



# Guideline for World Water Challenge

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Korea Water Forum  
Secretariat of Korea International Water Week



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## **1. OVERVIEW**

The World Water Challenge is an international contest for water solutions. It was created as a special program of the Science and Technology Process in the 7<sup>th</sup> World Water Forum to identify imminent water problems that the world is facing and to find feasible solutions keeping in mind “Implementation”, the core value of the 7<sup>th</sup> World Water Forum. The Program aimed to present science and technology that are applicable to the real world and come up with optimal solutions to water problems. Since the great success of the 1<sup>st</sup> event in 2015, the program has become one of the symbolic platforms of implementation which has been followed up in the Korea International Water Week over 3 years, focusing on science and technological methods that have contributed to the world’s awareness on the importance of role of science and technology in solving water challenges.

This year, the World Water Challenge 2018 (WWCH 2018) will take place as one of the signature programs of the Korea International Water Week (KIWW) in September in Daegu Metropolitan City, Republic of Korea. This 4<sup>th</sup> edition of World Water Challenge is expected to serve its role as an important platform to share the innovative ideas and know-hows towards solving the defined water issues around the world and to forge a broad network among the experts and stakeholders in water sector as well as the diverse pool of problem owners and solution providers.

## **2. ROLE OF PARTICIPANTS**

### **A. PROBLEM OWNER**

Problem owners will be invited to submit water problems including specific cases and situations in their region related to the defined “Topics” stated on Page 5, a pre-established set of categories. For the next step, the up to 5 water problems will be selected as the challenges of WWCH 2018 and selected problem owners will be invited to the final round during the KIWW 2018.

### **B. SOLUTION PROVIDER**

Solution provider will be invited to propose solutions to deal with the selected problems. Up to 6 outstanding solution providers will be invited to present their proposals and the best solutions (out of selected for finalists) will be awarded during the Korea International Water Week 2018.

### 3. ELIGIBILITY

#### A. PROBLEM OWNER

Anyone (as an individual or on behalf of an organization) who is interested in water or is suffering from water problems is welcome to participate in the program.

#### B. SOLUTION PROVIDER

Anyone (as an individual or on behalf of an organization) who is interested in water or would like to propose creative/applicable solutions is welcome to participate in the program.

*\* Persons (including winners) who participated once (and more) in the previous WWCH are allowed to participate in the WWCH 2018 with the different (or updated) subject and ideas. (If the same contents and ideas, will not be considered.)*

### 4. APPLICATION AND PERIOD

#### A. ON-LINE APPLICATION

The problem owners and solution providers are requested to submit problem/solution proposals through the online submission system via KIWW Official website ([www.kiww.org](http://www.kiww.org)) using the provided application form.

- It is strongly recommended for all submitters to read carefully and follow the submission instructions indicated on the provided template.  
*\* The official template can be downloaded on the KIWW website.  
([https://kiww.org/fairContents.do?FAIRMENU\\_IDX=5815&hl=ENG](https://kiww.org/fairContents.do?FAIRMENU_IDX=5815&hl=ENG))*
- Both problem and solution proposals can only be submitted via online submission system. The email submission will not be considered.  
*\* It is requested to create an account first on the sign-up page in order to submit your proposal through the website.*
- Both problem and solution proposals must be filled out in English. Other languages are not acceptable.
- One person (or organization) can submit more than one proposal with the different water problems and solutions.
- Please make sure that all materials submitted for entry will not be returned and they might be used or published partially or wholly by the secretariat.

## B. PERIOD

**Problems** : Problems can be submitted from **April 23 to June 1, 2018**.

*\* The Judging committee will select up to 5 problems in accordance with the selection criteria and announce them on the KIWW website before June 11, 2018.*

**Solutions** : Solutions can be submitted from **June 11 to July 30, 2018**.

*\* Submitted solution proposals will be evaluated by the judging committee in accordance with the evaluation criteria and up to 6 selected solution providers will be invited to the final round during the KIWW 2018.*

## 5. PROCESS



## 6. FINAL ROUND AND AWARD CEREMONY

Selected problem owners and solution providers will be invited to the final round of the WWCH 2018 to be held on September 13<sup>th</sup>, during the KIWW 2018 and they will be provided with the opportunity to present their solution to the participants of KIWW 2018.

The award ceremony will be held on September 14<sup>th</sup> at the closing ceremony of the KIWW 2018 and winners will be presented with a cash prize and trophy respectively. For the updates, please continuously visit the KIWW website.

## 7. CRITERIA

A submission can earn a maximum score of 100 points. Each submission will be judged based on five different criteria as below.

