Initiative on Global Standard Frameworks and Certification Schemes Applicable to Smart Water Cities

Host : IWRA *, K-water Research Institute, Asia Water Council (AWC)

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Description

Body
Developing Smart Cities has been a promising aspiration to deal with the many challenges that world cities face nowadays, to improve their efficiency and safety and to provide better quality of life for citizens. The concept of Smart City has been developed during the so-called Fourth Industrial Revolution, currently underway, consisting in the use of mobile digital communication and information technologies (ICTs), supercomputers and robotics in different areas of city life ,which have had large, paradigmatic impacts in world economies and societies.

Several international organizations and professionals around the world have developed key performance indicators (KPIs) and certification schemes to evaluate and compare various aspects of cities' performance. However, while Key Performance Indicators (KPIs) for Smart Cities have been developed in the context of "Sustainable Cities and Communities" according to the UN Sustainable Development Goals (SDGs), limitations exist as to how to adapt and apply these concepts to the use of ICTs in urban water management and water services provision. Indeed, Smart Cities KPIs concern several aspects of a Smart City – communication, use of energy, transportation, disasters prevention, etc - but water has figured insufficiently in the definition of a Smart City. Also, it is essential to consider cities in different countries (e.g., economical, technical levels and hydrometeorological, morphological conditions) and different types of cities (e.g., existing and new cities). For this reason, while the measures and standards for Smart Cities can be used as a starting point, they are insufficient when trying to apply it to the particularities of a Smart Water City (SWC).

K-water, IWRA and AWC have joined forces to conceive and implement a joint three-year research project examining Smart Water Cities (SWC). The project, which runs from 2021 till the end of 2023, seeks to develop a global standard framework, KPIs and a certification scheme for Smart Water Cities. The project is divided into distinctive three parts. The First year will examine, classify, and evaluate existing global standards (frameworks, KPIs, solutions, certification schemes and Smart Water City definition) The second year, from January to December 2022, will develop a SWC frameworks and KPIs, while the third year will develop a SWC Certification Scheme, protocols and evaluation guidelines.

This Special session presents the SWC project and the results of the first year. It will address emerging water-related issues in cities and present illustrative cases of smart water cities, from international organizations, government, and academia. The Special Sessions attendees, which will include steering

committee members, IWRA Task Force members and case authors, will be invited to discuss the project's future directions to develop and adopt a global standards and certification schemes for Smart Water Cities.