

International Centre for Water Security and Sustainable Management under the auspices of UNESCO

15 May 2024

International Symposium of Category 2 Centres under the auspices of UNESCO

Ms. Sooyoung Park
i-WSSM Programme Manager

Introduction: i-WSSM

- ♦ i-WSSM is Korea's first UNESCO natural Science field international organization
- ♦ Established in 2017, based on the Agreement between the Republic of Korea government and UNESCO
- ♦ The renewal of the Agreement on Centre Establishment was signed in Dec. 2022

Mission & Vision

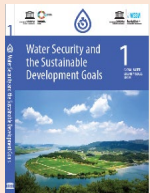


Mission	Support Water Security Strategies for Sustainable Development against Climate Change		
Vision	Equal and Safe Water Use and Better Quality of Human Life		
Core Value	<div><div>Interaction</div><div>Wisdom</div><div>Sharing</div><div>Support</div><div>Motivation</div></div>		
Strategic Direction	Integrated & Problem-Solving Research	Case & Field Oriented Education & Training	Globally Networked Cooperation Platform

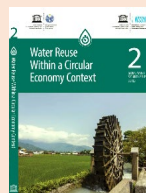
Integrated Problem-solving Research

Publication of GWSI

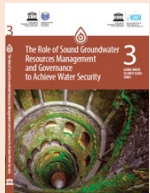
- Global Water Security Issues
- Publishing periodically,
UNESCO's official publication
- **10 issues** are scheduled to be
published



◀ Water Security
and SDGs ('19)

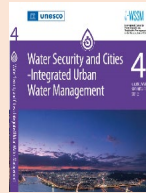


Water Reuse ('20) ▶



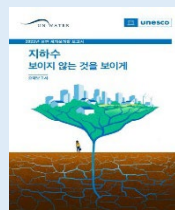
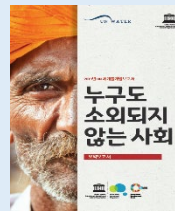
◀ Groundwater
Management ('21)

Integrated Urban
Water Management
('23)



Korean Executive Summary of WWDR

- World Water Development Report
- Publishing in non UN official
language, **Korean** to share
international issues domestically
- 2024: Water for prosperity and
peace

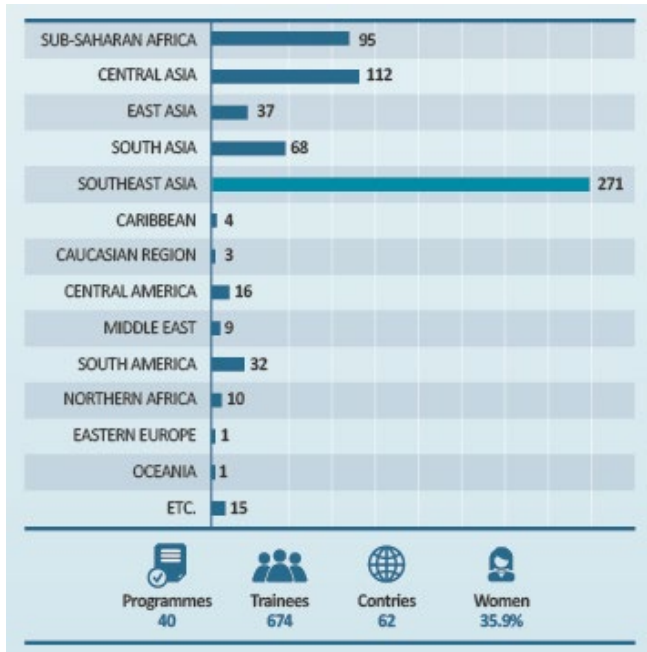


Research on Water Management

- Urban water management on Water-
Energy-Land **Nexus perspective**
- Determining relationship on each
nexus and establishing strategy
 - Accelerating transition into environment
friendliness, high efficiency, low cost
- Sharing research result in
international conference



Case & Field Oriented Education



Capacity Building for Water Security

- **On-site** or **invitation training** for developing countries
- Capacity development programme, **specializing targeting countries**
- Urban water management (Laos), Smart water management (Central Asia), groundwater monitoring and managing (Africa)



Education for the Next Generation

- **Youth** is a priority group for UNESCO
- **Enhancing awareness** of concept of water security to who will live with climate change in the future
- Cooperation with university or institutions in Korea, as well as Jakarta Regional Office
- Foreign student who study in **Korea, Indonesia**, etc.
- Policy, technology, international cooperation, fund raising, etc.

❖ MOOC Digital Education Contents : <https://unesco-iwssm.org/e-learning>



Climate Change



Carbon Neutrality



Integrated Water
Resources Management



Water Resources



Hydrological
Survey



Groundwater
Management



Water
Supply



Irrigation
Water

Global Cooperation and Network Platform

Cooperative Project with IHP

- Collaboration on **UNESCO Water Family** for knowledge sharing (MoA, Capacity Development)
 - Laos, Kenya
- **Workshop, field survey** will be proceeded to other countries for expanding cooperation projects



Strengthening Network Platform

- Contributing **IHP 9th Strategies**
- Cooperating on **C2Cs**
 - * C2C Consultation Secretariat in Korea
- Participating in **international events**
- Supporting **SDG-PSS**, with UNOSD
- Establishing **close relationship** with water-related institutions, especially Water Family(C2Cs)

