAD as the counterpart agency. Following the earthquakes that occurred on 6 February 2023, ADRC coordinated various actions. A brief report of these activities is available on the website: https://www.adrc.asia/publications/disaster_report/index.php

2.3.1 Issuance of GLIDE numbers

GLIDE numbers for the earthquakes that occurred on 6 February 2023 were issued as follows:

- Türkiye: [EQ-2023-000015-TUR](#)
- Syria: [EQ-2023-000015-SYR](#)

With the GLIDE numbers issued, all information related to these earthquakes are integrated.

2.3.2 Satellite imageries

Below are some satellite imageries that ADRC requested from Sentinel Asia on behalf of AFAD. The satellite imageries were analyzed and AFAD utilized it for disaster response, including assessment of impacts.

These emergency observation satellite imageries are available online: <https://sentinel-asia.org/EO/2023/article20230206TR.html>.

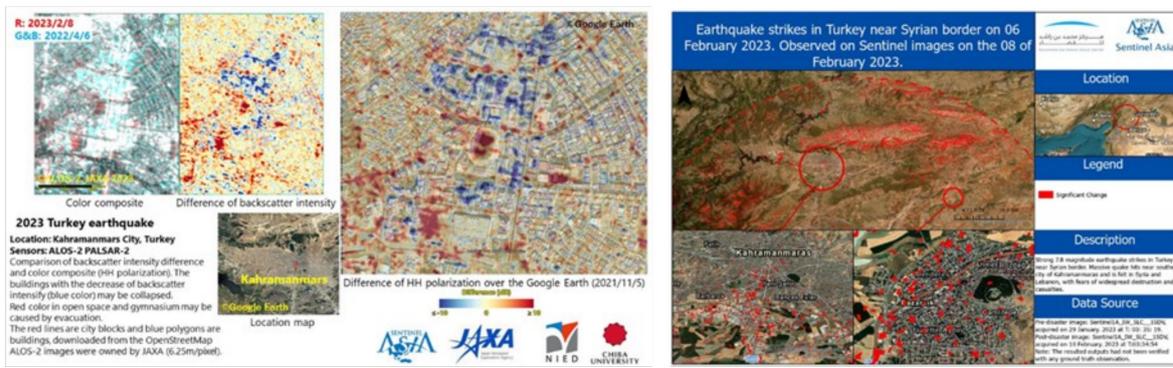


Figure 2.10 Satellite imageries of the 2023 Türkiye Earthquakes from Sentinel Asia

2.3.3 Assessments

ADRC initially gathered impact assessment of the Türkiye-Syria earthquakes, including those presented at the ACDR2022 on 11 March 2023, which includes:

- The main shock occurred close to the border of Türkiye and Syria
- 11 out of 81 provinces in Türkiye were affected by the earthquakes
- Total population of the 11 earthquake-affected provinces is 14,013,496 (which is 16.4% of the national population of 85,279,553 people)
- AFAD, with the support of World Bank (WB), UNDP, and European Union (EU), published the Post Disaster Needs Assessment (PDNA) on 23 March 2023 <https://www.sbb.gov.tr/wp-content/uploads/2023/03/Turkiye-Recovery-and-Reconstruction-Assessment.pdf>

Province	Total
Adana	2,274,106
Adiyaman	635,169
Diyarbakir	1,804,880
Elazığ	591,497
Gaziantep	2,154,051
Hatay	1,686,043
Malatya	812,580
Kahramanmaraş	1,177,436
Şanlıurfa	2,170,110
Kilis	147,919
Osmaniye	559,405
Total Region	14,013,196
Men	7,049,219
Women	6,963,977
Total Türkiye	85,279,553
Men	42,704,112
Women	42,575,441

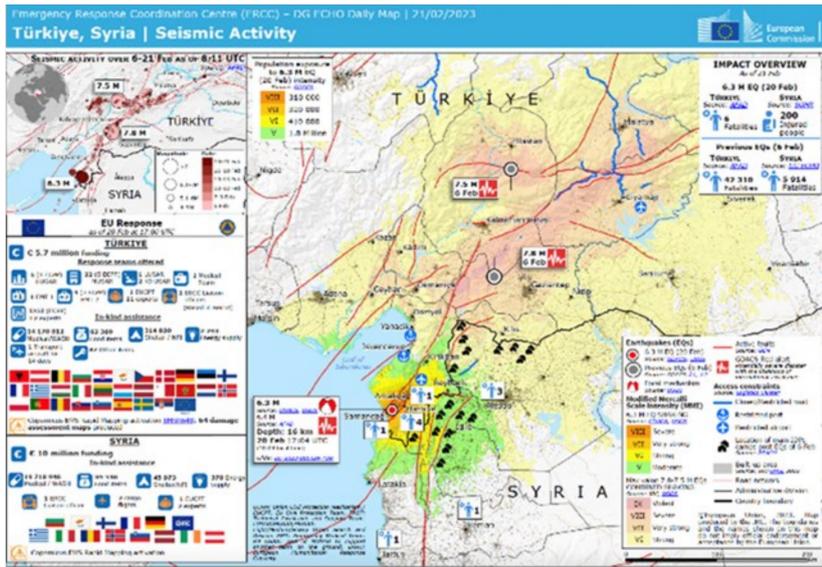


Figure 2.11 List of Provinces affected and the Seismic Activity map of the 2023 Türkiye-Syria Earthquakes

