

WATER – ENERGY NEXUS IN EUROPE

The EU has ambitious decarbonisation goals for the future which may rely on water intensive technologies...

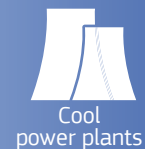
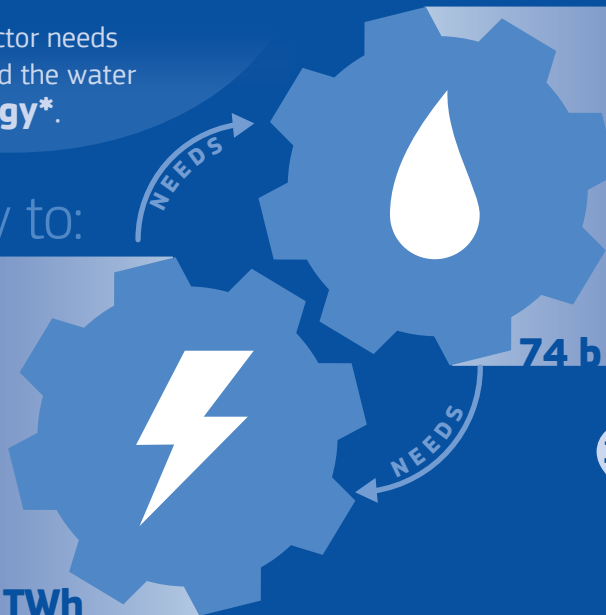
In a course of a year the energy sector needs **74 billions m³ of water***, and the water system needs **80TWh of energy***.

we need water to:

we need electricity to:



80 TWh



*74 b m³ = 30 million olympic swimming pools
*80 TWh = 1 year of electricity produced in Belgium

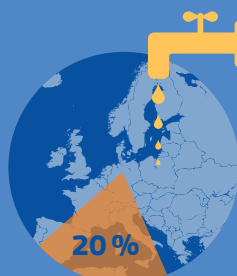
...but these goals must be reached in a way that guarantees the sustainability of water resources.

challenges

Energy can be renewable, however the available water is limited.



20% of European population will be affected by water scarcity by 2050 (under the 2°C warming scenario).



Currently, the use and management of water and energy are not jointly addressed.



WEFE Nexus can help...

The WEFE Nexus project aims to develop a holistic understanding of the interactions between Water, Energy, Food and Ecosystem, treating them collectively.



Support the implementation of several sectoral EU policies



Analyse the most significant interdependencies



Evaluate the value of water in transitioning towards a climate neutral economy



Deliver country and regional scale reports



Develop practical guidance to allow the identification of a portfolio of measures

...taking action!

strategic actions

INTRODUCING

water-related criteria in long-term energy policies



to find a proper trade-off between decarbonisation goals and water sustainability

DEVELOPING

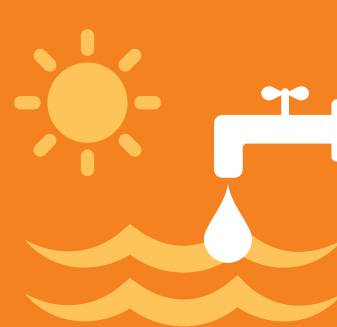
integrated management of water and energy resources



to ensure the functioning of the energy system without affecting agriculture and water supply

UNDERSTANDING

the role of renewable-powered desalination as a viable source of freshwater



and how it may impact the functioning of the energy system

operational actions

INCLUDING

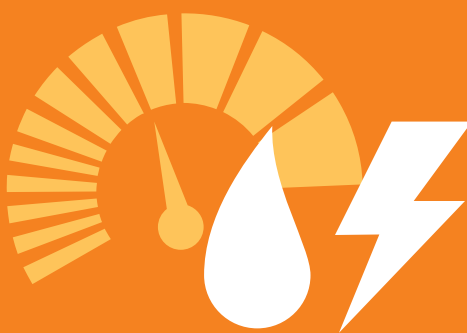
energy efficiency indicators and targets for the water sector



to reduce losses and leakages in water networks and optimise wastewater treatments

RESEARCHING

on water and energy saving technologies



to improve the technical and economic feasibility of these technologies

IMPROVING

the gathering of data from different water uses



to understand the extent of water-energy interactions, and other interdependencies in the WEFE nexus