



United Nations
Educational, Scientific and
Cultural Organization



International Centre for
Water Hazard and Risk Management
under the auspices of UNESCO



Public Works Research Institute,
National Research and Development
Agency, Japan



Creating partnerships at all levels for water-related disaster risk reduction by involving all

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ICHARM (International Centre for Water Hazard and Risk Management under the auspices of UNESCO)

28 August 2019

ASIA FOCUS

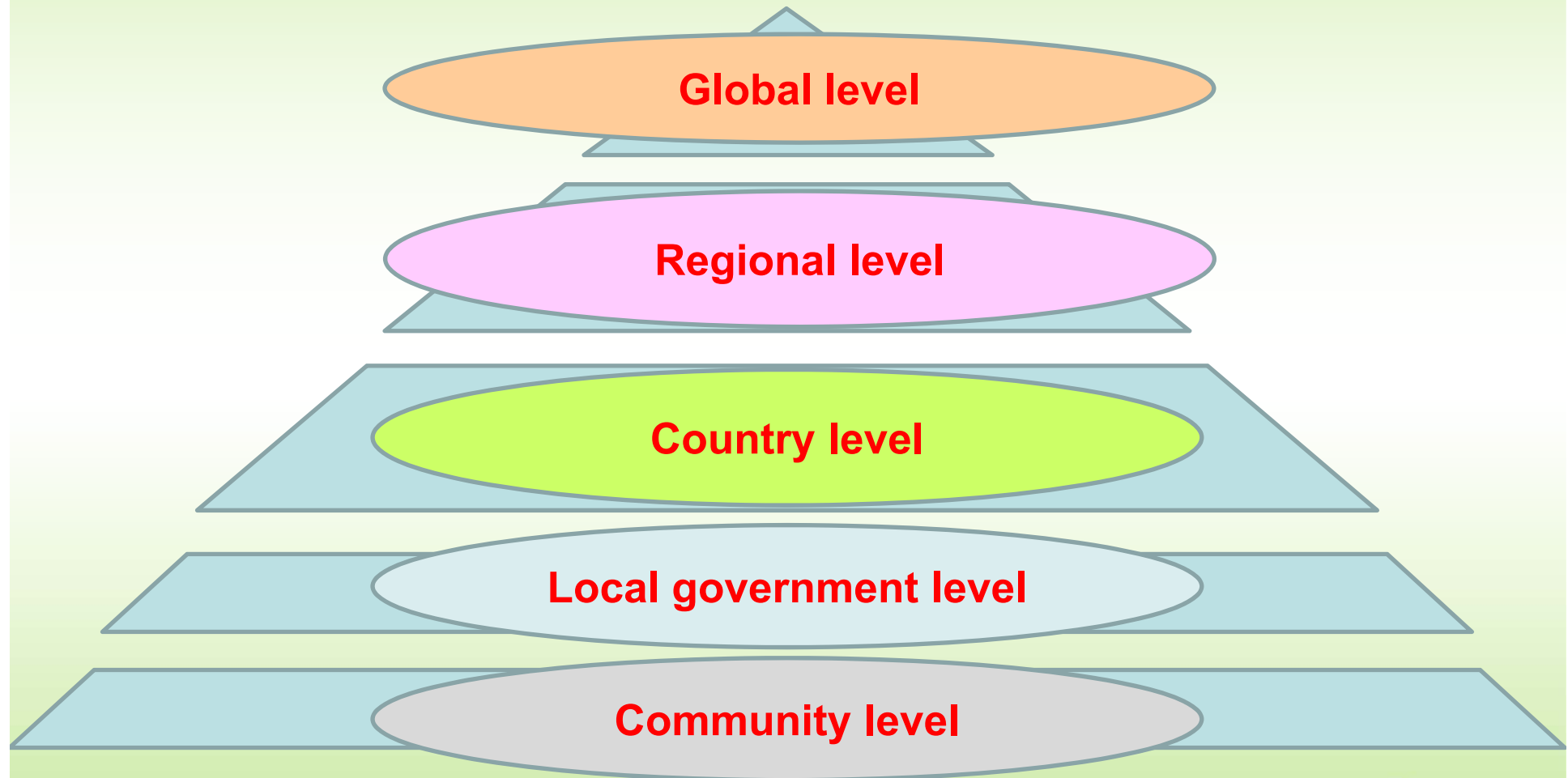
Strengthening Governance to Address Asia's Water Challenges

Stockholm World Water Week 2019

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Facilitating the Partnerships at all levels for water-related disaster risk reduction



= Community Level =

Support for community-level flood contingency plans in Calumpit Municipality in Pampanga River Basin in the Philippines