2.4 Tsunami Seminar 2022

With the theme, “Understanding Tsunami Risk and Enhancing Practical Countermeasures”, ADRC organized an online tsunami seminar on 15 June 2022. The seminar was aimed at improving knowledge on tsunami risk, especially with regard to non-earthquake sources of tsunami. Outcomes of the seminar provided insights on augmenting physical countermeasures (e.g., levees) and improving practical countermeasures at the community level (e.g., awareness-raising, actionable early warning, and simple evacuation procedures). Speakers in this seminar, were: (1) Dr Teuku Alvisyahrin, Professor at Syiah Kuala University and Former Head of Professional Services Division of the Tsunami and Disaster Mitigation Research Center, Banda Aceh, Indonesia; (2) Mr Somneuk Swatteuk, Disaster Early Warning Specialist at the National Disaster Warning Center of the Department of Disaster Prevention and Mitigation, Ministry of Interior in Thailand; and (3) Mr ARAKIDA Masaru, Director of the Research Department of ADRC, Kobe, Japan. Dr Gerald Potutan, Senior Researcher at ADRC, served as moderator while Mr NAKAGAWA Masaaki, Executive Director of ADRC, provided synthesis of the discussions. Below is a list of messages from the event:



Figure 2.12 Speakers of ADRC Online Tsunami Seminar 2022

- Tsunami risk is dynamic. As shown in the experiences of Thailand and Indonesia, tsunami risk can increase or decrease depending on the community's ability to reduce vulnerability.

- Practical countermeasures need to be scaled-up to enhance community resilience. It is important to exchange experiences in practical countermeasures (e.g., how to evacuate the pregnant, disabled, and elderly during tsunami) so that communities can further learn and improve their efforts.
- Space-based technology augments response efforts during tsunami disaster. Satellites imageries during the Great East Japan Earthquake were valuable in assessing tsunami disaster impacts by comparing before and after photos.

Through this seminar, information about tsunami risk were greatly understood. Hence, ADRC will continue sharing Tsunami DRR experiences and lessons to pass on to the next generation.

2.5 Workshop at the BOSAI KOKUTAI 2022

Within the context of the BOSAI KOKUTAI 2022, ADRC organized a workshop on 22 October 2022 entitled, “Differences in Disaster Risk Management (DRM) between Japan and other countries as seen by foreign residents: Cooperation starts from understanding the differences.” Speakers at the workshop discussed a range of issues, including the engagement of foreign residents in disaster prevention activities, risk communication, and ways to bridge the differences in DRM practices among Asian countries.

Dr Khaerunnisa (Head, Master of the Architecture Program, University of Atma Jaya Yogyakarta, Indonesia), a former foreign student in Osaka, pointed that in Japan, foreign students can organize themselves to establish a network of support and disaster information from mass media, TV, the internet, and radio are readily accessible to foreign students. By contrast, in Indonesia, government agencies facilitate the organization of community networks (including student networks) to build a strong support system in times of disaster.



Figure 2.13 Participants of ADRC Workshop at the BOSAI KOKUTAI 2022

Mr NAGANO Koichi (Director, Policy Planning and Coordination Department, Hyogo International Association) highlighted Hyogo International Association's (HIA) efforts to support foreign residents during disasters. Among the efforts he mentioned were: 1) a multilingual bulletin board, aimed at providing information on disaster preparation and evacuation in times of disaster; 2) a Disaster Preparedness Guide for Children and Parents, which is to be disseminated to all residents; and 3) the My Evacuation Card, a card that provides simple instructions for evacuation in nine different languages.

Mr MAMIYA Keita (Risk Management Section Officer, Policy Department, Kusatsu City, Shiga Prefecture) shared Kusatsu City's pioneering program of organizing "Foreign Firefighters." During normal times, foreign firefighters receive training and participate in disaster risk reduction activities, including seminars and lectures. During emergencies, foreign firefighters also help in disseminating information via social media, support safe evacuation, and assist in counselling using their respective native languages.

Dr Gerald Potutan (Senior Researcher, ADRC) presented the results of an online survey that looked into the differences in DRM practices between Japan and other countries. The study showed that foreign residents perceived Japan's DRM practices (e.g., hazard maps, disaster drills, evacuation guidance, and early warnings) to be "excellent" compared with their respective countries of origin. The study also showed that "language barrier" hinders risk communication. So, the use of visual tools (e.g., images, drawings, and signs); reaching out to foreign residents early on (e.g., during arrival and registration) regarding disaster preparedness; and enhancing multilingual services (e.g., offering translations and subtitles in more languages) are among the actions that the respondents recommended.

In closing, Mr ARAKIDA Masaru (Director, Researcher Department, ADRC), who moderated the workshop, acknowledged that since foreign residents in Japan come from diverse cultures and backgrounds, Japanese local governments can experience difficulties in communicating disaster risk. He said that the outcomes of the workshop can offer insights on how to address this challenge. He also mentioned that all workshop materials would be made available on the ADRC website at: <https://www.adrc.asia/workshop/2022bosaikokutai.php>.

Asian Disaster Reduction Center
Side Event Workshop at the BOSAI KOKUTAI 2022

Differences in DRM between Japan and other countries as seen by foreign residents in Japan
– DRM cooperation starts from understanding the differences –

22 October 2022
15:30 - 16:30
(Japan Time UTC+9)

Venue
3rd Floor at JICA Kansai,
Seminar Room No.33 • 34
1-5-2 Waburohama Kagamori, Chuo-ku,
Kobe City, Hyogo Prefecture 651-0873

Registration
For registration, please scan this QR code or visit the link below and fill out the registration form

➤ In - person registration form
<https://bit.ly/BK2022ADRC2>

*Applications will be closed when the maximum number of participants reaches 50.

➤ Online registration from
<https://bit.ly/BK2022ADRC>

Contact us
ADRC Secretariat email address: bosai_kokutai2022@adrc.asia
ADRC Website: <https://www.adrc.asia>

Figure 2.14 Flyer of the Workshop at the BOSAI KOKUTAI 2022