Japan's View to the Urban Resilience for Water Risks in the Asia-Pacific region

- High-level Policy Needs -

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15th Asia-Oceania Group on Earth Observation (AOGEO) Symposium
Special session 5: Enhancing Resilience for Water Risks:
Seeking opportunities for further collaboration

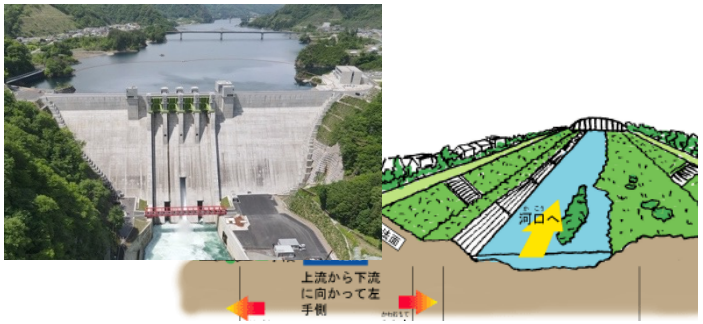
MLIT
Ministry of Land, Infrastructure, Transport and Tourism

MLIT's Mission in Water Risks in Japan

MLIT is responsible for policy making, planning, coordination among stakeholders, infrastructure development, risk evaluation & sharing, emergency disaster response, recovery and reconstruction for Water Risks(*).

(*Flood, Drought, Land Slide, Tsunami etc.)