1. Understand Current status

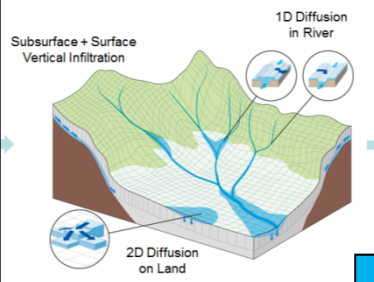


Interview Survey



Field Survey

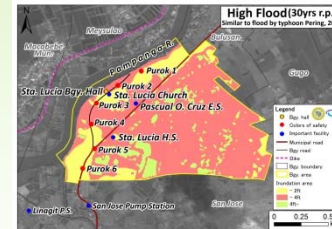
2. Identify Risk (with National and Provincial govt.)



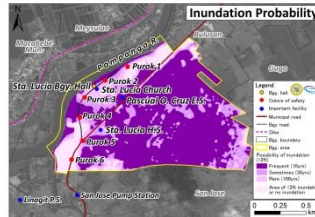
Flood Simulation by RRI Model (Use of 5m IfSar Dem data)



Resource Map



Inundation Map (30 Years)



Inundation Probability Map

Return Period (yr)	0.5m		1m		1.5m		2m		2.5m	
	Area (ha)	Pop.	Area (ha)	Pop.	Area (ha)	Pop.	Area (ha)	Pop.	Area (ha)	Pop.
0.5	100	1000	200	2000	300	3000	400	4000	500	5000
1	150	1500	300	3000	450	4500	600	6000	750	7500
5	300	3000	600	6000	900	9000	1200	12000	1500	15000
10	400	4000	800	8000	1200	12000	1600	16000	2000	20000
20	500	5000	1000	10000	1500	15000	2000	20000	2500	25000
50	600	6000	1200	12000	1800	18000	2400	24000	3000	30000
100	700	7000	1400	14000	2100	21000	2800	28000	3500	35000

Inundation Water Chart

3. Analyze Flood Impact



Workshop at Communities (July 2015)

5 & 6. Develop and Share the Plan



Final Workshop at Municipality (Feb. 2016)



Example of Community Contingency Plan

4. Develop Response Strategy at Communities



Workshop at Communities (Jan. 2016)



Proposal of Strategy

ICHARM received a Certificate of Appreciation from the Calumpit Mayor, Jessie P. De Jesus.



= Local Government Level =

Support for local governments (municipalities) on water-related disaster risk reduction through joint research agreement

- ICHARM supports local governments on water-related disaster risk reduction through joint agreement or MoU.
- For this purpose, ICHARM has developed ICHARM Disaster Risk Information System (IDRIS) which is utilized for disaster mitigation not only in emergency but also in normal time.
- IDRIS contains “Real time information viewer” and “Risk information map viewer”, indicating various real time information on one screen to be used for disaster management.



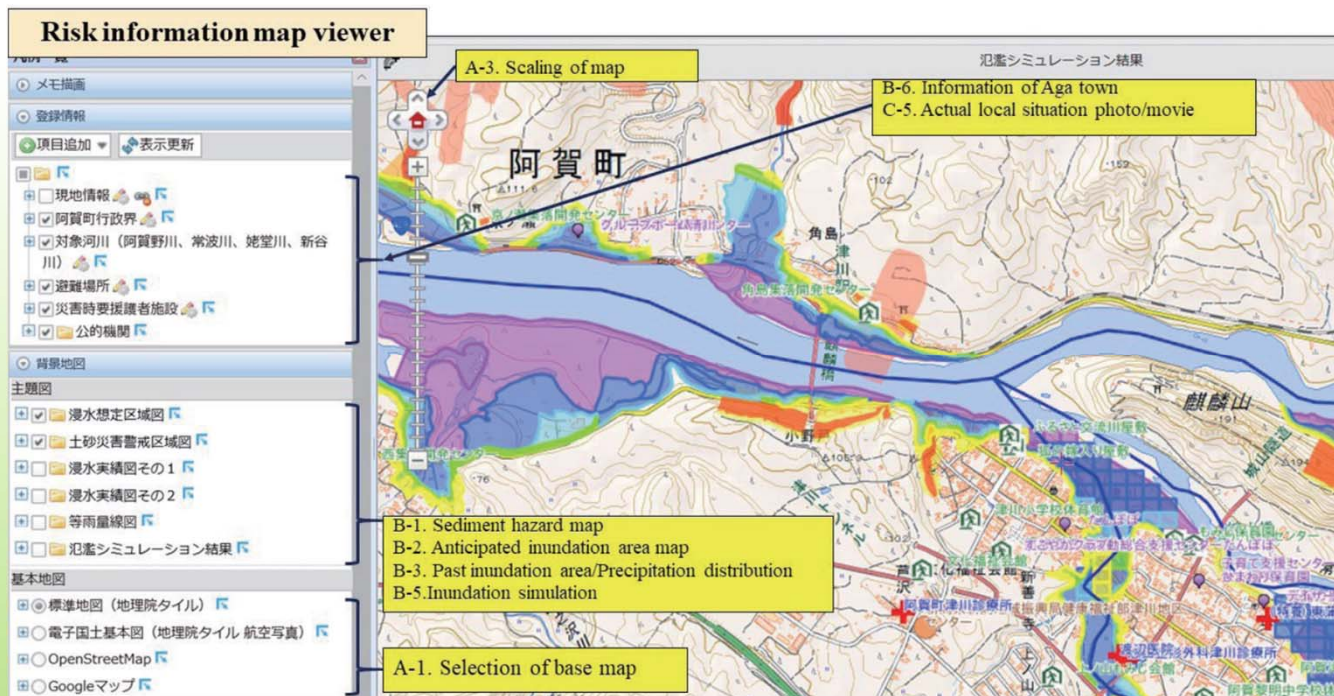
Flood damage in Iwaizumi Town on August 2016



