**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 m$^3$ of water***, and the water system needs **80 TWh of energy**

we need water to:

- Cool power plants
- Produce fuels
- Generate electricity in hydropower plants

we need electricity to:

- Collect
- Pump
- Treat
- Desalinate

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

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.

*74 b m$^3$ = 30 million olympic swimming pools
*80 TWh = 1 year of electricity produced in Belgium
The WEFE Nexus project aims to develop a holistic understanding of the interactions between Water, Energy, Food and Ecosystem, treating them collectively.

WEFE Nexus can help...

- 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

Find out more at: [https://europa.eu/VM38Vw](https://europa.eu/VM38Vw)