Disaster Prevention and Preparedness



Infrastructure Development

Sharing Risk Information
Disaster Risk Education

Disaster Emergency Response

Flood Water Discharge by Pump

Damage Investigation by Specialist

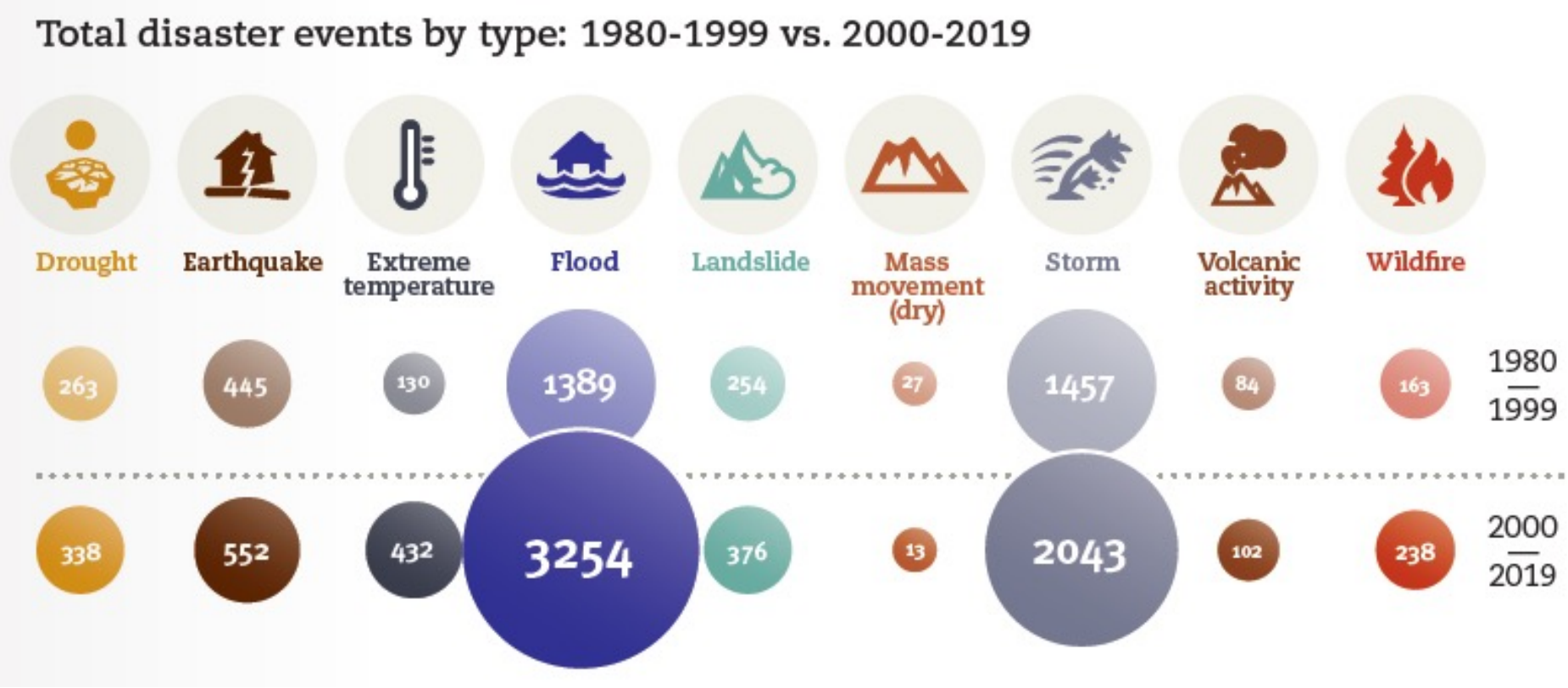
Disaster Recovery and Reconstruction

Emergency Repair of
Damaged Embankment

Technical Support for Recovery

We recognize….

Priority of the Water-related Disaster Risk Reduction tends to be lower than the other sectors in many countries.



Source: EM-DAT & UNDRR

4th Asia-Pacific Water Summit

MLIT
Ministry of Land, Infrastructure, Transport and Tourism

■Date: 23rd (Sat) and 24th (Sun) April, 2022

■Venue: Kumamoto City, Japan

■Organizers: Asia-Pacific Water Forum and Kumamoto City

* The Government of Japan provides necessary cooperation based on the cabinet approval.

■Theme: Water for Sustainable Development

- Best Practices and the Next Generation -

The scene of the beginning of the Heads of State and Government Meeting

Result of the Water Summit

◆Approximately 5,500 participants*1 including online with the Heads and Ministers of State and Government from 30 countries in the Asia-Pacific region discussed various water-related issues in this Water Summit.

◆His Majesty the Emperor of Japan gave his Remarks and Commemorative Speech at the Opening Ceremony, after that Mr. Kishida, Prime Minister of Japan, announced "Kumamoto Initiative for Water", and "Kumamoto declaration" expressed the determination by the Heads of State and Government was adapted at the Heads of State and Government Meeting.

◆Nine Thematic Sessions, four Integrated Sessions and two Special Sessions were held to discuss concrete actions to the inquiry by the Heads of State and Government of "Kumamoto declaration", and "Chair's Summary" summarizing the answers from the Sessions to the inquiry was announced at the Closing Ceremony.

Thematic Sessions

1 - "Water and Disaster/Climate Change"
2 - "Water Supply"
3 - "Water and the Environment from Source to Sea"
4 - "Water and Poverty/Gender"
5 - "Water & Sanitation/Wastewater Management"
6 - "Youth Leadership & Innovation by Youth"
7 - "Water and Food"
8 - "Water, Culture and Peace"
9 - "Sound Water Cycle including Groundwater"

Integrated Sessions

"Overall Integration Session"
"Science & Technology"
"Governance"
"Finance"

Special Sessions

"Showcase"
"Small Islands State Session"

Kumamoto Declaration (Extract)

Water sector plays a vital role in recovering from the pandemic.

Recovery from the pandemic requires **transformation into quality-oriented societies** that are resilient, sustainable and inclusive.

To realize a quality-oriented society, we develop **quality infrastructure for the water sector** by accelerating efforts of improving **governance**, promoting **investment** and providing **science and technology innovations**.

Kumamoto Initiative for Water (Extract)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

Japan contribute to the solution of water-related social issues faced by the Asia-Pacific region by developing **"Quality Infrastructure"**

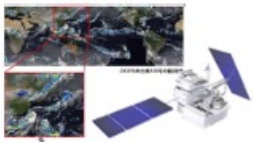
1. Promoting **both** climate change **adaptation** and **mitigation** measures

- Develop and provide **hybrid technology** to develop dams, sewerage systems and agricultural facilities to reduce water-related disaster risks for **climate change adaptation** and also to reduce greenhouse gas emissions for **climate change mitigation**.
- Provide **satellite data** to fill gaps of ground observation data.
- Sophisticate the **evaluation of water-related disaster risks** by the use of AI/IoT-based forecast and analysis technologies.
- Support human resource development.

