Programme

Proposal Guidelines

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UNESCO

United Nations
Educational, Scientific and
Cultural Organization

i-WSSM

International Centre for
Water Security and
Sustainable Management

I. Introduction to i-WSSM Programmes

1. Background

The International Centre for Water Security and Sustainable Management (i-WSSM) was established in May 2017 by the Agreement between the Government of the Republic of Korea and UNESCO in order to assist developing countries in addressing water security and sustainable development through research, education & training, and global cooperation.

As a bridge between Korea and the international society, the Centre offers empirical and hands-on training programmes that make full use of the cutting-edge water technology and infrastructure within Korea. Furthermore, it offers valuable opportunities for networking, cooperation, and information exchange between Korean and international organizations and individuals.

Since its establishment, 14 programmes have been organized for 193 participants from 32 countries and 3 organizations, in collaboration with organizations such as: the Ministry of Environment, Ministry of Land, Infrastructure and Transport, K-water and KEITI (domestic) and UNESCO, IDB, World Bank and USACE (international).

Starting from 2020, the i-WSSM is implementing a new systemic process of programme proposal collection and evaluation. Through this new system, partner countries and organizations are able to suggest their own education programmes based on current needs and desired outcomes. This process will not only enhance the effectiveness and sustainability of our education programmes, but also increase mutual communication and cooperation between i-WSSM and its partners.

2. Objectives

The objectives of i-WSSM's education programmes are:

1) To provide customized education programmes based on the partner country's needs and situation by sharing Korea's experience;
2) To enhance the capacity of programme participants, which can lead to improvement of institutional capacity;
3) To strengthen mutual cooperation between i-WSSM and partner countries.

II. Qualifications for Proposal

- **Country:** public sector organizations such as (central or local) government, government agency, public organization, or research institutes from countries included in the OECD DAC's List of ODA Recipients

- **International Organization:** International organizations

III. Education Themes

An ideal theme is (i) relevant to partner country's national development plan or highly prioritized in the national policy agenda, (ii) relevant to i-WSSM's strategies, (iii) consistent with Korean Government's development policy, and (iv) closely related to UNESCO's strategies. For more details, please refer to the additional information on the websites below.

> - **i-WSSM strategy**
> ☞ http://www.unesco-iwssm.org/centerIntro/mission
>
> - **Korea's government development policy**
> ☞ http://odakorea.go.kr/eng.policy.Legal.do
>
> - **UNESCO strategy**
> ☞ https://en.unesco.org/themes/water-security/hydrology/IHP-VIII-water-security

While partner organizations are welcome to suggest any theme for their programme proposal, priority consideration will be given to proposals under the following four priority themes.

Priority Themes

The i-WSSM has developed four education modules considering the needs from partner countries, as well as Korea's and the international society's priority agenda. The themes of the modules are: (i) Smart Water Management, (ii) Groundwater Management, (iii) Hydrological Survey, and (iv) Nature-based Solutions. The details of the programme are subject to change depending on the education period and participants.

● Smart Water Management

Smart Water Management (SWM) refers to integrated water management that ensures the stability, safety, and efficiency of water. It provides a more resilient and efficient water supply system, reducing costs and improving sustainability with adjustable technology solutions for the water. This module aims to share to smart water management policies and technologies for the whole water cycle, from water sources to consumption.

	Subject	Lecture/Practices	Site visits
1	**Introduction to Smart Water Management**	- Water supply management development history & policy of Korea - Introduction to Smart Water Management - Technologies of Smart Water Grid - Cases of smart water city	
2	(Source) **Integrated Water Resources Management**	- Integrated Water Resources Management of Korea - Water resources management & analysis - Real time monitoring & control technology - Flood & drought forecasting - (P) Hydrological analysis for water resource management	- Integrated Water Supply Operation Center - Water Hazard Information Platform
3	(Treatment) **Water Treatment & Quality Management**	- Water treatment plant system design & operation - Water quality standard - Water treatment plant diagnosis - (P) hydrodynamic analysis in water supply system	- Water Quality Research Center - Water Supply Demonstration Plant - Water treatment plants
4	(Distribution) **Water Pipe Management**	- Water pipe system design & planning - Water loss control program - Water distribution network analysis	- Water Loss Reduction Center

● Groundwater Management

Groundwater is a vital water resource, especially in agricultural areas and islands, as a sustainable source of water. As groundwater is not clearly visible, there is a high necessity for technology solutions for efficient groundwater management. Therefore, this module aims to provide insight into developed monitoring systems using ICT, data collection methods, and relevant policies.

