

HELP11 Workshop on
Implementing DRR Recommendation of HLPW Outcome Document
– with focus on the Alliance of Alliances -

How can Science & Technology Contribute to Resilient Economies, Societies & Disaster Risk Reduction?

Toshio Koike

Director, International Centre for Water Hazard and Risk Management (ICHARM)
Council Member, Science Council of Japan (SCJ), Cabinet Office of Japan
Professor Emeritus, the University of Tokyo
Chair, River Council of Japan

Making Every Drop Count



An Agenda for Water Action



HIGH-LEVEL PANEL ON WATER
OUTCOME DOCUMENT

14 March 2018



**WATER
DATA**



**VALUING
WATER**



**WATER
GOVERNANCE**

HEADLINE RECOMMENDATION

Shift focus of disaster management from response to preparedness and resilience.

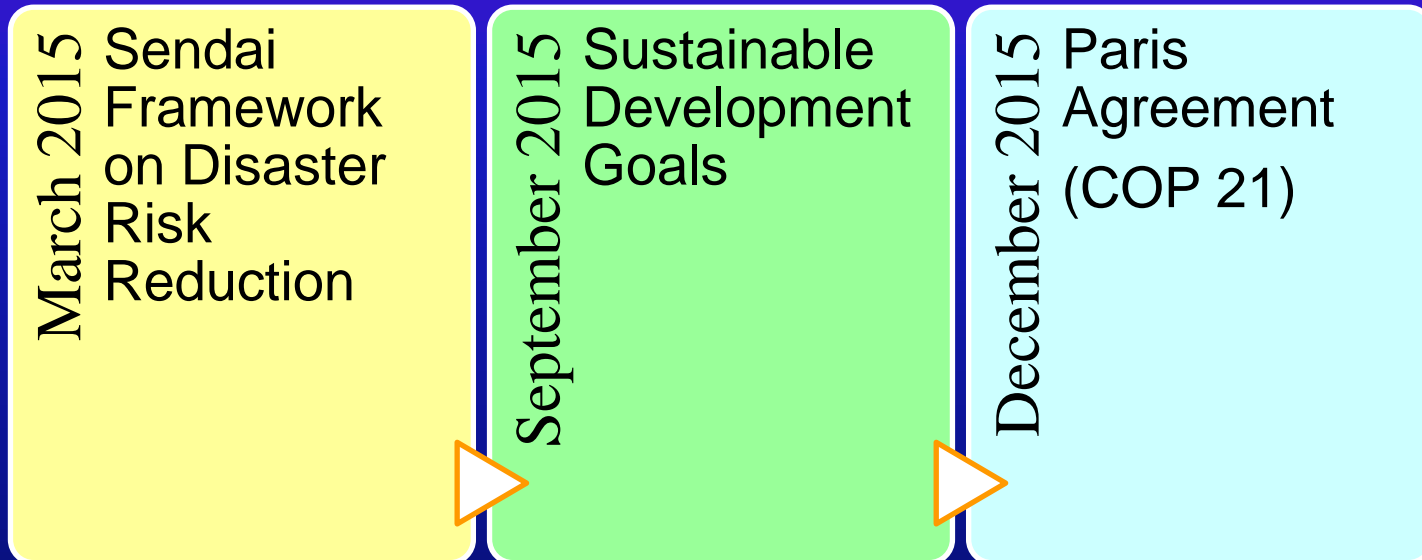
DETAILED RECOMMENDATIONS

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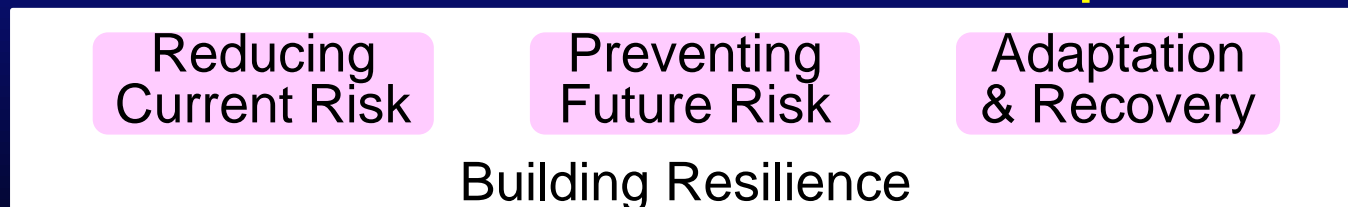
Key Global Agendas

Understanding Governance Investment EW/BBB

Alliance of Alliances



Concerted Actions are Required



Sustainable Development

Making Every Drop Count

a collaborative framework
with existing alliances by linking efforts
in research and education
across national boundaries and disciplines.

