



Summary of the e-ASIA JRP Workshop on “Intelligent Infrastructure for Water”

co-organized by Directorate of Water Resources (DWR)
and Institute of Water Resources Planning (IWRP) of Vietnam,
Japan Science and Technology Agency (JST)
and e-ASIA JRP Secretariat

21-22 February, 2019
IWRP Office, Hanoi, Vietnam

Overview



➤ Workshop Theme

- ✓ *Smart and Intelligent Infrastructure for Water*

➤ Focus Topics

- ✓ *Water Infrastructure for Climate Change Adaptation*
(Water resource management, Disaster management, etc.)
- ✓ *Water Infrastructure for Water Quality and Environment*
(Natural rivers, Water supply, Sanitation, etc.)
- ✓ *Water Infrastructure for Management and Operation*
(Irrigation, Saving water, Hydraulic system, etc.)

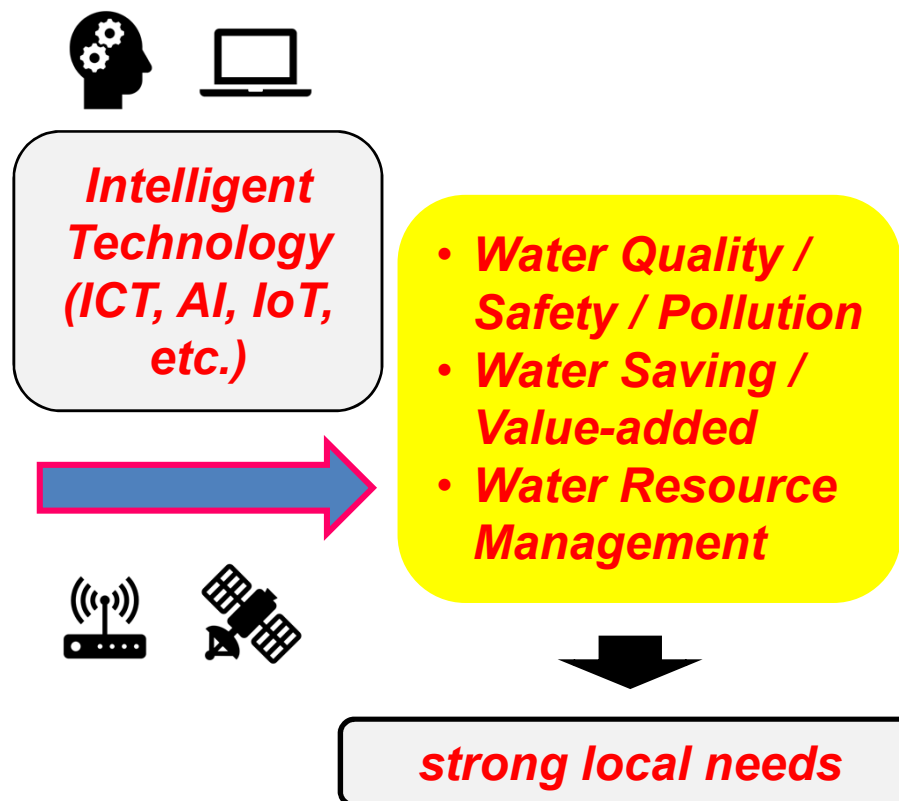
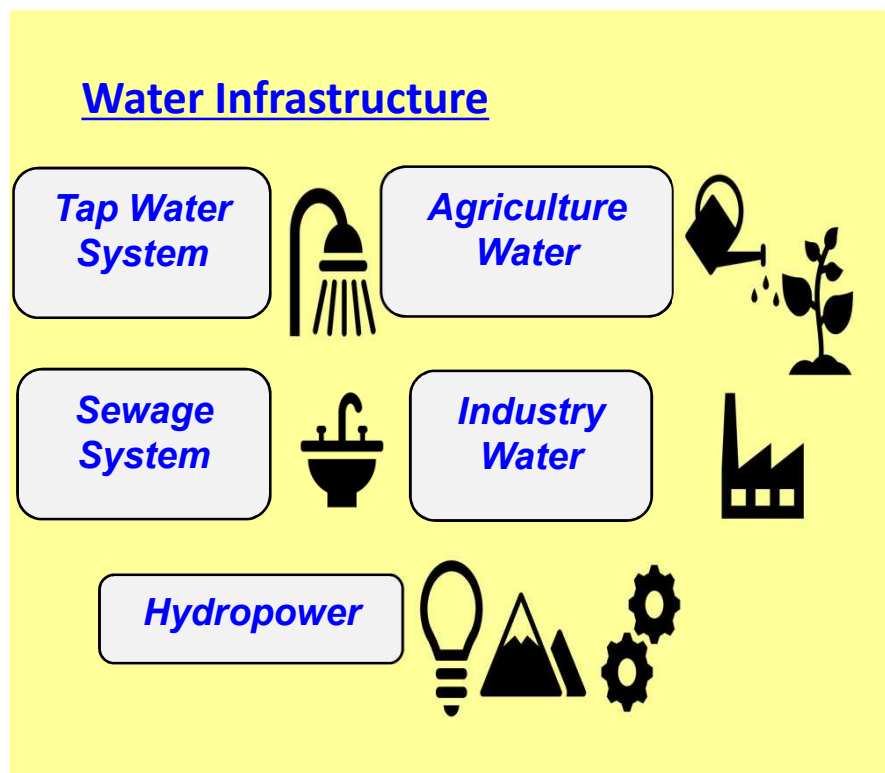
➤ Participants