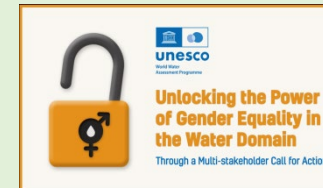
Water
Family

Institutions
Organizations

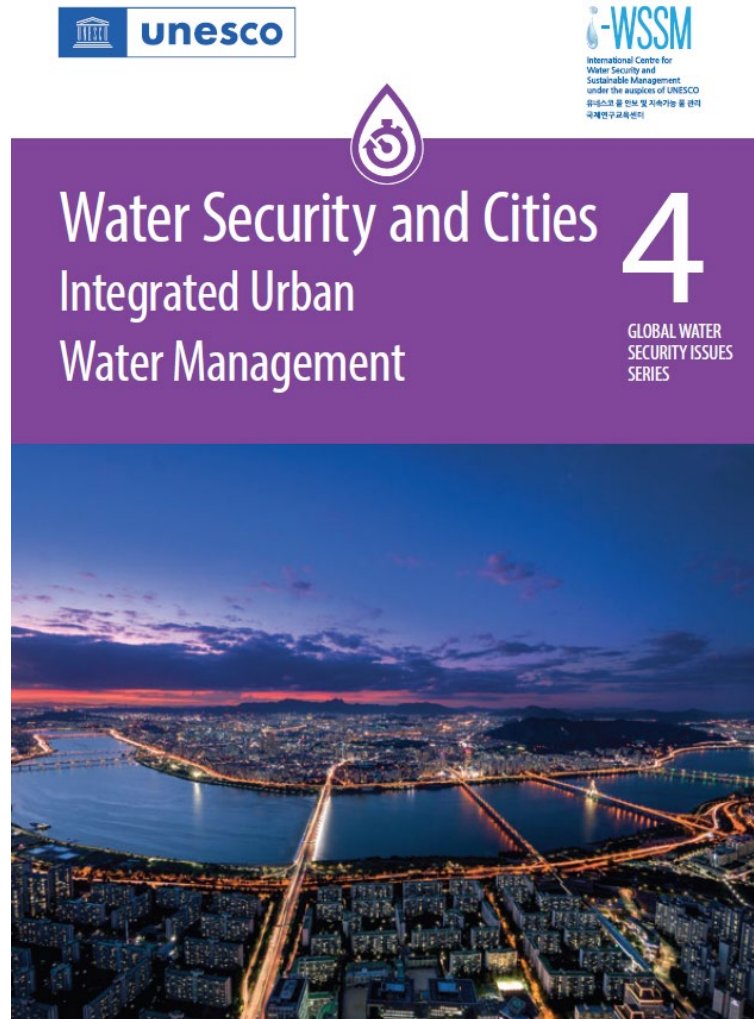
C2Cs
in region

Water & Gender Awareness Raising

- Supporting UNESCO's 'Call for Action('21) and Playing a role as Multi-stakeholder Coalition Group
 - * Call for Action; Accelerating gender equality in the water domain('21) – led by UNESCO WWAP
- Launch i-WSSM's Early Career & Young Professional Network on Water and Gender Equality in Asia-Pacific region('WAGEL YP') in Nov. 2023



Integrated Urban Water Management



- ◆ GWSI: Global Water Security Issues
- ◆ Co-publication of UNESCO and i-WSSM
 - Listed in the UNESCO Digital Library
- ◆ Presents various case study and implementation of Integrated Urban Water Management (IUWM) and including 11 chapters of:
 - IUWM and city planning
 - Stakeholder engagement and practical experiences
 - Innovation to meet urban water demand
 - Frameworks for IUWM solutions

Integrated Urban Water Management

Water-Energy Nexus Research

i-WSSM has been conducted urban water-energy nexus

- 1st year: analysis of interrelationship and trade-offs between sectors
- 2nd year: energy intensity matrix in urban water system
- 3rd year: Investigation of urban water system in Korea
- 4th year: Evaluating the applicability by using AI-based big data analysis

Capacity Building

Webinar on Smart Water Management (SWM)

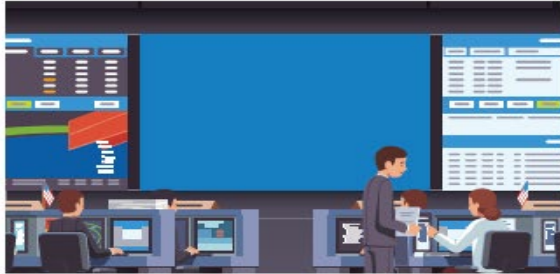
- Webinar with Korea – Central Asia Cooperation Forum
- Introduction of best practice with cooperation of K-water (Busan Eco Delta City, Sejong Smart Water City)
- Capacity building programme on SWM for Aparri City, Phillipines



Integrated Urban Water Management



Integrated Urban Water Management



Precipitation monitoring & urban/water-related disaster response

Small-sized precipitation forecast radars and prepare for flooding and integrated water-related disaster response system

1



Low impact development (LID)

Customized green infrastructure at public facilities, lands, and buildings

2



Stream quality improvement

Eco-filtering system to improve the natural water source quality

3



Water recycling system

Highly advanced treatment for 100 water reuse

6



Smart water management (SWM)

ICT application in all water supply processes for live monitoring and remote control of water quality and quantity

5



Smart water treatment plant

Multi-story water treatment facilities for supplying freshly treat water from locations that are closer to users

4



Thank You

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Ms. Sooyoung Park(sooyoungpark@unesco-iwssm.org)