



TROPHIMATIQUE

SMALL-SCALE FIELD INSTRUMENTS FOR VALIDATING HYDROLOGICAL INDICATORS

The aim of the TROPHIMATIQUE project was to develop a new generation of scaled-down, automated instruments designed to validate the hydrological indicators put forward for coastal areas in the EU Water Framework Directive (WFD). Given the requirements of the WFD, it was essential to have access to a range of detailed measurements, particularly in the event of any problematic issues arising in zones previously identified as being at risk of not meeting the WFD environmental objectives.

Spin-offs and future developments

Experiments conducted in the Baie de Vilaine, one of the region's sites most threatened by eutrophication, provided an opportunity to perfect transferrable methodologies and techniques that can be used by management bodies elsewhere. The work also established an industry benchmark.

The following significant advances were achieved:

- Lab-to-field (i.e. sea) transfer of flow injection analysis techniques applied to measuring nutrients – nitrates, silicates, phosphates and ammonium – in seawater, providing measurements that now equal laboratory measurements for quality.
- Development of software that offers the possibility of re-sampling the measurements obtained to determine the extent to which frequency influences the representativeness of in-situ measuring.
- Scientific publications
- Refining of CHEMINI miniaturised chemical analysers
- These developments led to an important technological breakthrough with future potential uses in deep ocean waters as well.
- Final development and commercialisation of a new French probe – Smatch MPx – marketed by Nke.
- Patent pending.

Partners

COM_PROJECTS_CATEGORIE_PARTNER_ENTREPRISES

Nke, Hennebont

Research center

Ifremer, Brest [Project Developer]

Other partner

Institut d'Aménagement de la Vilaine

Funder

- Agence Nationale de la Recherche

Labelisation

2005

Overall budget

1 054 K€