

## Marine Institute Job Description

Position	Temporary Scientific and Technical Officer (STO) Stock Identity of Herring
Contract	Temporary specified purpose contract for a maximum duration of up to 3 years under EASME/EMFF/2017/1.3.2.1 Herring genetic and morphometric project
Service Group	Fisheries Ecosystems Advisory Services (FEAS)
Location	Marine Institute, Oranmore, Co. Galway, Ireland

### Brief description of the Marine Institute:

The Marine Institute is a non-commercial, semi-state body, which was formally established by statute (Marine Institute Act, 1991) in October 1992.

Under the Act, the Marine Institute was given the responsibility:

*“to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development, that in the opinion of the Institute will promote economic development and create employment and protect the marine environment.”*

The Marine Institute is the national agency responsible for marine research, technology, development and innovation (RTDI). The Marine Institute seeks to assess and realise the economic potential of Ireland’s 990,000 km<sup>2</sup> marine resource; promote the sustainable development of marine industry through strategic funding programmes and scientific services; and safeguard the marine environment through research and environmental monitoring. The Institute works in conjunction with the Department of Agriculture, Food and Marine (DAFM) and a network of other Government Departments, semi-state agencies, national and international marine partners.

The vision of the Marine Institute is *“a thriving maritime economy in harmony with the ecosystem and supported by the delivery of excellence in our services”*.

In order to achieve this vision, the MI has six service areas; (1) Ocean Science and Information Services, (2) Marine Environment & Food Safety Services, (3) Fisheries Ecosystems Advisory Services, (4) Irish Maritime Development Office, (5) Policy, Innovation and Research Support Services, and (6) Corporate Services.

The Marine Institute 3 Year Strategic Plan (2015 to 2018) is available on:

[http://www.marine.ie/Home/sites/default/files/MIFiles/Docs\\_Comms/MI%20Strategic%20Business%20Plan%20-%202015%20-%202018.pdf](http://www.marine.ie/Home/sites/default/files/MIFiles/Docs_Comms/MI%20Strategic%20Business%20Plan%20-%202015%20-%202018.pdf). A new Marine Institute five-year strategy is currently in preparation and will be launched in 2018.

Ocean Wealth (HOOW) is Ireland’s Integrated Maritime Plan (see [www.ouroceanwealth.ie](http://www.ouroceanwealth.ie)). HOOW sets out a

roadmap for the Government's vision, high level goals and integrated actions to enable Ireland's marine potential to be realised. As part of the implementation of HOOW, the Government published in 2017 the National Marine Research & Innovation Strategy 2017-2021.

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#### Description of appropriate Service Group:

##### **Fisheries Advisory Ecosystems Services (FEAS)**

The FEAS's mission is "to assess research and advise on the sustainable exploitation of marine fisheries resources". Currently, FEAS consists of over 70 scientists, technical, post graduate and administrative staff under the Directorship of Dr. Paul Connolly. The Service group operates a significant part of their services from the headquarters in Oranmore, Co. Galway with additional port based facilities and a major research facility at Newport, Co Mayo. FEAS staff spend a considerable amount of time at sea on commercial fishing vessels and on research vessel surveys carried out on the RV Celtic Explorer and RV Celtic Voyager. A key output of FEAS is the annual Stock Book and the annual Shellfisheries Stock Book. These provide the latest assessment and scientific advice for the resources exploited by Irish vessels and is a key reference for the Governments sustainability assessment presented annually to the Oireachtas. A key element of FEAS work is the provision of scientific support for the Irish government (principally the Department of Agriculture, Food and the Marine – DAFM) on marine fisheries ecosystems related issues. FEAS also publish much of its work in peer reviewed scientific journals.

The 10 goals of FEAS are:

- 1) To maximise the benefits of the new EU Data Collection Framework (DCF).
- 2) To build a strong working relationship with the fishing industry and the environmental NGO's.
- 3) To build an effective working relationship with key Government Departments (principally DAFM) and other partner agencies.
- 4) To use ICES, NASCO, ICCAT, OSPAR and the EU system to support the delivery of excellence in our fisheries and ecosystems science and advisory services.
- 5) To engage in a suite of research activity that supports the evolution of scientific advice and that is in line with MI/FEAS mission, HOOW, FH2020, Horizon 2020, the new RTDI strategy and the objectives of the CFP.
- 6) To progress and incorporate the ecosystem approach to Fisheries Management (EAFM) into all aspects of our work.
- 7) To increase public awareness of the importance of the Ocean.
- 8) To Ensure a common understanding of the "value chain" within the FEAS team and the MI.
- 9) To ensure FEAS is a rewarding place to work.
- 10) To engage in cross service area work that enhances MI service delivery.

