PhD Postgraduate Research Opportunity

PhD Project Title:	**Cullen Scholarship: Priority Fishing Areas in a changing climate and in the context of major constraints on ocean area use by Marine Protected Areas and Offshore Renewable Energy (P230078)**
Project Duration:	**4 years**
Organisation:	**Atlantic Technological University**
Location:	**ATU Galway City and Marine Institute, Co. Galway**
Stipend:	**€25,000 per annum**
Responsible to:	**Dr Cóilín Minto, Dr Deirdre Brophy (ATU), Prof. David Reid (Marine Institute)**

Funding: The Cullen Scholarship Programme is funded by the Marine Institute under the Marine Research Programme with the support of the Government of Ireland (number CS/23/004).

Description:

Marine ecosystems provide an enormous range of goods and services to humans, including natural resources and energy. In the Republic of Ireland, the estimated Gross Domestic Product of seafood was worth €1.3 billion in 2023, directly employing 15,000 people in predominantly rural coastal areas. Currently the Irish offshore wind energy industry is in development with ambitious plans to reach 30GW of floating wind by 2050 and 37GW in total with a projected economic value of €15bn or more per annum. These plans represent a seismic shift in the Irish marine economy and environment. How these ORE plans interact with other sectors, primarily fish, and marine area protection will be the focus of this Cullen Scholarship.

Offshore wind farms can demonstrably impact fishing effort with reductions within the immediate footprint of the windfarm and displacement elsewhere. Understanding potential spatial competition and ultimately coexistence of multiple users requires a firm information base of activities and associated uncertainties. Identification of the most important areas for fisheries in terms of biology, catches, economic value, and social importance would contribute to this evidence-base.

The overall research objective of this Cullen Scholarship is to provide a probabilistic evidence-base for how fisheries, offshore renewable energy and MPAs interact in the context of the Celtic Seas.

Specific objectives to be codeveloped with the PhD student are to:

1. Review state of the art across: fisheries activity mapping, offshore renewable energy potential and impacts, MPA designation by 2030, synthesis via marine spatial planning.
2. Collate and document available relevant datasets on fisheries biology and fishing activity, for both offshore and inshore vessels.
3. Map basic data in an intuitive and informative manner such as spatial mapping of biology, effort, catch and value data for selected fleets and areas; remaining cognisant of grid-size biases.
4. Quantify uncertainty in hotspots, not-spots, and not-sure-spots of given variables via spatiotemporal modelling including uncertainty.

5. Develop specific examples of how effort and population dynamics might respond to a closure or exclusion in the context of climate change.

Requirements/Qualifications: The successful candidate will hold an Honours Degree with a minimum award classification of 2:1 or equivalent in a cognate discipline (Marine Biology, Oceanography, Fisheries Science, Aquatic Ecology, or a related discipline). Demonstrated experience in scientific programming (R programming language), good quantitative/modelling skills and familiarity with data management will be an advantage, as well as evidence of contributions to scientific publications.

The candidate will be expected to work on their own initiative and be willing to acquire the broader skills necessary for the successful completion of a PhD project.

Project Duration: 48 months

Conditions:

- €25,000 Stipend per annum.
- Postgraduate fees for EU/EEA students will be covered by the project.
  Please Note: Candidates from outside the EU/EEA are eligible to apply, but will be expected to provide evidence of sources of additional funds to cover excesses associated with Non-EU fees.
- In addition, any necessary travel, material and open access publication costs incurred during the project will be covered.

If either English or Irish is not the applicant's first language, evidence of English language proficiency is required for registration. Please refer to web link English Language Requirements | ATU - Atlantic Technological University view the minimum English language proficiency standards for entry to ATU

Project Start Date: Spring 2024

Application Closing Date: 12 noon Friday 26th of January 2024

Applicants should submit their:

- Curriculum Vitae (to include details of 2 referees)
- A copy of transcript of results
- A Personal Statement

The Personal Statement should not exceed 1 page and must include details on:

- How your qualifications and experience have prepared you for this PhD research programme
- Why you would like to pursue this PhD research programme.

Applications must be submitted to ResearchOffice.galwaymayo@atu.ie ***e-mail address only. Please ensure all documents are emailed as a single Word or PDF file.***

For further information on the project, please contact: Dr Cóilín Minto (coilin.minto@atu.ie), Dr Deirdre Brophy (Deirdre.brophy@atu.ie) or Prof. David Reid (david.reid@marine.ie)

Data Protection Statement

ATU takes very seriously its legal obligations as set out in the General Data Protection Regulation 2016/679 (GDPR) and the Irish Data Protection Act 2018 to safeguard and protect your personal information in our possession. The personal information which you disclose to us in this form will only be used to assess your suitability; administer and register you for this scholarship. We will not keep your personal information for any longer than is necessary for those stated purposes. **For more details, please refer to ATU's Student Privacy Statement:** Student-privacy-statement