An Agenda for Water Action

- communications role
- analytical role
- catalytic role
- supportive role

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5. The Way Forward

National action is the essential ingredient for making the changes required to implement the water-related Sustainable Development Goals. Our recommendations are therefore primarily aimed at national political leaders and opinion leaders, in public and private sectors, who can determine and influence policy. Panel members' countries will actively promote the recommendations of the Panel in appropriate forums and engagements with other countries.

The urgently required change will be complex, multi-faceted and challenging, and often controversial, and require cooperation from all stakeholders. We call on all national leaders to initiate and guide a national water reform process and for others in leadership roles to support these efforts.

National action will also benefit from international cooperation. Trans-boundary and regional cooperation, as described earlier in this report, is vital for the 40% of the people of the world living in river basins which cross national borders¹.

We have identified a number of priority themes which are especially ripe for international cooperation, so that we share and learn lessons, and help countries to adopt and implement best practice. With this in mind, and without prejudice to the many other important and valuable initiatives underway, we highlight the following ongoing initiatives as being especially valuable to states and stakeholders seeking to implement our recommendations:

- World Water Data Initiative²
- The OECD Water Governance Initiative³
- The Delta Coalition⁴
- HELP, including an Alliance of Alliances on disaster risk reduction researches⁵
- The initiative on Financing Water Infrastructure convened by the OECD⁶
- Water Innovation Engine⁷

In addition, we encourage the launch of new cooperative initiatives in areas of critical importance to the new water agenda, such as:

- A global leadership coalition on valuing water
- A water scarcity initiative, and
- An Africa water investment program.