MoU with Aga Town on June 2018



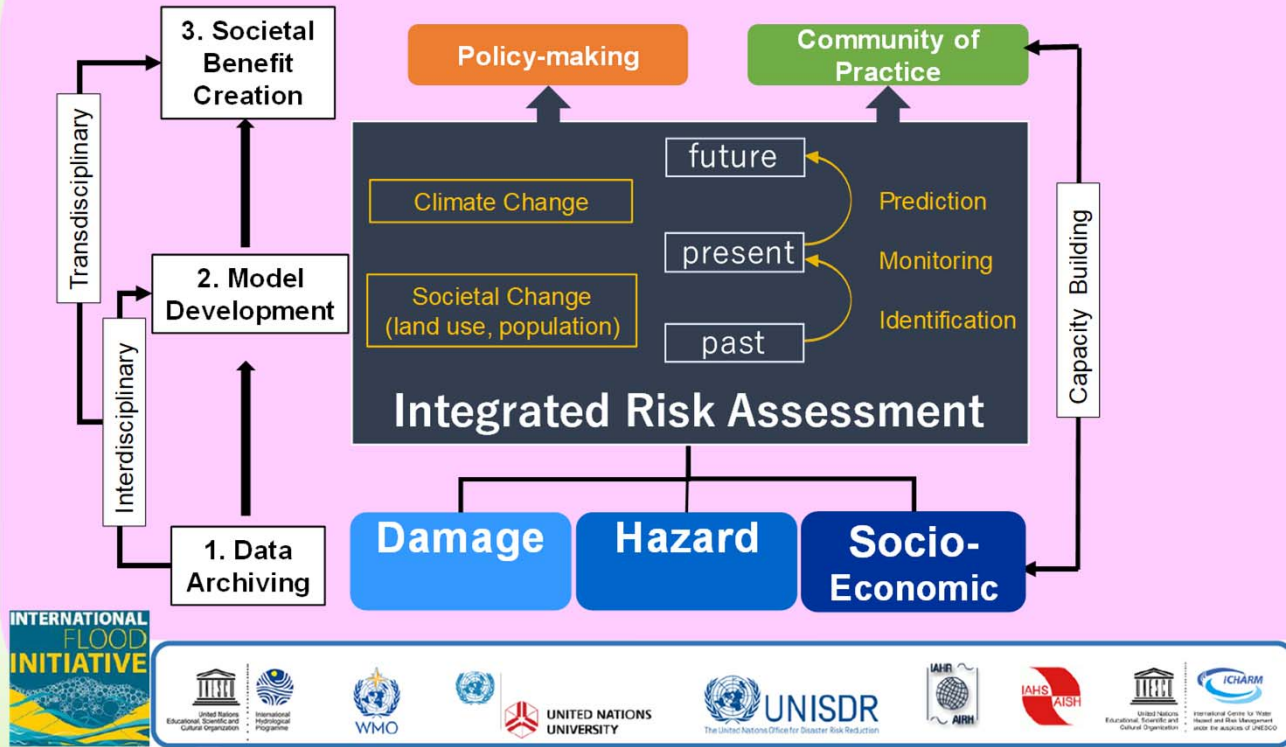
Joint agreement with Iwaizumi Town on February 2019



