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.