



Marine Institute  
Foras na Mara



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

## PhD Postgraduate Research Opportunity

**Ref:** P696

**Project Title:** Linking mixed fisheries and multispecies models for management advice

**Funding:** This project is funded by the Department of Agriculture, Food and the Marine Competitive Research Funding Programmes (Reference 15/S/774).

**Description:** An exciting opportunity has arisen for a suitably qualified and strongly motivated graduate to undertake a PhD as part of the large-scale collaborative project *Fisheries Knowledge for Optimal Sustainable Management (FishKOSM)* led by the Marine Institute.

A key problem in European fisheries management lies in the fact that the main commercial demersal fisheries are not only exploiting a multi-species ecosystem and food web, but are also catching these fish mixed together: the mixed fisheries problem. In many cases there are more than one fleet fishing on a given species, and multiple species fished by a given fleet. For example, the 2018 single species ICES advice for Celtic Sea cod, haddock and whiting (often caught together) is for an (approximate) 9% increase in TAC for cod, a 24% decrease for haddock and a 4% decrease for whiting. This highlights that the management approach needs to consider technical interactions, where fish species are caught together. Over longer time horizons, it is also clear that multispecies interactions play an important role in the provision of management advice.

To address the requirements for both mixed fisheries and multispecies advice, the aims of this Ph.D. are to: 1) explore linkages between large-scale multispecies models (developed elsewhere in the consortium) and mixed fisheries models; 2) investigate appropriate harvest control rules or reference point ranges that reflect given interactions; 3) investigate application to the mixed fisheries of the Celtic Sea; and 4) derive conclusions on the impacts of ignoring either or both components in management advice. A primary tool will be advanced Management Strategy Evaluation.

### Requirements/Qualifications:

The successful candidate will hold an Honours Degree (minimum 2:2, but 2:1 or higher is desirable) in a cognate discipline, e.g., Marine or Environmental Science, Zoology, Ecology, Fisheries or a related discipline. An MSc or equivalent experience would be a distinct advantage. The candidate should have a strong quantitative background with demonstrated experience in statistical modelling and programming (e.g., R programming language). Previous experience working at sea on scientific or commercial surveys would be an advantage. A demonstrated ability to communicate scientific research findings will be viewed favourably.

**Project Duration:** 36 months

**Conditions:**

- €18,000 Stipend per annum.
- Postgraduate fees for EU students will be covered by the project.
- In addition, any necessary travel and material costs incurred during the project will also be covered.

**Please Note:** Candidates from outside the EU are eligible to apply, but will be expected to provide evidence of sources of additional funds to cover excesses associated with Non-EU fees.

If either English or Irish is not the applicant's first language, a certificate of language ability in either language is required. IELTS level 6.0 or equivalent is mandatory for those presenting with English as a foreign language.

**Project Start Date:** November 2017

**Application Closing Date:** Wednesday October 11<sup>th</sup>, 2017 at 12pm

**Interviews are expected to take place the week of October 23<sup>rd</sup>, 2017**

Applicants should submit their **Curriculum Vitae** (to include 2 referees) and a one-page **Personal Statement** to: [ResearchOffice@gmit.ie](mailto:ResearchOffice@gmit.ie)

***Applications must be submitted to this e-mail address only.***

The Personal Statement should not exceed 1 page and include:

- How you meet the requirements of the position
- Why you would like to pursue this PhD research programme

For further information on the project please contact:  
Dr Cólín Minto, Marine and Freshwater Research Centre, GMIT [coilin.minto@gmit.ie](mailto:coilin.minto@gmit.ie)