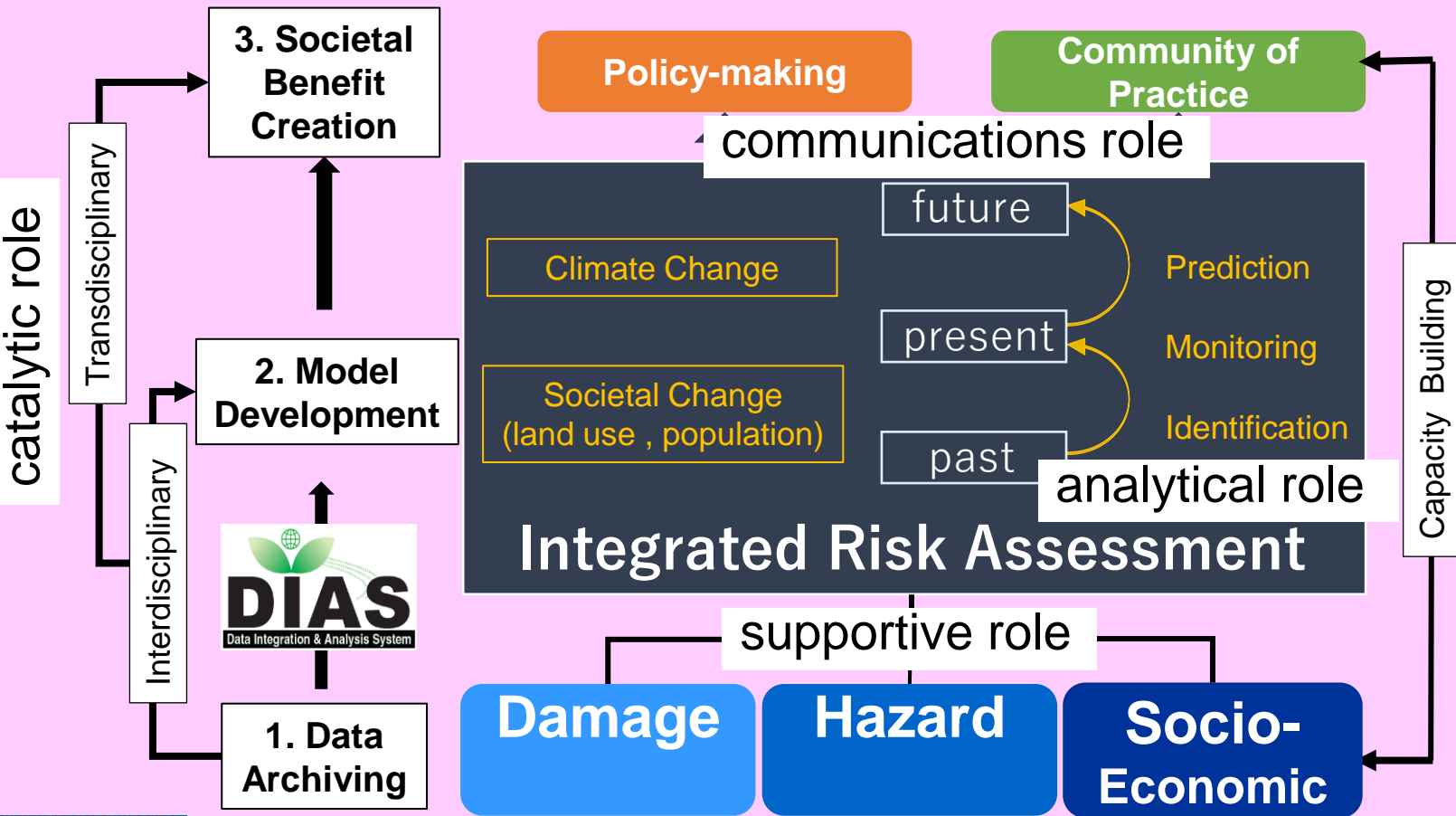
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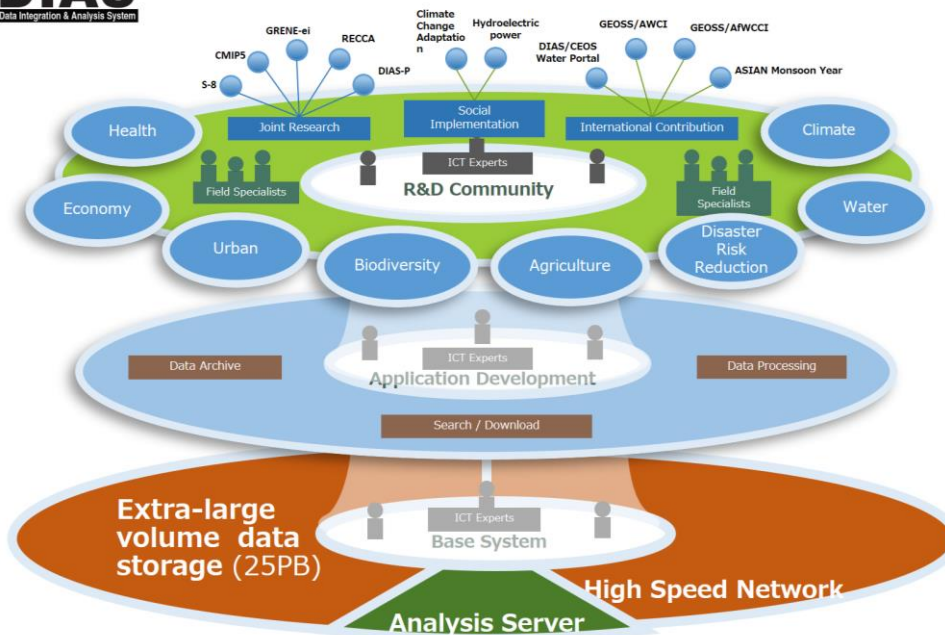
Platform on Water Resilience and Disasters



