



# Wetskills-South Korea 2018

## Overview of Study Cases

### Case 1: Raising the Value of Rivers

**Case owner: Korea Water Resources Corporation (K-water)**

South Korea faces many climate change challenges in terms of water management due to heavy rainfall combined with a recent period of rapid urbanization and industrialization. They now strive for eco-friendly water management, with sustainable and ecological river management instead of large dam constructions. K-water is increasingly focusing on finding more effective and desirable ways to use and manage the Korean rivers with the balance of traditional and cutting-edge methods. Which is also what the assigned team is asked to investigate.

### Case 2: Sustainable future: Water & Energy

**Case owner: Waternet Amsterdam (in cooperation with Seoul Metropolitan Government)**

For 2040, Amsterdam strives for all energy used in the city to come from renewable resources. Seoul has a similar urgent need for sustainable energy. If these cities want to have a 100% sustainable energy supply, they have to look for other sustainable energy sources in the near future. The question is: how can water contribute to this transition? Both Waternet Amsterdam and Seoul Waterworks Authority want to contribute to achieve the goal of 100% renewable energy for both their capital cities, the Wetskills team is challenged with the question how.

### Case 3: Creating a circular economy for decentralized wastewater systems in cities

**Case owner: Delfland Water Authority**

Cities all over the world are dealing with comparable issues such as: staggering urbanization rates, industrial pollution and climate-change. In many cases the current urban water systems show to be insufficient in dealing with these issues. It is therefore essential to start learning from each other's experiences to create a blueprint for a worldwide sustainable urban future. The question remains: how can a decentralized wastewater system be redesigned such that it embraces the concept of Circular Economy and motivates a broad range of stakeholders to commit and engage along the process?



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### **Case 4: Turning Saline Aquifer into a Freshwater and Energy Storage System**

**Case owner: Korea Institute of Science and Technology (KIST)**

Water quality degradation in river basins and climate change are becoming a major threat to the surface water in South Korea. There is a need to shift the water resources portfolio from surface water to a groundwater-surface water integrated management system. The assigned team is asked to come up with an innovative system design, combined with economic analysis and enhanced stakeholder engagement.

### **Case 5: Islands of Innovation**

**Case owner: Province of Fryslân (in cooperation with Daegu)**

The Province of Fryslân (a province in the north of The Netherlands) and its regional partners in water innovation, aim at the development of smart water systems for consumers. They want to stimulate and accelerate consumer oriented water use innovations. The team is asked to design a game competition for this, focusing specifically on islands, and along with this to develop a unique novel product, service, business or a combination.