	Subject	lecture/practices	Site visits
1	**Introduction to Groundwater**	- Introduction to Groundwater - Groundwater cases of other countries - Groundwater management development history & policy of Korea	- K-water Integrated Water Resources Center

2	**Hydrogeological Survey**	- Hydrogeological survey - Development of GW maps	- National Groundwater Information Center
3	**Groundwater Monitoring**	- Installation of GW monitoring well - Operation of GW monitoring network - Equipment & system for GW monitoring	- Groundwater monitoring stations
4	**Groundwater Development and Utilization**	- Aquifer recharge, subsurface dam, riverbank filtration - Abandoned & aged well management	- Subsurface dam - Riverbank filtration
5	**Groundwater Quality Management**	- GW pollution risks & vulnerability - Water quality monitoring & analysis - GW pollution mitigation measures	- Korea Institute of Geoscience and Mineral Resources
6	**Groundwater Data Management**	- Data collection & storage - Data analysis & management - Data dissemination service	- National Groundwater Information Center

● Hydrological Survey

UNESCO's Intergovernmental Hydrological Programme (IHP) highlights the importance of hydrological survey within its 9th phase (2022-2029). Lack of hydrologic monitoring technology and infrastructure leads to inefficient use of existing water resources. Therefore, this module trains participants in hydrological survey methodology, technology, analysis, and management.

	Subject	**lecture/practices**	**Site visits**
1	**Introduction to Hydrological Survey**	- Introduction to hydrological survey - Hydrological survey development history and policy of Korea	- Korea Institute of Hydrological Survey (KIHRS)
2	**Hydrological Survey Method**	- Rainfall, water level, streamflow, sediment, soil moisture, evapotranspiration - (P) Streamflow measurement (Price, Ft, ADCP, Automatic flow)	- Hydrological survey practice area
3	**Hydrological Survey Instrument**	- Utilization of hydrological survey instrument - Certification of hydrological survey instrument	- KIHRS
4	**Hydrological Data Analysis & Utilization**	- Calculation of streamflow - Development of rating curve (Water level-Discharge) - Flood & drought forecasting with data - (P) Software (CalPAD), ADCP	- Han River Flood Control Office
5	**Hydrological Data Management**	- Data quality management - Hydrological data standardization - National hydrological data network	- K-water Integrated Water Resources Center - KIHRS

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● Nature-based Solutions

Nature-based Solutions (NBS) is an approach to solve societal challenges faced by cities, landscapes, and seascapes by developing and implementing solutions supported by nature. Not only will it maintain the biological and cultural diversity of the ecosystem, but also bring socioeconomic and environmental benefits in a fair and equitable way. The NBS module aims to introduce and promote NBS solutions for various water-related issues.

	Subject	lecture	Site visits/practices
1	**Introduction to NBS & Water**	- Introduction to NBS - Application cases & effectiveness of NBS (ecological river restoration, urban regeneration) - Green & Grey Infrastructure - LID on urban development	- LID facilities - Rain harvesting facilities - Water reuse facilities - Ecological river
2	**NBS for Water Availability**	- Application cases (reconnecting rivers to floodplains, riparian buffers, forests and naturally vegetated land) - (P) Water balance analysis & water circulation index estimation	- Korea GI·LID Center
3	**NBS for Water Quality**	- Reducing the impacts of agriculture on water quality - Improving water quality in human settlements - Challenges of NBS in maintaining water quality	- Wetlands - Constructed wetlands
4	**NBS for climate change and Natural Disaster**	- NBS for flood management - NBS for drought management - Challenges in applying NBS in the context of variability & risk reduction	- Reservoir - Ecological park

IV. Programme Components

Programmes can be designed in various ways in terms of location, period, composition, etc. Even if selected, details of the programme are subject to change depending on discussions between i-WSSM and the partner organization.

1. Target Country

Proposals submitted by national (public) organizations should be targeted for **one specific country (Country-specific programme).** However, if there are several proposals with a similar theme, i-WSSM reserves the right to combine the proposals into one programme designated for **several countries (Multi-country programme).**

International organizations are welcome to propose either country-specific or multi-country programmes.

2. Location

Proposed programmes may be either **invitational** (to take place in Korea) or **on-site** (to take place in partner country).

3. Period

Education programmes can be a **one-time programme**, or a **repetitive programme** (once per year, up to a maximum of 3 consecutive years). The length of the programme is dependent on the proposed location:
-    Invitational programme: from 7 days to 14 days (including arrival & departure)
-    On-site programme: up to 14 days

4. Composition

Programmes can be composed of lectures, practices, site visits, seminars, meetings with relevant organizations (private sectors), country report presentations, action plan, cultural tours, etc. Partner organizations are welcome to indicate the lecture subjects and type of facilities they would like to visit. Based on the provided information, i-WSSM will design and finalize the detailed programme contents.

