

Short summary SESSION S1
“Trophimatique” project and chemical analysers
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The « **TROPHIMATIQUE** » project which started at the end of 2005 is financed by the National Research Agency (ANR) on behalf of the Program Ecotechnology for Sustainable Development, the project will finish in 2009.

The main objective of the « **TROPHIMATIQUE** » project is the development of a new type of instrumentation miniaturized and automated. These new designs have to be tested and should validate the new hydrological, phytoplanktonical indicators and also the frequency proposed by the new DCE (European Directive for Water).

The chosen pilot site is the Bay of Vilaine, (in the south Brittany): one of the most threatened sites in France which have already known an hypoxic event in 1982, and which is the subject of a lot of studies.

IFREMER takes into account its great experience in development of automated and high frequency systems (*MAREL TECHNOLOGY CONCEPT*) which are operational for years all along the French sea coasts. All the sites in operation are gathered into the “**ROSLIT**” national project.

At the end of the « **TROPHIMATIQUE** » project, the partners (the Vilaine Institute of Amenagement, nke Company, and Ifremer) should have finalised new sensors:

- A new French multi-parameters probe,
- New chemical analysers (Nitrates, Silicates, Phosphates, Ammonium),
- A new automated *IN SITU* Sampler.

All of these new designs are integrated on three floating supports (from ten Kg to ten Tons), are controlled by GSM, provide real time data which are stocked in data basis. All the data collected are accessible by internet.

One of the most original points is the MOLIT buoy which allows a continuous water pumping from the bottom and the surface which permits the continuous two levels analysis of the water with the same sensors. This original installation is actually without any equivalent in an operational state.