

## **1. Comprehensive Support from Disaster Prevention to Disaster Relief and Recovery Assistance**

### **1.1. Disaster Prevention**

#### **1.1.1. Capacity Building for Disaster Prevention**

##### **1.1.1.1 Asian Disaster Reduction Center (ADRC)**

Japan contributes to capacity building in developing countries and shares disaster information through the Asian Disaster Reduction Center (ADRC), which has 31 Asian countries as members. For example, visiting researchers are invited from member countries (125 from 27 countries in total as of March 2022) and are trained to contribute to the planning of disaster risk reduction policies in member countries through research on disaster risk reduction policies. The ADRC also collects information on disaster management systems and the latest disaster information in each country and provides them on its website, as well as satellite observations of disaster damage in the event of a disaster.

##### **1.1.1.2 Technological Contributions to the Mitigation of Water-related Disaster Risks**

Japan contributes to solving social issues related to water in each country through the development of technologies, e.g., satellite observation/prediction data and flood risk assessment, as well as the use of hybrid technologies in combination with both climate change adaptation and mitigation measures, e.g., the effective use of existing dams, and by communicating the results of these technologies to overseas countries.

##### **1.1.1.3 Disaster Risk Reduction Infrastructure Assistance**

In order to contribute to the realization of a "society with less risk of disasters," Japan supports developing countries to establish organizations in charge of structural measures and comprehensive disaster risk reduction promotion systems, and helps developing countries increase their prior investment in disaster prevention. Specifically, the JICA supports disaster risk reduction infrastructure development projects that can serve as models for developing countries to promote prior investment in disaster risk reduction through technical and financial cooperation, and also promotes human

resource development by providing training in Japan and utilizing Japanese technologies, systems, and knowledge.

## **1.2. Disaster Relief and Recovery Assistance**

### **1.2.1 Disaster Risk Insurance**

Japan, in cooperation with international organizations, has promoted the initiatives of disaster risk insurance, utilizing insurance schemes to provide rapid payouts without insurance claim investigation in the event of a large-scale disaster.

The Government of Japan has contributed to launching the initiatives of disaster risk insurance in Southeast Asia (Southeast Asia Disaster Risk Insurance Facility: SEADRIF), the Pacific region (Pacific Catastrophe Risk Assessment and Financing Initiative: PCRAFI), and the Caribbean nations (Caribbean Catastrophe Risk Insurance Facility: CCRIF). After launching the initiatives, the Government of Japan has made subsequent financial contributions to the SEADRIF and the PCRAFI.

### **1.2.2 Global Shield**

At COP27, the G7 and V20 officially launched the Global Shield against Climate Risks as an initiative to strengthen financial preparedness for rapid response to weather disasters. Initial contributions include more than 210 million euros and first recipient countries (pathfinder countries) include Bangladesh, Costa Rica, Fiji, Ghana, Pakistan, the Philippines, Senegal.

As part of this initiative, Japan will make voluntary contributions to the Global Shield Financing Facility operated by the World Bank to strengthen support for loss and damage, including financial assistance and technical assistance for rapid recovery from natural disasters for vulnerable countries.

### **1.2.3 Post Disaster Stand-by Loan**

Japan provides "Post Disaster Stand-by Loan" to developing countries that are exposed to a risk of natural disasters, which provides rapid assistance when a disaster occurs by having the Yen Loan signed in advance. Examples of signed agreements are the Philippines (50 billion yen in 2020), Fiji (5 billion yen in 2020), El Salvador (5 billion yen in 2015), Peru (10 billion yen in 2014), and the Philippines (50 billion yen in 2013).

### **1.2.4 Promoting "Build Back Better"**

In the area of weather-related disasters, the project provided rehabilitation and reconstruction

assistance in response to the 2022 Pakistan flood disaster, the 2021 Timor-Leste flood disaster, the 2019 Cyclone Idai disaster in Mozambique, and the 2013 Typhoon Yolanda disaster in the Philippines, and provided support for hazard assessment and rehabilitation and reconstruction planning.

## **2. Promoting the Development of Early Warning Systems**

### **2.1. Capacity Building and Development of Meteorological Observation Equipment**

#### **2.1.1 Bilateral Support for Capacity Building of Early Warning Systems**

Japan will continue to provide technical assistance and capacity development supports, in fields of weather observation, forecasting, and climate information, for National Meteorological and Hydrological Services responsible for early warning systems for weather-related disaster. In addition, Japan will continue to make efforts in cooperation with the public and private sectors to ensure that excellent technologies of the Japanese private sector, such as weather radar, are introduced and utilized in early warning systems around the world. Over the past ten years, Japan has provided such assistance to ten countries.

#### **2.1.2 Development of Meteorological Observation Equipment**

Japan supports the improvement of the observation capabilities of national meteorological agencies for meteorological phenomena through the development of meteorological radars and other measures.

### **2.2. Cooperation with International Organizations**

#### **2.2.1 Contribution to the UN Early Warnings Initiative “Early Warnings for All”**

Japan has supported the UN Early Warnings Initiative “Early Warnings for All” to be led by the United Nations Office for Disaster Risk Reduction (UNDRR) and the World Meteorological Organization (WMO), which aims to make every person on Earth is protected by early warning systems within five years, and are providing support for the establishment of early warning systems in developing countries and others.

### 2.2.2 Collaboration with the World Meteorological Organization (WMO)

Under the framework of the WMO and other international organizations Japan has supported National Meteorological Services by providing information and technical cooperation through the operation of Regional Centers on weather observation, tropical cyclones, climate, etc., and capacity building through the WMO's programs.

