

# CONCEPT NOTE

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## Programme Call ID

HORIZON-CL6-2023-CLIMATE-01-2

Improve the reliability and effectiveness of alternative water resources supply systems and technologies

## Proposed Project Length

36 months - €4 Million

## Context of the Project

The context of this project involves assessing the interaction between alternative water sources supply technologies and the infrastructure design and development, the scale of operation, and the water-energy interactions. The project aims to understand how different choices of alternative water supply technologies can affect the overall infrastructure design and development, as well as how they interact with energy consumption and water usage.

Moreover, the project aims to identify the critical factors that hinder the public acceptance of alternative water resources. It is essential to understand why people may be resistant to using alternative water resources and what actions can be taken to encourage their acceptance. The project will explore policy actions, marketing interventions, and other measures that could increase public awareness and acceptance of alternative water resources.

Overall, this project is designed to provide insights into how alternative water supply technologies can be integrated into existing infrastructure systems, their potential impact on energy usage and water conservation, and how to encourage public acceptance of these solutions. The findings from this project can help inform policymakers, water resource managers, and the public about the benefits and challenges of alternative water supply technologies, and how they can be implemented sustainably to ensure a reliable and safe water supply for future generations.

## Rationale of the Project

The rationale for this project is based on the need to address the challenges facing the water sector, such as population growth, urbanisation, climate change, and water scarcity. Alternative water supply technologies are being considered as a means of meeting the increasing demand for water and reducing pressure on traditional water sources. However, the interaction between the choices of these technologies and infrastructure design and development, the scale of operation, and water-energy interactions needs to be evaluated to ensure that the chosen technology is efficient, effective, and sustainable.

Moreover, public acceptance of alternative water resources is crucial for their successful implementation. However, there are critical factors hindering the public acceptance of these technologies, such as lack of awareness, misconceptions, distrust, and perceived health risks. Therefore, it is essential to identify these factors and develop measures and actions to encourage public acceptance, such as policy actions and marketing interventions.

Overall, this project aims to provide insights into the interaction between alternative water supply technologies, infrastructure design and development, scale of operation, and water-energy interactions. It also seeks to identify critical factors hindering public acceptance of alternative water resources and propose measures and actions to encourage their acceptance. The findings of this project will contribute to the development of sustainable and effective water supply systems that meet the needs of communities and the environment.

## **Project Objectives**

This project will have some overall objective such as:

- To assess the interaction between alternative water supply technologies and infrastructure design and development, scale of operation, and water-energy interactions.
- To identify critical factors that hinder public acceptance of alternative water resources.
- To propose measures and actions (e.g., policy actions, marketing interventions) to encourage public acceptance of alternative water resources.
- To evaluate the efficiency, effectiveness, and sustainability of chosen alternative water supply technologies.
- To develop recommendations for the implementation of alternative water supply technologies in a sustainable and effective manner.
- To contribute to the development of sustainable alternative water supply systems that meet the needs of communities and the environment.
- To disseminate the project's findings and recommendations to stakeholders, including policymakers, water professionals, and the public.

## **Project General Work Packages**

WP1 - Project Management

WP2 - Analysis of the Water Status Report and Plan

WP3 - Treated Municipal Wastewater Reuse and Technology

WP4 - Seawater and Brackish Water Treatment, Reuse and Technology

T4.4 - System validation

WP5 - Rainwater and Stormwater Treatment, Reuse and Technology

WP6 - Pilot Water Treatment System Integration

WP7 - Pilot Activity

WP8 - Pilot Treated Water Reuse Feasibility and Analysis

WP9 - Acceptance and Desirability Analysis and Strategy

WP10 - Results Validation and Water-Energy Nexus Analysis

WP11 - Communication, Dissemination and Exploitation