INTERNATIONAL
FLOOD
INITIATIVE

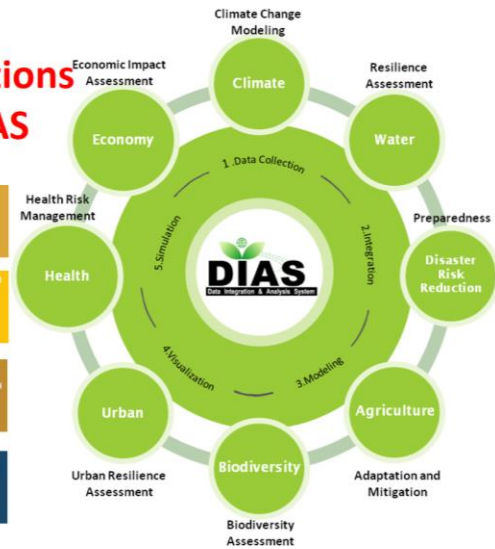


SDGs & DIAS Challenges



Searching Possible Future Contributions To match SDGs and DIAS

SUSTAINABLE DEVELOPMENT GOALS



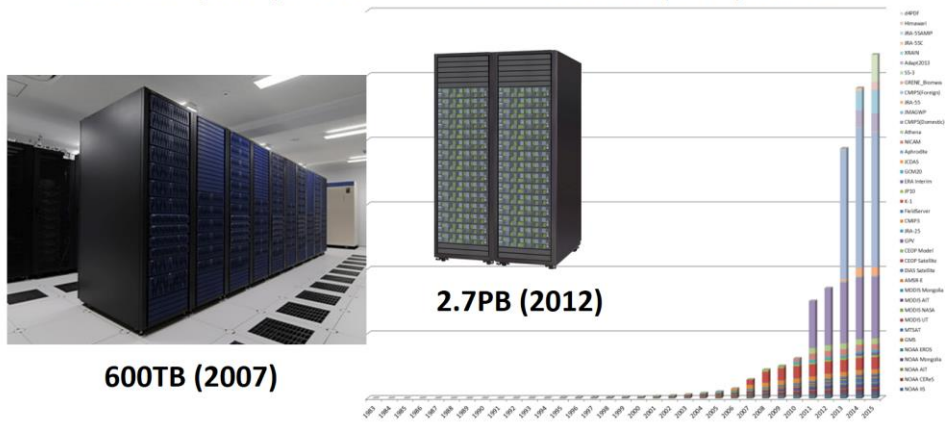
Data Integration and Analysis System

a legacy for Japan's contributions to GEOSS

tackling a large increase in **volume** of the Earth observation data.

