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Orientation: Sustainable Use of Marine Resources
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PhD project: Cultivation requirements, biofiltration capacity and crop quality of different blade-like species of Ulva (Ulvales, Chlorophyta) for use in integrated multi-trophic aquaculture systems

Supervisor: Dr. Javier Cremades Ugarte (University of A Coruña)

Summary: The overall objective of this research plan is to meet the different culturing requirements, biofiltration capacity and crop quality of the four different blade-like species of Ulva more common in the peninsular waters with a view to its use as a biofilter or their integration into IMTA systems, particularly in fish farming in inland facilities by recirculating water (RAS). To do so will be collected and molecularly identified reference material of Ulva australis, U. fasciata, U. ohnoi and U. rigida, these species were previously selected as the best candidates for this study following morphological, genetic and geographical criteria, the latter no doubt reflecting their different ecological requirements. Through cultivation techniques in 160 L culturing laboratory tanks or in chambers of environmental simulation will be analyzed for each species the differences in its requirements of light, temperature, nutrient uptake, growth rate, peak productivity, biofiltration capacity and quality of the biomass obtained. The final goal is to have a complete description of the characteristics and culturing behavior of each of these species in order to select the most suitable for its use in different integrated multi-trophic aquaculture (IMTA) systems.