##### **The Work of FEAS**

FEAS work programmes are focused on:

- 1) Data Collection and Data Management.
- 2) Fisheries Resources Assessment and Advice.
- 3) Modelling, Simulations and Management Plans.
- 4) Fisheries – Ecosystems Interactions.
- 5) Stakeholder Engagement.
- 6) Research that supports ecosystem understanding.

FEAS staff actively participate at many meetings of the International Council for the Exploration of the Seas (ICES). ICES organises many Expert Groups, Study Groups and co-ordination Groups related to provision of scientific advice on marine ecosystems. The ICES Strategic Plan (2014 to 2018) is focused on advancing scientific understanding of marine ecosystems, providing information, knowledge and advice on the sustainable management of human activities affecting and affected by marine ecosystems. ICES is a key fora for scientific co-ordination of data collection and the provision of independent scientific advice.

FEAS also participate at other international fora including STECF (Scientific, Technical and Economic Committee for Fisheries), NEAFC (North East Atlantic Fisheries Commission) and NASCO (North Atlantic Salmon Commission). FEAS provide scientific support for the DAFM at various EU meetings (e.g. the EU Norway Agreements and the EU Council of Fisheries Ministers). FEAS produce the annual Stock Book which provides the latest scientific advice on those stocks of interest to Ireland. In addition FEAS is responsible for the salmon National Coded Wire Tagging and Tag Recovery programme and work closely with IFI (Inland Fisheries Ireland) on the Standing Scientific Committees for salmon and eel.

About FEAS: [www.marine.ie/Home/site-area/about-us/fisheries-ecosystems-advisory-services](http://www.marine.ie/Home/site-area/about-us/fisheries-ecosystems-advisory-services)

MI Facebook: [www.facebook.com/marineinstituteireland](https://www.facebook.com/marineinstituteireland)

MI Twitter: [twitter.com/MarineInst](https://twitter.com/MarineInst)

### Summary of the Role:

The Scientific and Technical Officer (STO) will be an integral part of the FEAS team that will work closely with the Pelagic I Team Leader in the delivery of the EASME EASME/EMFF/2017/013 tender. The work will focus on three primary areas:

- Stock identity of herring around Ireland.
- Morphometric lab work and data analysis of whole fish and otoliths.
- Assisting in the collection of samples of herring for morphometric and genetic analyses in Marine Institute and University College Dublin respectively.

The role will involve collaboration with scientists in Marine Scotland, University College Dublin and the Irish and EU fishing industries.

### Background to Requirement:

Commercially important seasonal fisheries for herring take place in many different areas around the coasts of Ireland and Britain. The definition of these western stocks has changed considerably over the last five decades and the putative stocks are currently recognised as: 6aN; 6aS/7bc; Irish Sea; Celtic Sea & 7j. This separation is largely based on information from fisheries and the recognition of temporal and spatial differences in spawning season and grounds (ICES, 2015). However, herring from separate stocks are known to form mixed aggregations on common feeding grounds. Mixed stock fisheries operate in these areas and the inability to assign catches to their stock of origin prevents accurate assessment and has hampered the development and implementation of effective management strategies.

At present the International Council for the Exploration of the Sea (ICES) is unable to distinguish between the herring stocks in ICES Areas 6aN and 6aS/7bc in commercial catches or research surveys. This means that ICES has to provide combined management advice for the two stocks, leading to a combined quota and management of the two. However ICES and the scientific community all agree that the two stocks are indeed discrete, despite their being indistinguishable with currently available morphometric tools. Combined management of what amounts to an amalgam of separate stocks is a very dangerous situation. Such management can only be precautionary if the two stocks are of similar size and are homogeneously distributed together in commercial catches. If these conditions are not met, the smaller stock will suffer a higher mortality than would be sustainable and will eventually decline.