IPCC AR4 (2007): 40TB

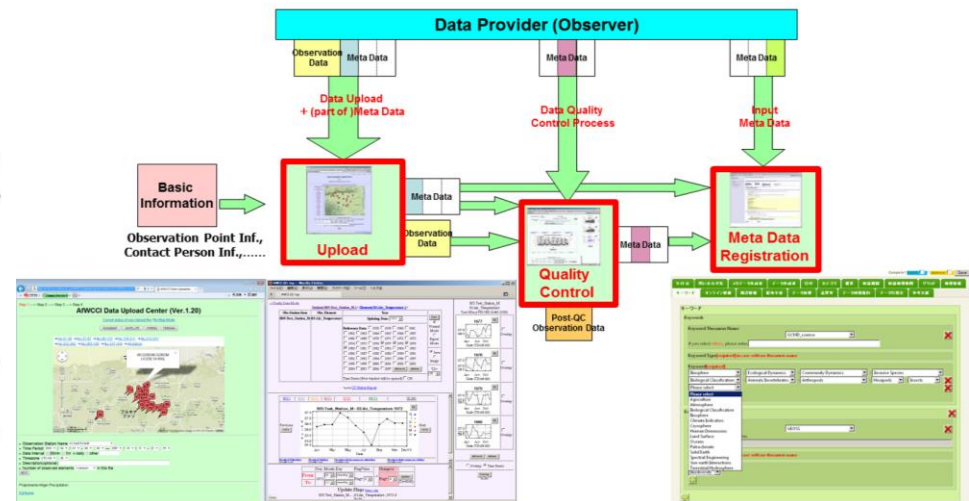
→ IPCC AR5 (2012): 2.6PB



Data Integration and Analysis System

a legacy for Japan's contributions to GEOSS

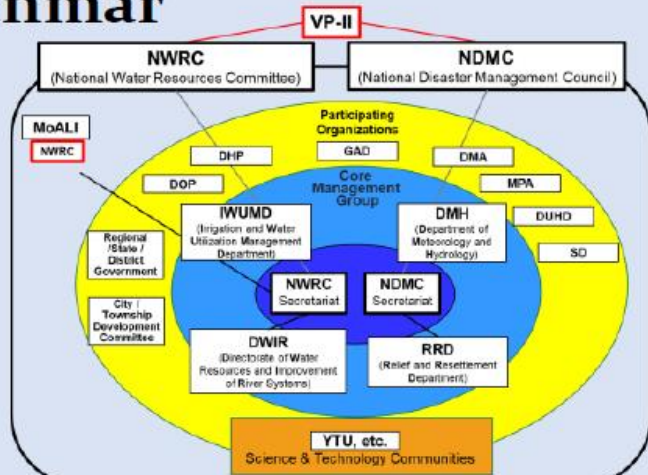
maintaining data veracity, including data loading, QC and metadata registration



Platform on Water Resilience and Disasters

Platform activities with a transdisciplinary approach in some Asian countries

Myanmar



Institutional Structure of Platform



High-level Consultation Meeting at Nay Pyi Taw on May 9, 2017
DMH, DWRI, RRD, IWUMD, YTU, JICA, JWF, UT, ICHARM

