GMIT
INSTITIÚID TEICNEOLAÍOCHTA NA GAILLIMHE-MAIGH EO
GALWAY-MAYO INSTITUTE OF TECHNOLOGY

Marine Institute
Foras na Mara

MARINE AND FRESHWATER RESEARCH CENTRE
LÁRIONAD TAIGHDE MARA AGUS FÍORUISCE

Title:	**Postdoctoral Researcher (12 Month Fixed Term) P869**
Reporting To:	Dr Cóilín Minto (GMIT) and Dr Hans Gerritsen (Marine Institute).
Location:	Marine and Freshwater Research Centre, GMIT, Dublin Road, Galway
Duration:	12 Month Fixed Term Contract
Project Title:	MSY Proxies for Data-Limited Stocks 2 (MYDAS-2).
Job Description:	An opportunity has arisen for a highly motivated Postdoctoral Researcher to be part of an exciting collaboration between the Marine and Freshwater Research Centre (MFRC) at GMIT, Sea++ and the Marine Institute (MI). MFRC and Sea++ are at the forefront of advanced fisheries modelling, simulation, testing and application while the MI delivers applied scientific advice to international and national fisheries management organisations.

The work will be part of the MYDAS project (MsY proxies for DAta-limited Stocks). Phase one of this project has (MYDAS-1) established a modular framework to evaluate the performance of stock assessment methods and management reference points (https://github.com/laurieKell/mydas/wiki). MYDAS-2 will apply the methods of MYDAS-1 to specific case-studies of relevance to the management of data-limited stocks in Ireland. These case studies will directly feed into the management advice for the stocks through the relevant international expert groups (ICES and OSPAR), or nationally to the relevant government department (DAFM).

MYDAS-2 will:
- In collaboration with experts at the MI, develop assessments and (proxy) MSY reference points for important case studies, including:
  ◦ Target species (e.g. pollack, black anglerfish, four-spot megrim).
  ◦ By-catch species (e.g. rays, ling).
  ◦ Non-TAC stocks of importance to the ecosystem (e.g. sprat, witch, lemon sole).
- Explore performance of methods through Management Strategy Evaluations (MSE).
- Explore management advice for inshore stocks, particularly for lobster, including the use of fisheries-dependent data and growth estimation.
- Engage with key ICES and OSPAR working groups to implement the assessments and reference points.
- Communicate results through workshops and scientific publications.

Key opportunities:
The Postdoctoral Researcher will work with scientists at the cutting-edge of both the theory and application of fisheries modelling and testing of scientific advice. They will be mentored in the details of advanced stock assessment and management strategy evaluation via application. They will join a wide and active international network at the forefront of testing the performance of scientific advice given relevant uncertainties. The project leads are committed to developing the researcher's career via scientific contributions and applied impacts for real-world fisheries management.

Requirements:	**Minimum:** • A PhD in a relevant discipline is required (quantitative ecology, statistics, applied mathematics). • The ideal candidate will have a background in applying statistical modelling to fisheries datasets and in particular applying and developing stock assessment models (estimation using maximum likelihood or Bayesian inference) in addition to applications. • In-depth knowledge of the R programming language is required. • Knowledge of management strategy evaluation would be an advantage. • The candidate will have a strong publication record, commensurate with their career stage and a demonstrated ability to work as part of a dynamic team. ➤ *Please see attached Table for all essential & desirable requirements.*
Key Responsibilities:	The postdoctoral researcher will work on the case studies with MI and be responsible for case study data analysis and simulation testing. Specific responsibilities are: • Application of relevant stock assessment methods for key case studies. • Testing of proposed assessment methods and management reference points using the MYDAS framework. • Work closely with MI experts on each case study. • Lead scientific peer-reviewed publications and conference presentations communicating the research outputs from the project. • Liaise with appropriate expert groups to contribute to the development of data-limited approaches (e.g., ICES WKLIFE, WGCSE, WGEF).
Salary Scale:	**€38,632.00 - €39,186.00 (Point 1 - point 2 of Post-Doctoral Researcher Level 2 IUA Scale) *** **Starting salary is dependent on funding availability & experience and will also be market driven and discipline related.* • Pension Contribution: 20% of salary. ** ***The appointee will not become a member of the Public Service pension scheme and the pension contribution will only be paid where an approved PRSA is established by the appointee.*

Further information on the position may be obtained from Dr Cóilín Minto coilin.minto@gmit.ie and Dr Hans Gerritsen hans.gerritsen@gmit.ie .

Latest date for receipt of completed application is 12noon, Wednesday 14th October 2020.

It is anticipated that interviews will take place late October 2020 with post filled as soon as possible thereafter.

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Cuirfear fáilte roimh chomhfhreagras trí Ghaeilge.

Person Qualifications and Attributes	
Requirements Candidates/post holders will be expected to demonstrate the following	**Essential (E)/Desirable (D)**
Education	
Hold a PhD (or equivalent) in an area relevant to fisheries or ecological modelling, or research software development.	E
Experience	
Experience in fish stock assessment or ecological modelling	E
Experience in Management Strategy Evaluation, or feedback control systems	D
Experience of using scientific objective orientated programming languages (C++, Java, Python)	D
Experience of using R programming language (mydas is coded in R using S4 classes)	E
Experience of using relational databases (e.g. MySQL)	D
Knowledge	
Knowledge regarding the precautionary approach, modelling uncertainty and the management of risk	E
Knowledge regarding the principles of numerical modelling applied within a scientific, context	E
Knowledge of best practices for collaborative scientific programming (e.g. GitHub)	D
Skills & Abilities	
Excellent analytical and quantitative research skills and familiarity with applying these in fisheries management or ecological modelling	E
Excellent written communication skills and the ability to write research for peer-reviewed journals and conferences in English	E
Excellent verbal communication skills, including ability to present work progress to partners	E
Proven and clear technical writing and analysis skills	E
Creative approach to problem-solving	E
Ability to plan work towards specified deadlines and deliver on time	E
Track record of producing high quality research publications in peer-reviewed journals and conferences	E
High level of attention to detail	D
Evidence of ability to write clear and concise reports	E
Ability to work independently or under remote supervision	E
Ability to prioritise own work and commitment to meeting deadlines	E
Ability to formulate new research questions from research completed	D
Other	
Willingness to work as part of a team and to be open-minded and cooperative	E
Flexible attitude towards work	E
Discipline and regard for confidentiality and security at all times	E
Willingness to undertake any necessary training for the role	E