= Country Level =

Establishment of Platforms on Water Resilience and Disasters Under International Flood Initiative (IFI)

Platform on Water Resilience and Disasters



Sri Lanka



Pakistan



Philippines



Myanmar

= Regional Level = Regional Cooperation among IFI implementing countries

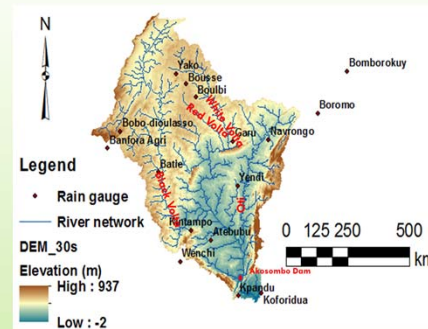
- **Regional Cooperative Implementation Meeting** of “Platforms on Water Resilience and Disasters” was held at **GEOSS Asian Water Cycle Initiative (AWCI)** on October 24-25, 2018 in Kyoto, Japan.
- The high-levels and representatives from the **IFI implementing countries** (*) participated, notably attended by **Honorable State Minister** of the Ministry of Irrigation and Water Resources & Disaster Management of Sri Lanka.
(* **Philippines, Myanmar, Sri Lanka and Indonesia**)
- During the meeting, activities and progress of each country were reported, and the future cooperation was discussed together with all the participants.
- **On 2-4 November 2019, this cooperative meeting will continuously be organized at AOGEO in Canberra, Australia.**



= Regional Level =

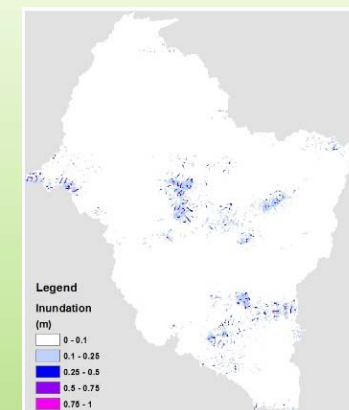
Water Disaster Platform to Enhance Climate Resilience in Africa (WADiRE-Africa)

- In collaboration with **UNESCO** and **AGRHYMET**, focusing on the West Africa from **Niger Basin Authority (NBA)** and **Volta Basin Authority (VBA)** including **11 countries** of the basins. (Benin, Burkina, Cameroon, Chad, Cote d'Ivoire, Ghana, Guinea, Mali, Niger, Nigeria and Togo)
- ICHARM support to **enhance flood risk management** in this region and **receive four trainees, who will then work as trainers** in their own organizations.
- The expected outputs are:
 - Regional flood early warning for Niger and Volta river basins
 - Capacity building for >300 persons on flood risk management (incl. >100 women)
 - Establishment of community early warning systems in two areas
 - Training for >3,000 persons at community level (incl. >1,000 women)



Rainfall observation
in Volta river basin

Inundation simulated
by WEB-RR1 model
during Oct. 2015

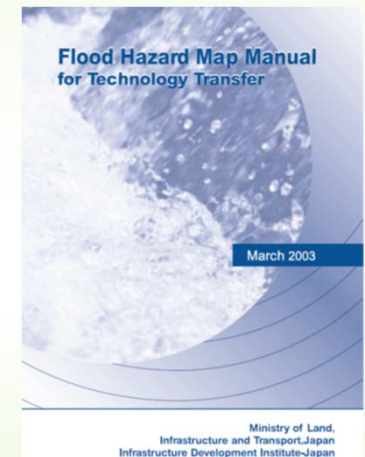


Atelier de lancement du projet sur la plateforme de
réduction des catastrophes hydriques pour renforcer la
résilience au changement climatique en Afrique

Lomé, Togo du 17 au 18 juin 2019

= Regional Level = Contribution to WMO/UNESCAP Typhoon Committee

- **Typhoon Committee (TC)** was established in 1968 as a joint intergovernmental body under the auspices of **UNECFAFE (now UNESCAP)** and **WMO**, currently involving **14 members countries** from typhoon affected area.
- TC is consisted of Working Group on Meteorology (WGM), **Working Group on Hydrology (WGH)**, Working Group on Disaster Risk Reduction (WGDRR) and Training and Research Coordination Group (TRCG)
- **Japan has contributed since its establishment** through seconding the experts, leading **Flood Hazard Mapping** and sediment disaster forecasting & warning project.



