ABOUT NINFA

NINFA is a Research and Innovation Horizon Europe 2022 project which aims to develop groundwater monitoring strategies through innovative technology to prevent groundwater pollution. These novel strategies will ensure effective management, control, governance and protection of groundwater resources thus securing water quality and quantity for future use.

Grand Agreement:	101081865
Project name:	TakiNg actIoN to prevent and mitigate pollution oF groundwAter bodies
Programme	HORIZON EUROPE
Call:	HORIZON-CL6-2022-ZEROPOLLUTION-01
Type of action:	HORIZON-Research and Innovation Action
Start date:	1 November 2022
End date:	30 April 2026
EU contribution:	€ 3 996 824,73
Coordinator:	ACONDICIONAMIENTO TARRASENSE ASSOCIACION - LEITAT

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NINFA

Taking action to prevent and mitigate pollution of groundwater bodies

www.ninfa-project.eu

Funded by the European Union

CHALLENGE

Groundwater (GW) is a key resource for water supply for people and nature. GW quality is affected by:

- **diffuse pollution** with pesticides and nutrients derived from agriculture and farming.
- **Sewage** from wastewater treatment plants (WWTPs)
- **runoff** infiltration in cities (especially during storm events)

The **target pollutants** are contaminants of emerging concern (such as pharmaceuticals), antibiotic resistance genes, hydrocarbons, heavy metals, and microplastics.

Since water bodies are interconnected, contaminants end up in rivers, wetlands, lakes, and oceans. Moreover, **aquifer exploitation** for water consumption leads to increased pressure on GW resources, affecting their quality, especially in coastal aquifers, due to saline intrusion.

These problems, aggravated by **global and climate change effects**, lead to a lack of aquifers natural recharge, or an increased sea level worsening saline intrusion.

More action is needed to understand the synergistic effects and risks of multiple stressors and pollutants.

This is where **NINFA** comes into play!

OUR SOLUTION

NINFA aims to go beyond existing actions, technologies, and tools to develop and validate:

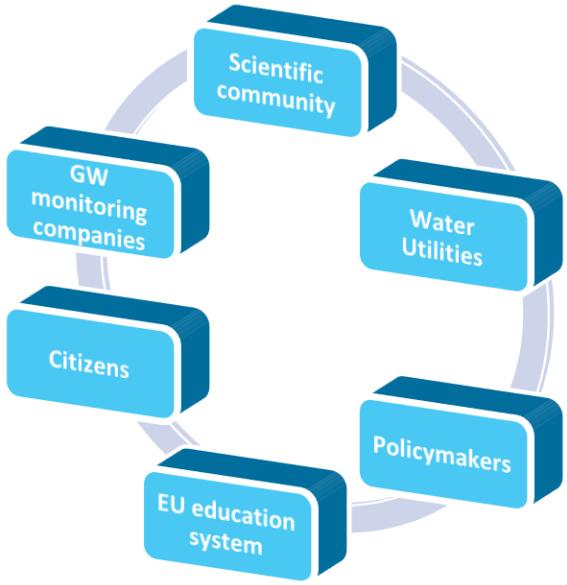
- **Innovative GW monitoring strategy and novel sensors**
- **Hydrogeological and reactive-transport models**
- **Innovative technologies for pollutants removal and resource recovery**

A NINFA Platform will also be developed during the project and will be a powerful IT tool offering the following features:

* **NINFA DSS for efficient GW management in an integrated context**
* **GW Knowledge Observatory for increasing the use of available and new knowledge on GW pollution**
* **Data acquisition and communication network**

WHO WILL BENEFIT

NINFA Platform will offer a better understanding of the processes affecting GW quality

NINFA DSS will understand, evaluate, and predict climate change impacts on GW resources and interlinked surface waters and ecosystems

NINFA will provide a better understanding of the water cycle, synergistic effects, and future impacts