

# Dynamics of inorganic carbon in surface waters off the Galician coast

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The role in the global inorganic carbon cycle of continental shelf seas influenced by seasonal upwelling remains controversial because they are sites of processes that have opposite effects on the flux of CO<sub>2</sub> across the air-sea interface. Upwelling brings to the shelf water oversaturated in CO<sub>2</sub>, while primary production tends to lower the CO<sub>2</sub> values.

In the framework of the Omex project, the dynamics of inorganic carbon in surface waters were studied using three different approaches: the mapping of both the dissolved CO<sub>2</sub> in surface water and the atmospheric CO<sub>2</sub>; the vertical profiling of dissolved carbon isotopes ratio; the modelling of CO<sub>2</sub> air-sea exchange applying different flux expressions.

The distribution of CO<sub>2</sub>, carbon isotopes and fluxes are discussed as a function of biological activity and physical forcing.