

Flanders Marine Institute (VLIZ) & ICOS: Research Infrastructure network in the Belgian waters... & beyond

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Over the past years VLIZ, through its involvement in ICOS, has enhanced its Marine Research Infrastructure capability in the Belgian Part of the North Sea. Within this scope the RV Simon Stevin's underway system is now equipped with a wide spectrum of sensors for measuring biogeochemical parameters (e.g. pCO₂, pH, oxygen, chlorophyll, fast repetition rate fluorometer, nutrients). The resulting data are contributing to the construction of a comprehensive biogeochemical map of the Belgian sea surface waters. Additionally a time series station is deployed in the Thorntonbank windfarm, equipped with an array of sensors (e.g. pCO₂, pH, O₂, temperature, conductivity) that provide a coherent time series record of the biogeochemical system in the local marine environment. The aim from both platforms is to constrain the marine biogeochemical system of the Belgian coast and understand how this dynamic environment evolves.

At an international level VLIZ has collaboration with the University of Valparaiso in Chile in order to set up sensors on ships of opportunity (SOP) for producing continuous underway data in the South Chilean coast. There are also ongoing efforts with the Kenyan Marine and Fisheries Research Institute aiming to equip the RV Mtafiti with equipment capable to collect underway data for biogeochemical and physical parameters. This poster presents the infrastructure details, data and derived products from the aforementioned platforms.

Keywords: marine infrastructure; underway sampling; marine biogeochemistry; marine carbonate system