### A. EVALUATION CRITERIA for PROBLEMS

Evaluation Item	Detailed Contents of Evaluation	Score
<b>Clarity</b>	<ul style="list-style-type: none"> <li>○ If the problem is described specifically and well explained with the practical information rather than vague or broad demonstration.</li> </ul>	<b>20</b>
<b>Relevance</b>	<ul style="list-style-type: none"> <li>○ If the problem is clearly identified with causes and influences of the problems.</li> <li>- If problem owners defines and analyzes the direct cause (secondary causes as well) and influences of the problem</li> </ul>	<b>15</b>
<b>Importance</b>	<ul style="list-style-type: none"> <li>○ If the problem is strongly linked to an issue which the world is facing today to solve, or related to a reserved task that the world is willing to overcome.</li> </ul>	<b>20</b>
<b>Urgency</b>	<ul style="list-style-type: none"> <li>○ If the problem demonstrates one of caution and urgency with respect to how to the world prepare for and act to prevent a water crisis and the needs to be dealt with as soon as possible.</li> </ul>	<b>25</b>
<b>Exposure</b>	<ul style="list-style-type: none"> <li>○ If the problem is demonstrated with a phenomenon or a situation in which large number of people and assets are exposed to difficulties and the defined causes result in the global communities potentially liable to face the water problem.</li> </ul>	<b>20</b>

## B. EVALUATION CRITERIA for SOLUTIONS

Evaluation Items	Detailed Contents of Evaluation	Score
<b>Comprehension</b>	<ul style="list-style-type: none"> <li>○ If the solution provider exactly understands the problem including background, objectives, scope, cause and effect, and impact on the global water issues.</li> </ul>	<b>20</b>
<b>Contribution to “Sustainability”</b>	<ul style="list-style-type: none"> <li>○ If the solution provider clearly understands the meaning of sustainability.</li> <li>○ If the solution sufficiently demonstrates the contribution to achieving the sustainability in development.</li> <li>○ If the solution provider considers possible alternatives in achieving sustainability in the solution.</li> </ul>	<b>25</b>
<b>Feasibility</b>	<ul style="list-style-type: none"> <li>○ If the solution sufficiently satisfies the requirement of the problem owner with a feasible manner, such as economic, technical, legal, and political feasibility in its implementation.</li> <li>○ If the solution is suitable for the implementation and easy for approaching its circumstance.</li> <li>○ If science and technologies applied to the solution are practically applicable to the field.</li> <li>○ If the local resources are efficiently used in the solution.</li> <li>○ If the solution is designed to have a lasting impact on the problem.</li> </ul>	<b>25</b>
<b>Challenge</b>	<ul style="list-style-type: none"> <li>○ If the solution effectively helps overcome any challenges and achieve the goals of water issues.</li> <li>○ If the solution provider proposes innovative methods in solving the problem.</li> </ul>	<b>15</b>
<b>Impact</b>	<ul style="list-style-type: none"> <li>○ If the solution provider well describes the expected effects of the solution on the lives of plants, animals, and human beings.</li> <li>○ If the effects of activities in solving the water problems are obviously described.</li> </ul>	<b>15</b>

## 8. TOPICS

### Topic 1: Efficient Water Management (SDGs links: SDG 6.4 Water Use Efficiency)

- Urban water efficiency
- Agricultural water efficiency
- Industrial water efficiency
- Energy efficiency in water and waste water systems

*Keywords: sustainable water resources management, water resources security, water production improvement technology, water supply management, water and industry, water-energy-food nexus, water resources development, trans-boundary water resources management, dam and river system operation*

### Topic 2: Resource Recovery from Water and Wastewater Systems (SDGs links: 6.1 Safe Water, 6.2 Sanitation)

- Water recycling and reuse technologies
- Energy production from water and waste water cycles
- Nutrient recovery from waste water

*Keywords: water and wastewater treatment technology, safe and clean technology for drinking water, sanitation and health science, sea water desalination, water-energy production technology, renewable energy, total water pollution load management, river quality management, hydropower technology*

### Topic 3: Water and Natural Disasters (SDGs links: 11.5 Reduction of Economic & Human Losses)

- Climate change assessment and adaptation
- Drought analysis and management
- Urban floods and damage reduction
- Remote sensing and GIS applications to natural hazards

*Keywords: climate change scenarios and prediction, drought analysis and management, water resources risk scenarios, risk assessment and adaptation, water and disasters, water related composite hazards, coastal disaster and tsunami, urban floods and resilience*

### Topic 4: Smart Water Technologies (SDGs links: 6.5 IWRM)

- Management of urban, industry, and irrigation water
- Implementation of integrated water resources management
- Design and implementation of smart water grid
- Information and communication technologies for water management

*Keywords: water and creative economy, smart water management, smart disaster management system, smart agricultural water management, standardized smart water grid technology, water management information systems, RS and GIS applications for securing water resources, best management practices of IWRM, advanced water governance through multi-directional information system.*

### Topic 5: Ecosystem and Water (SDGs links: 6.6 Water & Ecosystems)

- Science and technology for green infrastructure management
- Economic valuation on ecosystem and water
- Effects of ecosystem on water quality

*Keywords: water and environment, water and green growth, vulnerability analysis for water environments, marine ecology and sea level rise, wetland conservation and restoration, green infrastructure.*