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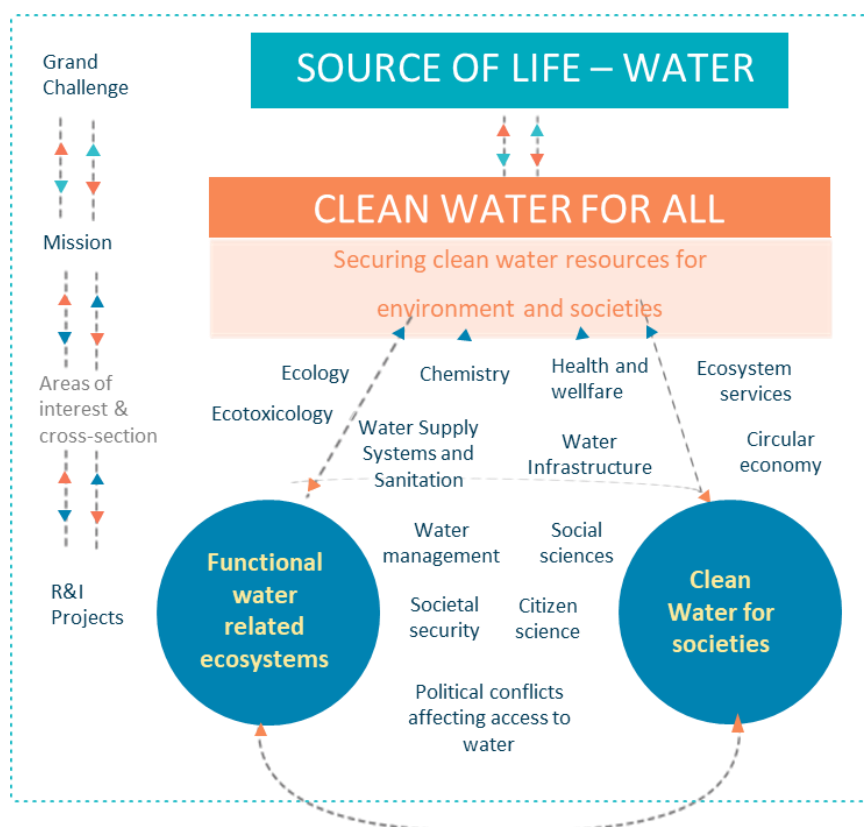
CLEAN WATER FOR ALL

Proposal by the Academy of Finland for a *Horizon Europe* mission

Safe and clean water should be a basic right for people in Europe and worldwide. However, freshwater ecosystems and resources are under growing and competing demand for different purposes and affected by climate change. In addition, pollution, political conflicts, infrastructure development and resource extraction exacerbate changes to the hydrological cycle and the ecosystems therein. Thus, water ecosystems and access to water are increasingly under threat in Europe and globally. The Water Framework Directive target for 2015 was met by a mere 53 per cent of surface water bodies in Europe. Solutions are therefore urgently needed to secure vital ecosystem services provided by our water-related ecosystems and to guarantee access to water. International, national and local decisions as well as changes in behaviour and perceptions based on solid knowledge of the problems at hand are therefore required.

By 2030

- Ecosystems and ecosystem services are maintained at least at current quality level, and 25 per cent of degraded freshwater ecosystems have been restored (e.g. protected from exposure to emerging contaminants including plastics in waters and extreme climate events) (UN SDG 6 target 6.6).
- 75 per cent of surface water bodies in the EU meet WFD requirements (UN SDG 6 target 6.3.2).
- Implementation of innovative solutions for wastewater treatment, recycling and reuse technologies has increased by 25 per cent.





1. WHY: GRAND CHALLENGE AND SOCIETAL RELEVANCE

Healthy water ecosystems are the source of clean water for societies in Europe and worldwide. Solutions developed through the **Clean Water for All** mission could contribute in many ways to global water problems and international development. This is crucial also considering the serious effects that water problems in the Middle East, for instance, have on societies. One main concern is the increased number of refugees caused by the lack of clean water, which affects also Europe.

2. WHAT: CLEAN WATER FOR ALL AS A MISSION

The aim of the **Clean Water for All** mission is to maintain and protect water ecosystems and ecosystem services and to secure sufficient availability of good quality water for all uses in Europe. The new knowledge developed and experiences gained will also help Europe to contribute to clean-water-related issues in other parts of the world, thereby also facilitating successful international agreement processes. Europe can play a key role in creating solutions to the problem by developing global water diplomacy.

3. HOW AND WITH WHOM: AN INTEGRATED APPROACH

By expanding international partnerships, cross-sectoral cooperation and capacity-building activities, including water management, access to water, water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies, the mission will contribute to the Sustainable Development Goals (SDGs) and support European and international policy initiatives – the Water Framework Directive (WFD), the Floods Directive and the EU Biodiversity Strategy. To protect the health of European citizens and ensure the safety of our environment, public and environmental health should be improved and developed as an integrative concept that focuses on core values around three elements – water, energy and food – to secure sufficient water for development and wellbeing. EU policies and targeted objectives will consider the multidimensional interdependencies of the water-food-energy nexus and examine how to better understand the interconnections between resource systems and integrative governance of water resources.

Integrated water resources management at all levels, including involvement of local communities and transboundary cooperation, is crucial to improve societal security and prevent political conflicts in ensuring access to water. There is therefore a need for a strong commitment from citizens to the transfer towards a circular economy and for nature-based solutions supported by legislation and regulation. We also need the commitment of the private sector, research and education institutes and the civil society to reach the set objectives, which means that a multi-stakeholder approach will be essential for success. Full integration of the social sciences and humanities in research and development programmes related to water challenges should address public participation (individual and collective approaches), behaviour and awareness in a holistic view.

