WATERWORKS 2017 RDI FUNDED PROJECTS BOOKLET

Project: Closing the Water Cycle Gap – Sustainable Management of Water Resources

Acronym: Water Harmony

Outcomes and expected impact:

- Improved use of scarce human and financial resources in the area of water research and innovation by sharing knowledge, building competences, rational utilisation of scare finances and facilitating increased funding;
- Reduced fragmentation of water R&I efforts across Europe and beyond by bringing research environments together to consolidate best practices, share knowledge and develop harmonised actions to achieve objectives;
- Enhanced synergy, coordination and coherence between national and EU funding in relevant research fields through transnational collaboration, by extending R&D&I activities from completed/ongoing R&D&I projects;
- Improved implementation of research and innovation programmes in these fields through exchange of good practices, which is a key objective reflected in all WPs of the project through 6 joint project meetings;
- Increased student mobility between the partners (>30 visits among partners) and >10 co-supervision of master and PhD students, which will be mainly funded from other sources (National funding, Erasmus+, etc.).
- At least 6 pilot plants and prototypes and 4 patent applications
- At least 10 research papers with more than one partner from the consortium
- Strengthened international leadership of European R&I makes the Water JPI, in collaboration with the EC, a privileged and attractive partner for global cooperation: Participation of 4 self-funding international partners;
- Contribution to the implementation of the objectives of the JPI on Water - sharing knowledge, promoting innovation, public-private partnerships, increased stakeholder ownership and governance with transparency;
- Contribution to the implementation of SDG 6, SDG 13 and other EU/UNECE/WHO tools related to water;
- Protecting humans against known and unknown health risks (emerging pollutants with unknown impacts);
- Supporting better water allocation and water use control measures using modelling tools;
- Sharing of knowledge, data and harmonised actions, prompting interoperability;
- Maintaining water quality and quantity with physical and cyber security of water infrastructure and services.

List of deliverables expected:

1.1 Mid-term reports from 4 demo projects produced

1.2 Best practices guide produced for demos

1.3 Open network functional
2.1 Mid-term reports from 7 showcases produced
2.2 Tech forums held in IL, PL, ES, NO
2.3 Technology validation reports
2.4 Open network functional
3.1 Implementation network
3.2 Report outlining the mapping of state variables
3.3 Proof of concept for select demo/case site studies
3.4 Proof of concept for sites – operational capacities
3.5 A report detailing the outcomes lessons learnt
4.1 1st Innovation camp in Israel conducted
4.2 2nd Innovation camp in Spain conducted
5.1 LinkedIn, ResearchGate, Mendeley operational
5.2 Policy labs with public
5.3 Policy labs conducted
5.4 Report on best practices on political dialogues
6.1 Development of dissemination
6.2 Webpage promoted among stakeholders
6.3 At least 10 scientific publications submitted
6.4 Presentations at UNECE PWH and SDGs meetings
7.1 Inception report
7.2 Signed consortium agreement
7.3 Webpage developed
7.4 Minutes of meetings x 7
7.5 Final report

Expected research results to communicate and disseminate (in very general terms)	**Target groups for communication and dissemination activities:**
1. Innovative solutions to prevent water pollution from micropollutants	Researchers, utility owners, industrial partners

2. Demonstration of concepts to holistically manage water resources with minimising pollution, wastewater and maximise resue	Researchers, utility owners, industrial partners
3. Digital tools for data acquisition, processing, use for control and dissemination	Researchers, utility owners, industrial partners
4. Process of innovation camps	Researchers, utility owners
5. Promote public engagement and investments in the water sector	Political and administrative authorities, utility owners
Experiments / Case studies (if any): location, type of experiments: • Management Demo 1: Dynamic water source management IVL (SE) – Sandviken municipality. • Management Demo 2: Reduction of pollution at the source by preventing sewer overflow NMBU (NO) – Asker municipality. • Management Demo 3: Implementing water conservation practices in a catchment UWM (PL) – Lyna river. • Management Demo 4: Rehabilitation of river water quality TUIASI (RO) – Danube river • Technology showcase 1: Electrospun nanofibers for micropollutants removal ACSA (ES) – Barcelona. • Technology showcase 2: Ceramic membranes mobilising fenton reaction and photocatalysis BGU (IL) – Negev desert • Technology showcase 3: Dual membrane – GAC adsorption hybrid system UTS (AU) • Technology showcase 4: Zero Liquid Discharge with RO and electrocoagulation NUS (SG) – • Technology showcase 5: Enhancing reuse capacities with coagulation	

pretreatment MARCOR (PL) – • Technology showcase 6: Hybrid reverse osmosis with fenton oxidation QUT (CN) – Beijing 2020 • Technology showcase 7: Natural coagulants with membranes MSU (US)	
Water Policy context / project contribution to policies (National, European, International – UN SDGs): • SDG 6 – "Ensure access to water and sanitation for all" by • Policy Lab – Co-creation tools and methods are used and experimented with to develop policies with those who are directly involved with the challenges • The work is a direct contribution to the anticipated revisions in the EU Drinking Water Directive on watch list pollutants, which will soon be included in national regulations. Thus, coherent with national and EU funding priorities. • The project also addresses the COP21 Paris conclusions on strengthening the ability of countries to deal with the impacts of climate change • The LCA and CBA concepts, Innovation camps, clustering, citizen sciences and BigData are some focus areas utilising international and EU research methodologies and priorities	