

## IN Situ device for Pollutants dEteCTion In cOntiNuos

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### Consortium:

The *INSPECTION* Consortium comprises **5 interdisciplinary partners** from public research centres, water agencies, SMEs and university, distributed **throughout 3 European countries**. The consortium has highly complementary expertise in the fields of ecotoxicology and site specific toxicity assessment of aquatic systems, passive sampling, ecological modelling and sensor developing.

### Background:

- The water monitoring for micro-contaminants (e.g. pesticides, heavy metals, pharmaceuticals) is still not efficient and based mainly on grab sampling.
- This represent a problem for industries that have to ensure continuously the use of the production of clean water (e.g. use: fish farms, production: drinking water companies, WWTP: waste water reuse in agriculture).
- At larger scale, 62% of EU surface waters has bad quality, leading to sanctions to member states for millions of euros.
- The toxic effects of mixtures in surface waters is still an open issue.

### Goal:

**Implement a low-cost, minimal-maintenance portable field device that can continuously monitor water quality and provide alerts in case of contamination**

### Impact:

- ✓ Substantial **reduction of monitoring costs** in EU rivers and industrial outflows.
- ✓ Improve **water quality diagnosis**, leading to **higher water safety**.
- ✓ Contribute to the assessment, and eventual management, of water as a **natural resource**, especially in the contest of water scarcity.
- ✓ Contribute to the advances in the enabling technologies of **nanotechnology**, **photonics** and **biotechnology**.
- ✓ Improve the **competitiveness of the EU** and the **growth of SMEs** in the sectors of superficial water safety assessment.

**The device is protected by PCT Patent (num. ES2772251)**

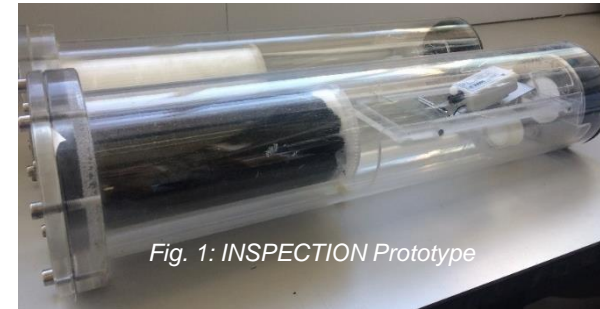


Fig. 1: INSPECTION Prototype