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Orientation: Sustainable use of marine resources
Specialization Area: Aquaculture
Research Area: 2.8 Marine ecology and cultures



PhD project: Recycling nutrients from aquaculture effluents through the integrated use of polychaete assisted sand filters and halophytes in aquaponics

Supervisors: Dr. Ricardo Jorge Guerra Calado (University of Aveiro)
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Summary: Aquaculture continues to play a key role in world food security. In order to incorporate the current guidelines advocating a circular economy, it is paramount to promote sustainable practices, such as integrated multi-trophic aquaculture (IMTA). This practice integrates the production of target species commonly fed on a pelleted diet (e.g., finfish, penaeid shrimp) with others capable of incorporating particulate organic matter (POM), as well as dissolved inorganic matter (DIM). The combined culture of polychaetes (e.g. *Hediste diversicolor*) and halophytes (e.g. *Salicornia ramosissima*) represent a balanced approach that allow to recover particulate and dissolved nutrients available on aquaculture effluents that would otherwise be lost and negatively impact the environment. My PhD project focus not only the bioremediation of aquaculture effluents through the implementation of IMTA, but also the production of additional crops (polychaetes and halophytes), whose biomass display unique biochemical properties and can give origin to value-added products.