### 2.2.3 Collaboration in Quad [JP, US, Australia, India]

Based on the "Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP)" announced at the Quad Leaders' meeting in 2022, the Climate and Information Service Taskforce under the Climate Working Group has been discussing the development of early warning systems in the Pacific region.

## 2.3. Cooperation with the Private Sector

### 2.3.1 Initiative to Promote the Development of Early Warning Systems through Public-Private Partnerships in the Asia-Pacific Region

Japan is planning to establish a new and additional cooperative structure for Japanese companies interested in developing early warning systems (e.g., installation of observation devices, analysis and projection based on observation data, delivery of climate information services) to develop early warning systems for business sector and to create new business using the systems in the Asia-Pacific region, in a way that can be well adapted to the circumstance in each country. As the first step, Japan aims to build a prototype early warning system for business sector in the Asian region to pave the way for further development.

## 3. Other Cross-Sectional Activities

### 3.1 Knowledge Sharing

#### 3.1.1 Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT)

Japan uses the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT), which was launched to support climate change risk-informed decision-making and highly effective climate change adaptation in the Asia-Pacific region, to improve scientific findings related to climate change

risks, to provide stakeholders with support tools, and to strengthen capacity related to climate change impact assessment and climate change adaptation, in collaboration with countries and relevant institutions in the region. For example, the AP-PLAT provides forecasting tools (e.g., for precipitation, temperature) around the world based on climate scenarios, and information that can be used for averting and minimizing losses and damages and for adaptation planning in each country. In addition, e-learning courses are made available for officials of developing countries who are seeking funding from the Green Climate Fund (GCF) and other sources.

### 3.1.2 Sharing on Earth Observation Data and Climate Change Projection Data

Japan shares earth observation data and climate change projection data through the Data Integration and Analysis System (DIAS). It supports human resources development to assess disaster risk, based on satellite observation data and climate change projection data in each country through training programs using the DIAS.

## **3.2. Contribution to the United Nations and Multilateral Frameworks**

### 3.2.1. United Nations

#### 3.2.1.1 The United Nations Office for Disaster Risk Reduction (UNDRR)

The UNDRR was established in 2000 with its headquarters in Geneva, Switzerland, with the aim of enhancing the importance of disaster risk reduction as an essential element of sustainable development, reducing damage and losses caused by disasters, and mitigating disaster risks. Japan continues to support the efforts of the UNDRR.

#### 3.2.1.2 International Recovery Platform (IRP)

IRP is a cooperative framework established to promote the "Build Back Better" principle in countries around the world with the participation of international organizations, including UNDRR. Japan continues to support its activities such as holding forums to gather and disseminate knowledge.

### 3.2.2. Other Multilateral Frameworks

#### 3.2.2.1 Risk-Informed Early Action Partnership (REAP)

Japan has participated in REAP, an international partnership aiming to make people in developing

countries safer with early action including early warning systems through supporting adaptation planning in developing countries and the sharing of good practices.

#### 3.2.2.2 Asia-Pacific Network for Global Change Research (APN)

Japan has contributed to APN activities as the host country (in Hyogo Prefectural Government) as well as one of the major donor countries. APN conducts various research projects related to losses and damages prevention and adaptation. More than one hundred research papers supported by APN have been cited in the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC).

#### 3.2.2.3 Enhancing community resilience to climate change in mountain watersheds in developing countries through Food and Agriculture Organization of the United Nations (FAO) Contributions

As part of efforts in the forestry sector to promote disaster risk reduction and mitigation, Japan supports the project to enhance community resilience through sustainable forest conservation and utilization based on the risk-based watersheds management approach in the Philippines and Peru and disseminate it at global level.

### **3.3. Promotion of Services and Technologies for Climate Disaster Risk Reduction**

#### 3.3.1 Collaboration between the "Public-Private-Academic Networking Meeting on Climate-related Risks in Japan" and the Asia Pacific Climate Change Adaptation Information Platform (AP-PLAT)

Japan has promoted the global expansion of climate related services and technologies that can be used against losses and damages, such as disaster prevention technologies, in collaboration with the "Public-Private-Academic Networking Meeting on Climate-related Risks in Japan" and the Asia Pacific Climate Change Adaptation Information Platform (AP-PLAT).

#### 3.3.2 Japan International Public-Private Association for Disaster Risk Reduction(JIPAD)

The Japan International Public-Private Association for Disaster Risk Reduction (JIPAD), a public private liaison group consisting of 206 companies and organizations, is holding public-private disaster risk reduction seminars to promote the overseas deployment of disaster risk reduction technologies of Japanese companies. Most recent events include: an online seminar concurrently held with the Asian Conference on Disaster Reduction (ACDR) organized by the Asian Disaster Reduction Center (ADRC); an online seminar co-hosted by the Cabinet Office, Government of Japan, and the ASEAN Secretariat;

and, a seminar at the Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR) 2022 held in Brisbane, Australia.

### 3.3.3 “Climate Change Adaptation Good Practices”

Japan has been identifying and disseminating good practices of adaptation businesses by Japanese private sector in the publication “Climate Change Adaptation Good Practices” to encourage the diffusion and deployment of technologies from Japanese private sector that can be used against losses and damages, such as early warning systems and compact weather radars.

### 3.3.4 Sustainable Business of Adaptation for Resilient Urban future

Through the SUBARU Initiative (Sustainable Business of Adaptation for a Resilient Urban Future), together with the United Nations Human Settlements Programme (UN-Habitat) Regional Office for Asia and the Pacific in Fukuoka, Japan is working to improve the resilience of cities in the Asia-Pacific region against weather-related disasters by utilizing the technologies and know-how of Japanese SMEs and start-ups.