MOBESENS - A DRONE FOR COASTAL WATER QUALITY CONTROL

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☐ **Key words**

Advanced engineering (including robotics / control systems) - Sensors / instrumentation / electronics

☐ **Description**

MOBESENS is an **autonomous surface drone capable of measuring various water quality parameters and taking samples in the water column in coastal zones, estuaries and lagoons**. Collected data are transmitted in quasi-real time to the remote control center on land. It is designed for providing a low cost operational solution for regular surveillance of water quality.

Applications
- o Measurements of water quality parameters (salinity, temperature, toxics..)
- o Test campaigns of new sensors
- o Integration of new sensors (modularity of the system)

Innovative Features
- o 24/48 hours autonomy: electric engine with batteries NiMn 2*2 kWh

- 4.20 m. length, 100 kg: designed for shallow waters, lakes or lagoons where survey vessels can't go
- Modularity: capability to integrate new sensors (e.g. to detect toxins)
- Near real time data acquisition and transfer
- Remote control and data transfer through GSM, GPRS, …

Validation phase achieved
- Lakes (Leman, Tau)
- Coastal zones (bay of Brest)
- Rivers (Ebre)
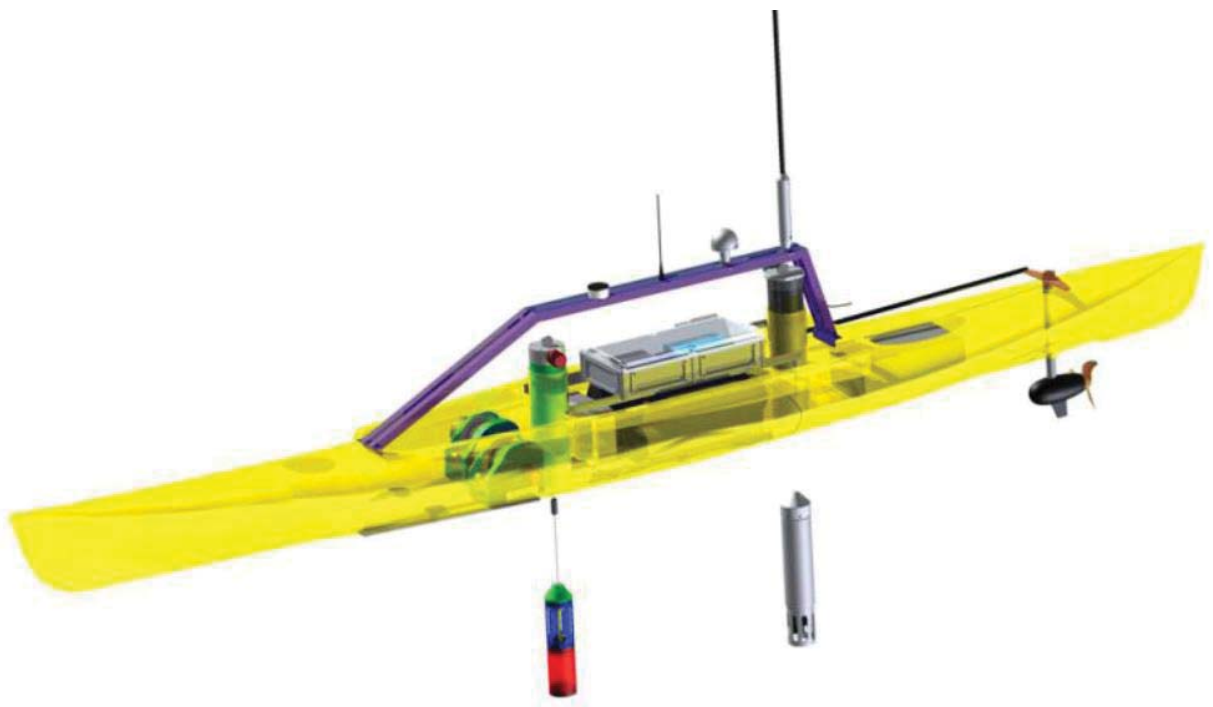
Picture taken on the Leman lake during trials (copyright Ifremer)

☐ **Applicability of Technology to Maritime SMES**

Environmental monitoring (surface and subsurface measurements), wave energy resource assessment. Regular water quality measurement and monitoring.