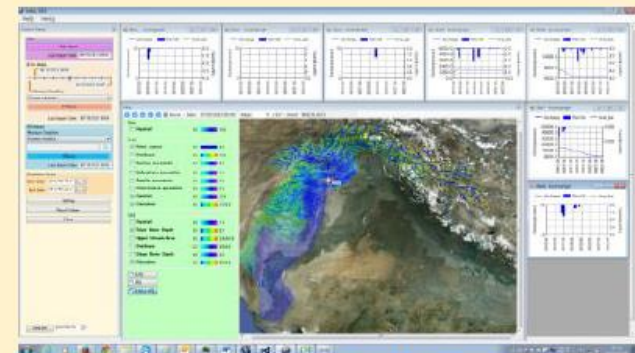
Pakistan

Participated Stakeholders

- PMD
- PCRWR
- GCISC
- NARC
- NDMA
- UNESCO
- ICHARM



Stakeholders' Meeting at PMD Headquarter, Islamabad on March 3, 2017

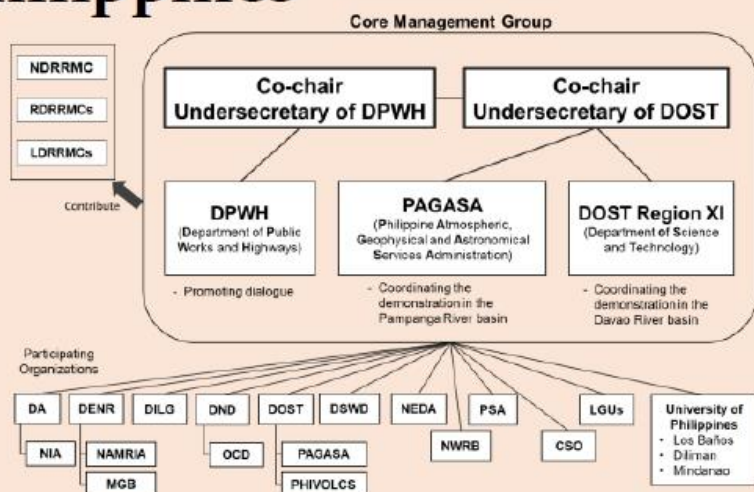


Flood Forecasting System installed and operated at PMD

Platform on Water Resilience and Disasters

Platform activities with a transdisciplinary approach in some Asian countries

Philippines



Institutional Structure of Platform

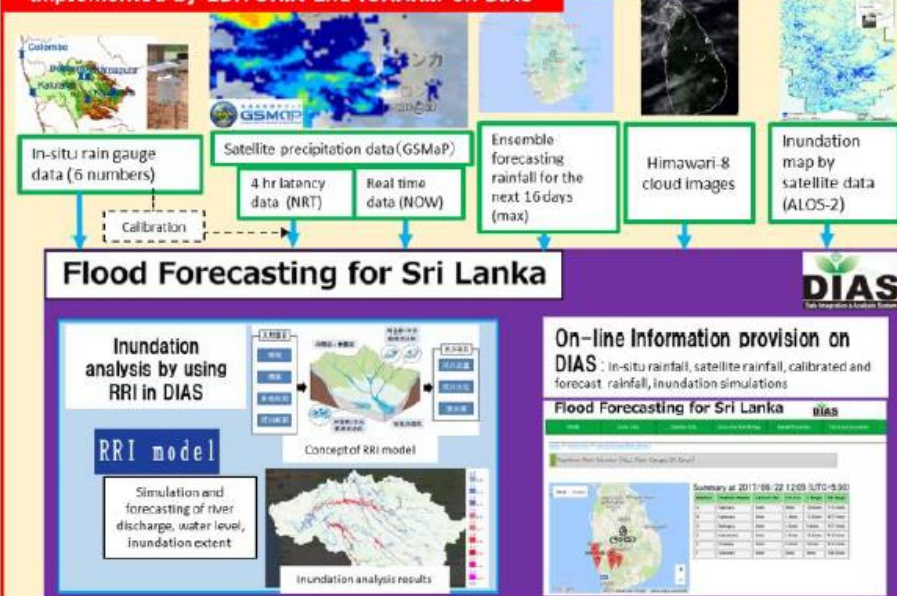
IFI Coordinating Meeting

Manila, March 10, 2017
DOST, PAGASA, DPWH, OCD, NEDA, NAMRIA, PSA, UP, JICA, ICHARM



Sri Lanka

Implemented by EDITORIA and ICHARM on DIAS



Rainfall Prediction and Flood Forecasting System installed in Sri Lanka

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**Prof. Naoyuki Yoshino, Dean,
Asian Development Bank Institute
(ADBI)**

Economic Effects of disaster

Effects on Supply Side (Production

L = Labor

Kp = Private Capital

Kg = Infrastructure

D = Disaster

$$(GDP) Y = F(Kp, L, Kg, D)$$

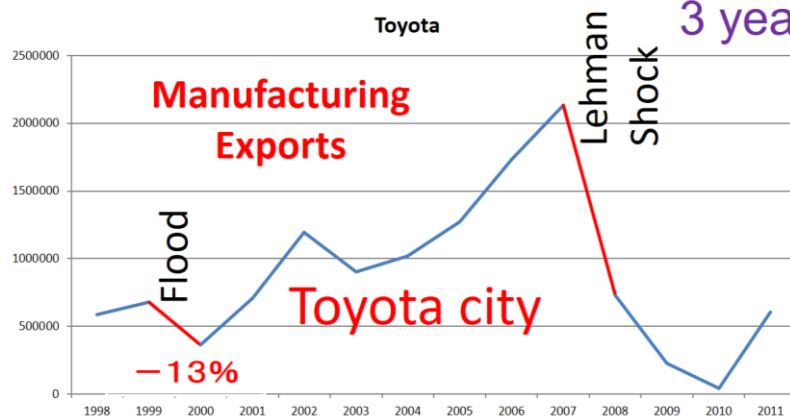
GDP

Agriculture

Manufactur

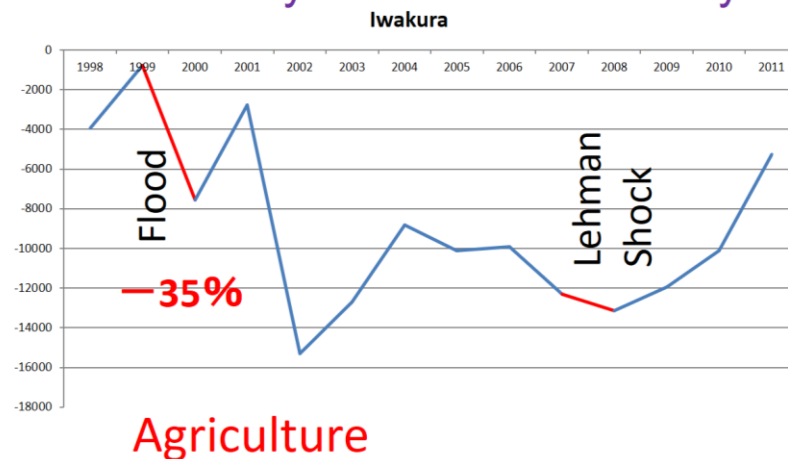
Service

Difference in difference estimation
coefficients, million JPYen (Exports)
Only 1 year damage: Lehman was bigger
3 years