5. Number of Participants

The maximum number of participants is dependent on the proposed location of the programme:
- Invitational Programme: up to 15 participants
- On-site Programme: up to 30 participants
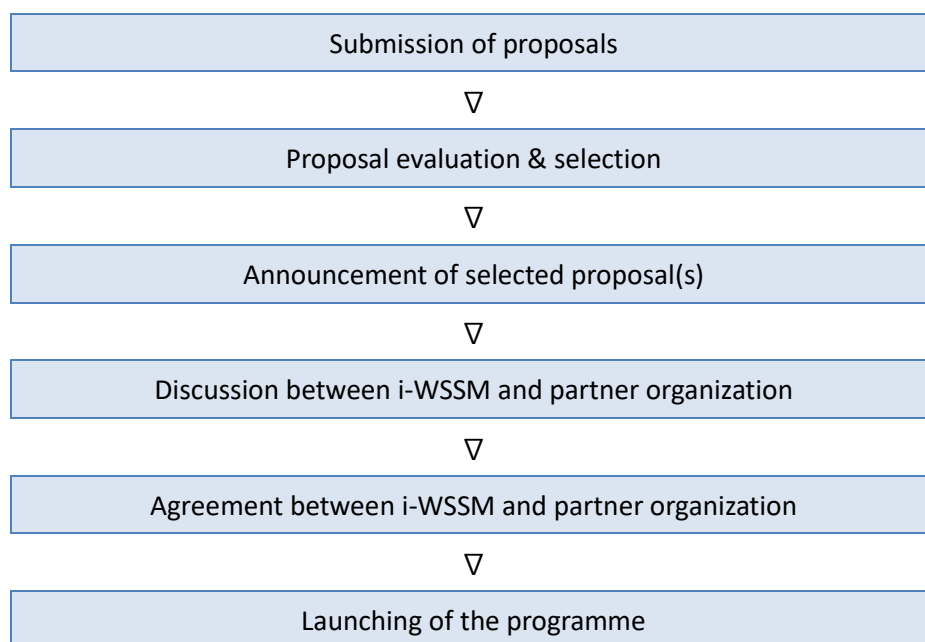
6. Participants' Qualifications

- Be nominated by his/her organization;
- Be in good health both physically and mentally, to complete the programme;
- Has not participated in a i-WSSM programme in the past 3 years;
- Has good command of English, in order to actively participate in presentations and discussions;
- Be ready to demonstrate high level of participation and commitment throughout the programme and promote capacity building in his/her organization after the completion of the programme.

V. Proposal Evaluation Criteria

Evaluation of proposals is conducted **from 1 to 16 August 2020** based upon the criteria below and objectives of i-WSSM.

	Item	Detailed contents	Ratio (%)
I. Programme Proposal	Background	- Feasibility of Background and Objectives	20
	Suitability of the theme	- Relevance to partner country's national development plan - Relevance to i-WSSM's strategy - Relevance to Korea's government development policy - Relevance to UNESCO's strategy	20
	Education programme	- Faithfulness and systemicity of programme plan - Adequacy, diversity and creativity of programme module	20
	Expected outcome	- Effectiveness and specificity of expected output and outcome	20
II. Organization's Capacity	Willingness	- Willingness to support the programme	20

VI. Application & Programme Procedures

Submission of proposals
∇
Proposal evaluation & selection
∇
Announcement of selected proposal(s)
∇
Discussion between i-WSSM and partner organization
∇
Agreement between i-WSSM and partner organization
∇
Launching of the programme

1. Application Process

Proposals should be submitted to the i-WSSM Education team at edu@unesco-iwssm.org along with an official letter from the head of your organization to the Director of i-WSSM.

2. Announcement of Results

The selected proposal(s) will be announced on the i-WSSM website. i-WSSM also will contact the organization directly through the contact information provided in the proposal.

3. Discussion & Agreement

The detailed programme plan will be decided based on discussions between i-WSSM and the partner organization. After thorough discussion, both organizations will sign an agreement on the programme. If required, i-WSSM may implement an on-site assessment mission in order to obtain more detailed information on the situation of the partner country.

VII. Roles & Responsibilities

	Partner Organization	i-WSSM
Preparation	- Provide relevant data and information on related to the education theme - Select and nominate qualified local participants on time	- Design and organize the programme based on the needs of the partner organization - Recruit experts to give lectures and arrange site visits, etc - Invite participants
Implementation	- Arrange meetings with relevant organizations and local experts and/or site visits to coordinate the visits of Korean experts for **on-site assessment** - Support i-WSSM in coordinating the **on-site workshop** (e. g. by arranging conference rooms, local transportation, recruiting local experts and participants, etc.)	- Programme implementation - Financial support in accordance with the i-WSSM's regulation - Programme monitoring - Participants' care and management
Evaluation	- Long-term evaluation **a year after** the completion of the programme focusing on the effectiveness of the programme	- Evaluation **right after** the completion of the programme focusing on participant's satisfaction and achievement
Report	- Full report on the outcomes of the programme a year after the completion of the programme	- Report on the result of the programme three months after each programme
Public Relations	- Utilizing and sharing the outcome of the programme at international meetings or through publication	