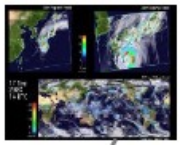
Flood Simulation for the Risk Evaluation

We can't improve the quality infrastructure if we don't know **where the risks are.**
We can't find the risks if we don't have the **flood simulation.**
We can't do the flood simulation if we don't have **technical skills** and **necessary data**.

Capacity Building



Satellite Observation Data



DIAS
Data Integration & Analysis System

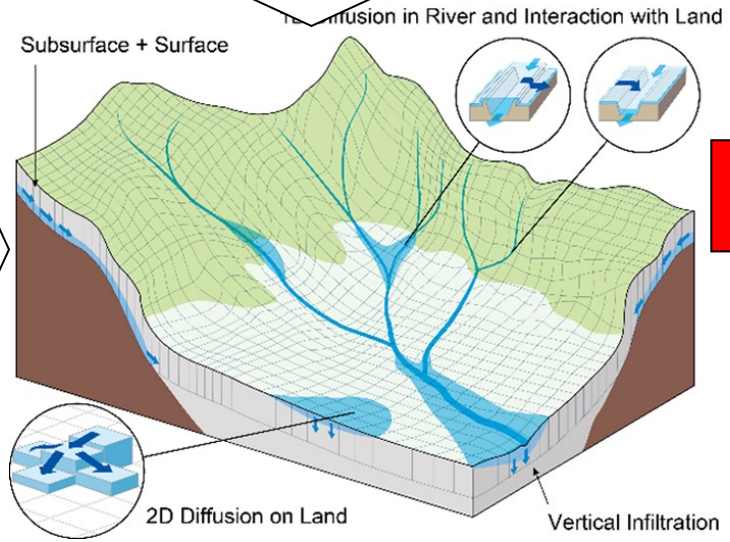
Data Integration
& Analysis System

Training
Program

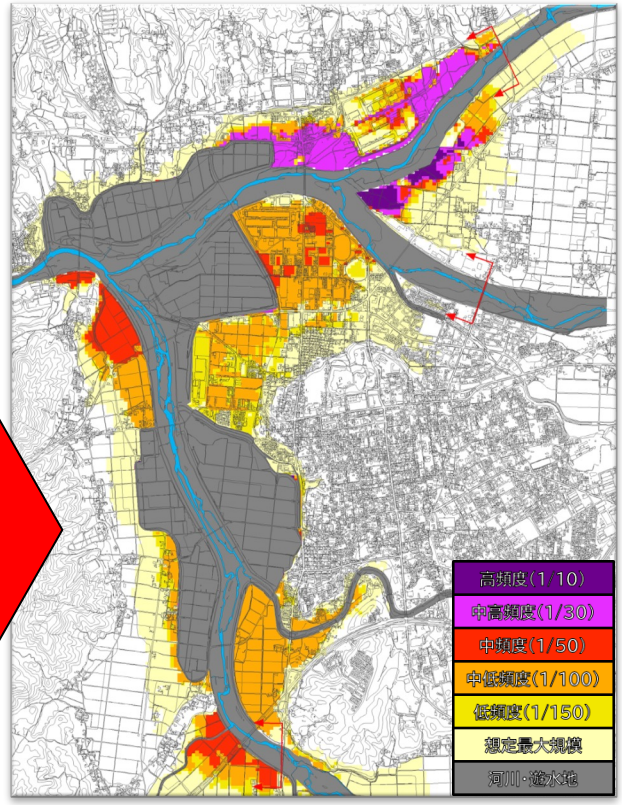
Necessary Data

- Surface Elevation Data
- Land Use Data
- Precipitation Data
  *Real Time
  *Climate Change Projection

These data can be obtained by satellite observation



Flood Simulation
(Rainfall-Runoff-Inundation Model)



Flood Risk Map
& Flood Hazard Map