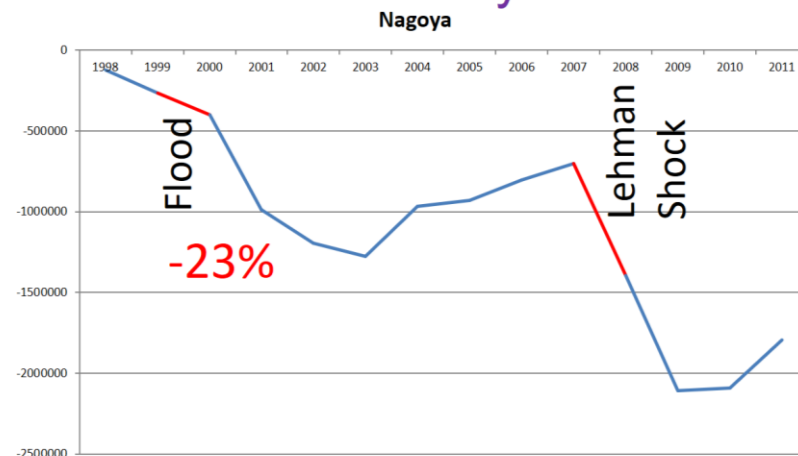


Difference in difference estimation
coefficients, million. JPY

Agricultural Region: Big Drop
It took 3 years for the recovery



Difference in difference estimation
coefficients, million. JPY
Services sector : 4 years decline



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Information Infrastructure for **Nation's Synthesis** on DRR

