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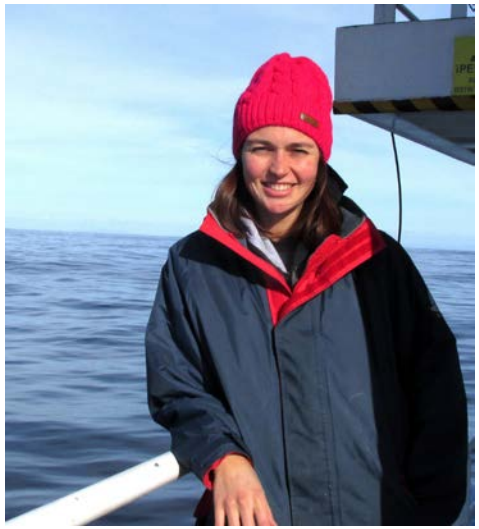
Specialization Area: Ocean Observation
Research Area: 1.4 Biological Oceanography

DO MAR
PHD PROGRAM IN MARINE SCIENCE, TECHNOLOGY AND MANAGEMENT



PhD project: **Elucidating the role of b-vitamins in microbial plankton community structure, activity and succession in a coastal upwelling system (ENVISION)**

Supervisors: Dr. Eva Teira (University of Vigo)

Summary: The ENVISION project and therefore, the experiments included in this thesis are developed in the NW margin of the Iberian Peninsula. This area is a highly dynamic and productive area seasonally affected by wind driven upwelling pulses.

The availability of B-vitamins may influence the abundance, distribution and activity of microbial plankton in coastal waters of the North East Atlantic ocean over short-term and seasonal scales.

B-vitamin concentrations are relatively low in winter, and thus, the spring bloom initially allows the growth of species that have low B-vitamin requirements or high B-vitamin uptake affinities which rapidly deplete dissolved B-vitamins. Subsequently, early upwelling pulses in spring may limit the growth of B-vitamin auxotrophs determining the pool of species that proliferate at the beginning of the upwelling season. After the first productive episodes, bacterial proliferation and associated remineralization processes will provide B-vitamins to further support the growth of B-vitamin auxotrophs during late summer upwelling pulses.