#### Principal Tasks:

- Morphometric analyses of whole fish and otoliths, including macro and micro-photography, shape analysis, measurements and data analysis.
- Collection and processing of biological material for genetic analysis
- Literature review of existing and historical stock discrimination methods and stocks around Ireland.
- Archiving and digitising of historical literature and biological material
- Organisation of sampling
- Sea going duties on both research and commercial vessels as required
- Lab based duties as required
- Report and publish articles in peer reviewed journals based on the scientific analyses.
- Any other duties assigned from time to time, as appropriate to the position.

#### Reporting Structure:

The successful candidate will be based at the MI Oranmore and will report to the Pelagic I Team Leader with responsibility for the EASME/EMFF/2017/1.3.2.1 Project

#### Contacts:

##### Within the Marine Institute

Appropriate FEAS Team Leader.

##### Outside the Marine Institute

University College Dublin, Marine Scotland, Fish Producers Organisations.

##### Training

A full range of training will be provided as required, on the job and through appropriate courses. Training needs will be identified through the MI Performance Management Development System (PMDS).

#### Education, Professional or Technical Qualifications, Knowledge, Skills, Aptitudes, Experience, and Training

#### Essential:

- A relevant third level degree in a fisheries science, marine science or related field, with at least one year work experience in a relevant scientific project.
- Strong data handling skills.
- Higher level of experience in the use of Microsoft Word, Excel, PowerPoint and with databases.

- Proven scientific report writing skills / or published peer-reviewed papers.
- Excellent interpersonal skills and an ability to work with and effectively communicate with the fishing Industry and stakeholders.
- Experience at collaborating with others through scientific expert groups or research.
- Effective organisation and administration skills.
- Good time management and the ability to prioritise and meet deadlines.
- The ability to work unsupervised and as part of a team.
- Good written and verbal communication skills in addition to effective numeracy skills.
- Sea going experience or sufficiently fit to pass an ENG II Medical.
- Full, driving license.

#### Desirable:

- Fisheries research experience and aptitude for use of statistical packages such as R.
- Publication record.
- Strong data analysis skills (e.g. SQL and R).
- An overview of the role of fisheries science in the context of marine fisheries and ecosystem management.
- A sound knowledge of fisheries and marine biology.
- An excellent knowledge of the herring fishing industry.
- Experience using digital SLR cameras and microscope photography.

#### Special personal attributes required for the position:

- Dynamic and reliable.
- An ability to work in an organised manner and progress work independently.
- Self-sufficiency.
- Experience in collaborating with scientists and members of a technical team.
- Possess a diplomatic manner, and the ability to resolve issues before conflict arises with stakeholders.

#### Salary:

Remuneration is in accordance with the Public Sector, Department of Finance approved Salary Scale for the Scientific & Technical Officer (Engineer III grade) with a salary of €30,680 per annum pro-rated with time worked. You will become a member of the Single Public Service Pension Scheme.

#### Annual Leave:

Annual leave entitlement for a Scientific & Technical Officer is 25 working days per annum pro-rated to reflect time worked. Annual leave entitlements are exclusive of Public Holidays. All leave must be approved in advance in line with Marine Institute leave policies, by your manager or their authorised representative

#### Duration of Contract:

This temporary specified purpose contract of employment will run for a maximum duration of up to 3 years in line with the end of the project. The successful candidate will be on probation for the first six months of this contract.

### How to Apply:

A C.V. and letter of application, summarising experience and skill set applicable to the position should be emailed to [recruitment@marine.ie](mailto:recruitment@marine.ie) or posted to Human Resources at the Marine Institute, Rinville, Oranmore, Galway. All correspondence for this post should quote reference:

**FEAS/ STO Herring/ August 18**

#### **Closing Date For Applications:**

All applications for this post should be received by the Marine Institute in advance of **12 noon on Tuesday 28<sup>th</sup> August 2018**. Please note that late applications will not be accepted.

**Use of Data** - all personal data and the information submitted for this application will be used solely for the purpose of this campaign, after which it will be deleted in line with our data and documents policy. All information will be treated with the strictest confidence and accessed only by those involved directly in the campaign.

**The Marine Institute is an equal opportunities employer**