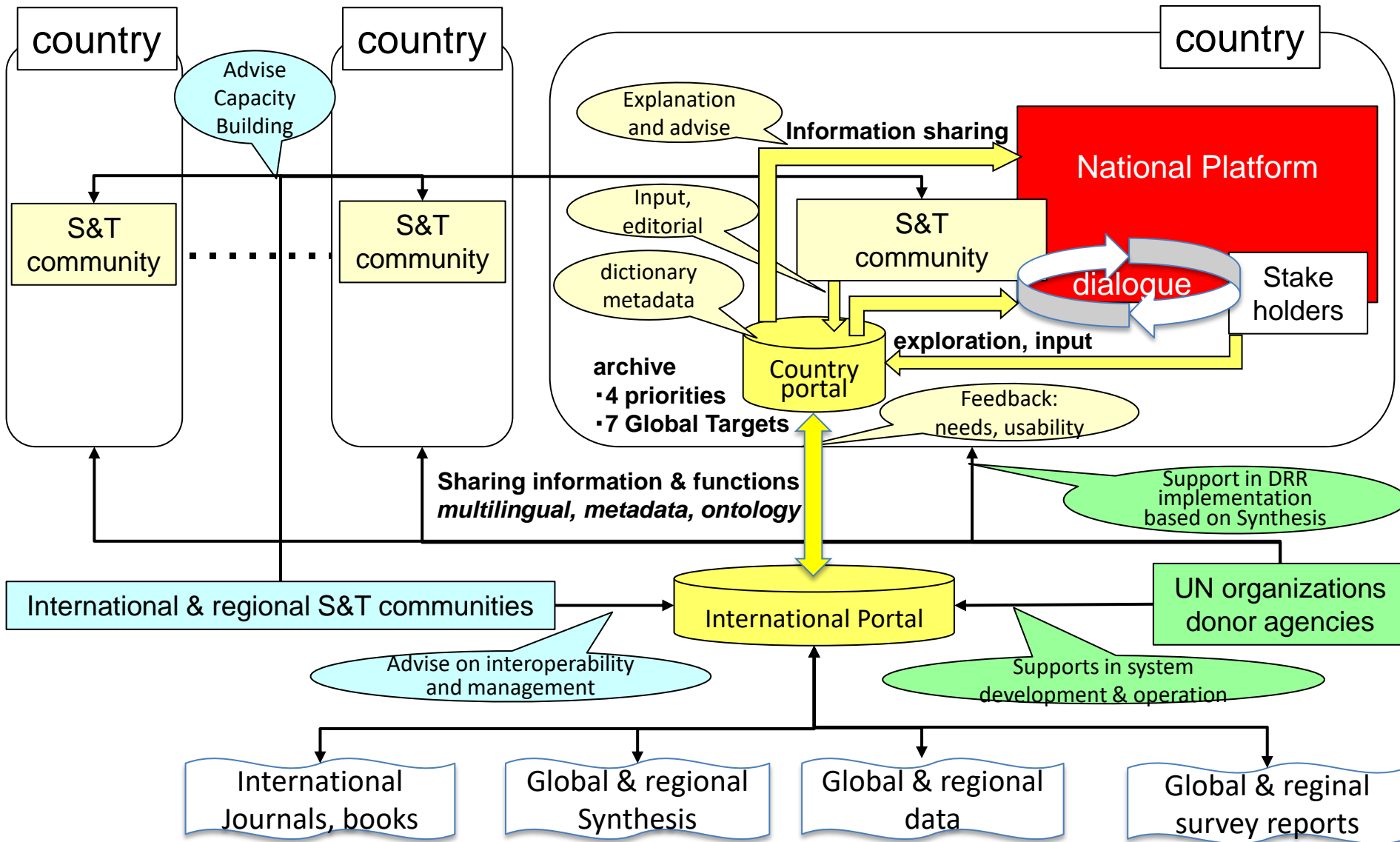
National Platform

design practical measures

based on S&T

discuss how DRR should be carried out

review the status and issues of the current DRR efforts



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Platform on Water Resilience and Disasters

National Graduate Research Institute for Policy Study (GRIPS)

GRIPS: Science, Technology and Innovation Policy Program

GRIPS: Disaster Management Program

Higher Education

3. Societal Benefit Creation

Policy-making

Community of Practice

Transdisciplinary

2. Model Development

1. Data Archiving

Climate Change

Societal Change
land use , population

future

preser

past

Prediction

Monitoring

Identification

Integrated Risk Assessment

Damage

Hazard

Socio-Economic

ICHARM

International Cooperation

Capacity Building

High-Level Policy-Maker

PhD Course

Master Course

Short Course

Upgrading Education

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Thank you very much for your cooperation.

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Preface

The United Nations and World Bank Group convened a High Level Panel on Water (HLPW) to provide leadership in tackling one of the world's most pressing challenges – an approaching global water crisis. As leaders of our organizations, the challenge we put before the Panel was to identify ways in which the world could accelerate progress towards ensuring the *availability and sustainable management of water and sanitation for all* (SDG 6) as well as to contribute to the achievement of the multiple SDGs that also depend on the development and adequate management of our planet's water resources and thereby achieve the 2030¹ Agenda.

To ensure the highest level of political leadership, we invited 11 sitting Heads of State or Government, as well as a Special Advisor, to lead the Panel for a two-year period starting in April 2016.

During the United Nations General Assembly in September 2016, the Panel issued an Action Plan which called for a fundamental shift in the way the world looks at and manages water. Since then, the Panel members have explored ways to implement this Plan and have taken initiatives in many of the action areas, leading by example. This report presents a summary of the Panel's findings and recommendations.

Today, as we write this Preface, some parts of our planet are suffering from the misery of drought while others endure the destruction of floods. Climate change is exacerbating natural variability of the water cycle, increasing water stresses that constrain social progress and economic development. Our health, food security, energy sustainability, jobs, cities, and the ecosystems on which all life is based are all being influenced by the way water is being managed in different parts of the world.

The Panel's recommendations call for all stakeholders to be involved in crafting responses to these challenges, and to build on the work already underway. Governments will need to take the lead in many cases, including in cooperating across national boundaries, but citizens, civil societies, the private sector, and international organizations also have vital roles to play in meeting these challenges. At stake is our human right to access to safe drinking water and sanitation and our future survival. The International Decade for Action "Water for Sustainable Development", 2018-2028 gives new inspiration and opportunity to accelerate and enforce our efforts in this direction.

The Panel members and their respective member states have committed to take action on water, and are inviting their peer leaders, as well as other policymakers, and leaders from civil society and the private sector to find creative and collaborative solutions to better manage and value water. We wholeheartedly endorse this urgency to act.

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