

The European Commission has signed the grant agreement for water mining. Water mining is a 17 million euro project that is aimed at demonstrating innovative water resource solutions.

As part of the project, demonstrations in Cyprus, Spain, Portugal, Italy and The Netherlands will be built to show novel efficient ways to reclaim nutrients, minerals, energy and water from industrial and urban wastewater and seawater. The public-private consortium consists of 38 public and private partners and 4 linked third parties in 12 countries. It will be led by Delft University of Technology (TU Delft).

The Water mining project aims to provide examples for real-world implementation of the Water Framework Directive to help the transition to a circular economy. It also ties in with the recently presented European Green Deal. The demonstrations will integrate selected innovative technologies developed by partners and from previously funded EU projects. The value-added end-products (water, platform chemicals, energy, nutrients and minerals) are expected to fuel regional economic developments.

Mark van Loosdrecht (professor of Environmental Biotechnology, TU Delft): “Water is essential for human health, certainly in urban areas. Flushing sanitary waste out of the city is one of its main functions. This program will help recover this water and convert waste components to resources, thereby contributing to a stronger circular economy.”

Social embedding

The implementation of the new technology will be co-designed with a range of stakeholders. Through science museums such as NEMO in The Netherlands and Living Labs throughout Europe the project will also invite public input related to the social impact and possible concerns. Using augmented reality, the project will present the science behind the technology, its measured ecological footprint and any social impacts.

The project aims to be an example for the social embedding of innovative technological solutions. “We will organize over 24 workshops with experts, policy makers, industry, civil communities and the public to show the innovations and discuss their implications, such as the ecological footprint, local changes and consequences” says Patricia Osseweijer, professor of Biotechnology and Society at TU Delft and coordinator of the project. “Their input will be used to improve the innovations and their implementation in society. I am really looking forward to this process.”

Collaboration

Novel technology for wastewater treatment and desalination requires new rules and regulations, as well as business models. Together with industry, city councils and regional water organizations, new policies and business models will be developed. Collaboration will be key to reduce costs and increase the efficiency and social benefits.

Dr. Dimitris Xevgenos, who is part of the coordinating team with Mark van Loosdrecht and Patricia Osseweijer: "WATER-MINING is not a concept that was built overnight. Rather, it has been a work of almost a decade carried out with research groups that bring different expertise on board. These groups are now members of the project consortium, committed to contribute to the systemic innovation needed for the circular economy transition to actually happen. I am thankful to them, as well as grateful to the European Commission for supporting us through Horizon 2020 and the LIFE programs since 2010." The Water mining project is set to start on 1 September 2020.

Source: waterworld.com