Capacity Development and Awareness Raising

- ICHARM conducts several **capacity development and awareness raising** programs in collaboration with UNESCO, JICA, GRIPS, Governments, etc.
 - PhD and Master degree courses
 - Short-term group/country training programs
 - Technical workshops and advisories for engineers and residence
 - Follow-up seminars inviting the ex-trainees in each country
- **“Town watching”** has been introduced as a **useful risk assessment method** through grouped field survey to check potential risk spots & vulnerable areas.



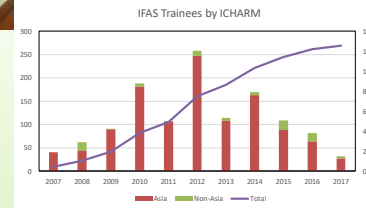
IFAS training workshops



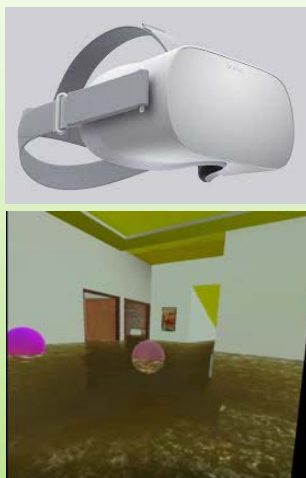
Advisory for local engineers



Follow-up seminar



VR demonstration on flood: awareness raising through simulated flood by using VR goggle



Town watching – field survey & group discussion



= Global Level = Global Partnerships for water-related risk reduction

Global Agendas



Sendai Framework for Disaster Risk Reduction 2015-2030



Sustainable Development Goals (2016-2030)



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11
Paris Agreement

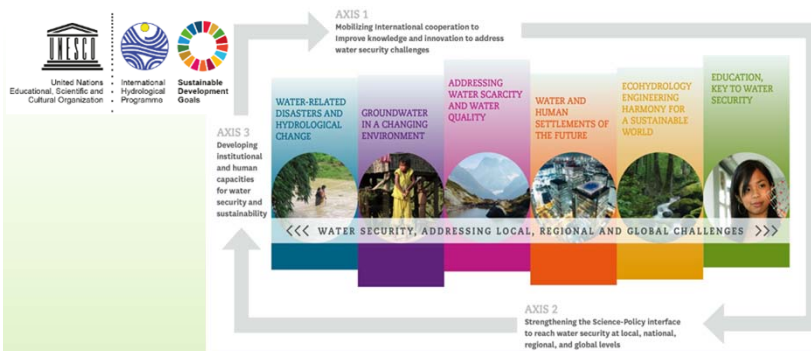


WATER ACTION DECADE
2018-2028

UN International Decade for Action: Water for Sustainable Development (2018-2028)

Contribution

UNESCO-IHP VIII (2014-2021)



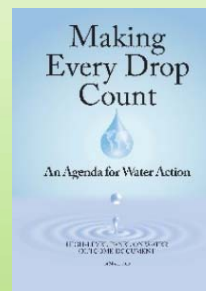
International Flood Initiative (IFI)



UNESCO-IHP Centres & Chairs



Platform on Water Resilience and Disasters



Endorsement

Outcome document of UN/WB High Level Panel on Water (HLPW) (14 March 2018)

= Global Level = Advocate & Dissemination



3rd APWS, Yangon, December 2017



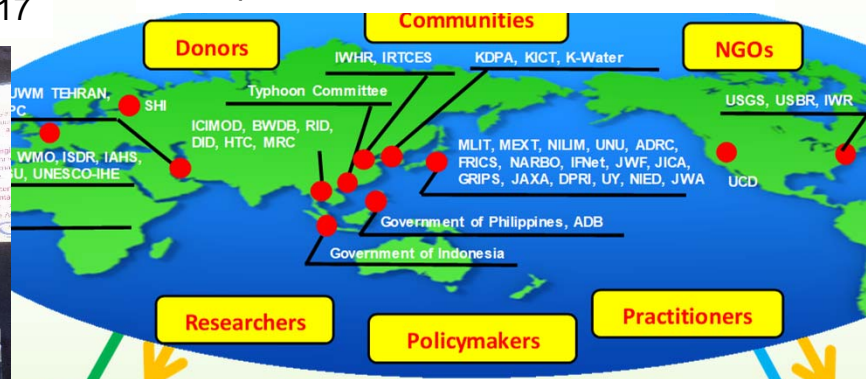
UN Special Thematic Session, June 2019



UNESCO IWC, Paris, May 2019



WWF9, Brasilia, March 2018



TC 51th Annual Session, Guangzhou, February 2019



Side Event at UNESCO-IHP IGC, Paris, June 2018



Side Event at HLPF, New York, July 2018



ADB Water Forum, Manila, October 2018

***Thank you very much
for your kind attentions***



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