



MOLECULAR AND INNOVATIVE BIOMONITORING TOOLS

TOPIC:

Molecular and Innovative Biomonitoring Tools: apply environmental DNA (eDNA) metabarcoding for biodiversity assessment in oyster farms and reference sites; compare eDNA with traditional and visual survey methods to evaluate monitoring efficiency

IDEA / PROPOSAL:

We are looking for motivated Master's students to join the Fish Ecology and Sustainability research team within the AQUABENEFIT project, which aims to evaluate the habitat and biodiversity benefits of bivalve aquaculture in estuarine ecosystems. This research explores how oyster farming structures influence biodiversity, ecosystem functioning, and the provision of ecosystem services in transitional waters. Possible thesis projects include (but are not limited to): - Assessing fish communities associated with oyster grow-out systems using underwater video techniques; - Investigating benthic macroinvertebrate diversity and community composition in oyster farming areas; - Applying environmental DNA (eDNA) metabarcoding to monitor biodiversity in aquaculture and reference sites. Students will work in an interdisciplinary team with expertise in estuarine ecology, aquaculture, biodiversity assessment, and molecular biomonitoring. Main tasks will include field sampling, laboratory analysis, data interpretation, and dissemination of results.

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