- ✓ *60 participants including 18 invited speakers*
(Indonesia, Japan, Philippines, Thailand, Vietnam)

Background



Water Infrastructure is a key element for our society development.



STI for



Objectives



- *Discuss hot topics of “Intelligent Infrastructure for Water” among eminent researchers’ community in e-ASIA JRP, leading to sustainable future development in Asian countries.*
- *Explore potential future collaboration opportunities to prepare for the next e-ASIA JRP call on “Advanced Interdisciplinary Research towards Innovation” in 2019-20.*
- *Establish tight researchers’ network among participants for better international collaboration, especially by inviting and encouraging young researchers.*

Agenda



➤ Workshop Advisors

- ✓ *Dr. Haruo Takeda (Hitachi, Ltd., Japan)*
- ✓ *Prof. Nguyen Van Tinh (DWR, Vietnam)*

➤ Plenary Session Keynote Speech

- ✓ *Expectation for the Workshop and Introduction to e-ASIA JRP (Dr. Haruo Takeda)*



Agenda



➤ Technical Sessions

Smart and Intelligent Water Infrastructure for

- ✓ *Climate Change Adaptation (6 invited talks)*
- ✓ *Water Quality and Environment (6 invited talks)*
- ✓ *Management and Operation (6 invited talks)*

➤ Group Discussion on Potential Future Collaboration under the e-ASIA JRP

- ✓ *Discuss and adopt workshop observations and recommendations.*
- ✓ *Identify potential research areas and topics for future collaboration, preparing for the next call for proposals.*

Photos



(Group Photo)



Photos

(Technical Session)



Photos

(Group Discussion)



Conclusions



➤ Common Research Interest in the Area (example)

- ✓ *Climate change adaptation including the adaptation to socio-economic changes.*
- ✓ *Use of massive data and numerical models.*
- ✓ *Sensing devices and energy-saving for wastewater treatment.*
- ✓ *Rapid detection of water quality.*
- ✓ *Adaptive water management based on monitoring.*
- ✓ *Improving agricultural productivity (land and labor).*
- ✓ *Groundwater management.*
- ✓ *Water saving for adapting to drought.*
- ✓ *Flood risk mitigation.....and many more !*

Conclusions



➤ Possible Collaboration Projects (example)

- ✓ *Intelligent infrastructure toward better water management under climate change and socio-economic change with the fusion of various sensor data, GIS, and models of hydrology.*
- ✓ *Intelligent water infrastructure for mega cities (disaster mitigation) and/or mega irrigation areas.*
- ✓ *Decentralized wastewater treatment technology supported by challenging sensing devices. (real time monitoring)*
- ✓ *Smart paddy management for rational water distribution, water saving, labor saving, and/or mitigating flood damage.*
- ✓ *Adaptive management of water distribution for mitigating impacts of water shortage, water logging, and/or salt water intrusion.....All of above projects for all e-ASIA countries.*

Conclusions



➤ What can be expected from e-ASIA JRP Collaboration in Smart/Intelligent Water Infrastructure Technology

- ✓ *Better water infrastructure for heavily populated mega cities in warm-humid climate, in Asian geology.*
- ✓ *Better international water management for peace.*
- ✓ *Synergistic, supplemental and leveraged effects by multilateral cooperation through joint funding.*
- ✓ *Genuine partnerships for mutual contribution.*
- ✓ *Promotion of Asia-specific technologies by understanding the similarities and differences of different participating countries.*
- ✓ *“Smart means smiles.”*



**Thank you for your strong support
to e-ASIA Joint Research Program.**