

## Marine Institute Job Description

Position	<b>Temporary Water Framework Directive Monitoring Environmental Data Scientist – Scientific and Technical Officer – 6 month maternity leave cover</b>
Grade & Contract	<b>Scientific and Technical Officer (ENG III) – Temporary Specified Purpose Contract – Maternity Leave cover for up to 6 months until the 23<sup>rd</sup> of June 2023</b>
Service Group	<b>Marine Environment and Food Safety Services</b>
Location	<b>Marine Institute HQ, Oranmore, Co. Galway (noting that we are currently considering &amp; drafting our blended working policy which may apply to this role)</b>

### Who will you Work With and What Will The Role Involve?

The Water Framework Directive (WFD Directive 2000/60/EC) came into force in December 2000 and establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater and was given legal effect in Ireland by S.I. No. 722/2003 - European Communities (Water Policy) Regulations 2003.

High volumes of complex data generated by Water Framework Directive and other marine environmental monitoring activities are a resource requiring careful archiving and management in accordance with the FAIR principles (Data should be Findable, Accessible, Interoperable and Reusable). Ready access to fit-for-purpose data are required to deliver assessments and other technical outputs and good data management processes also maximise the value of monitoring programmes through ensuring quality data are available for multiple use.

The data scientist will primarily be responsible for quality screening and uploading all WFD field, MI and external laboratory project data to the SQL databases (biota, water and sediment), archiving and storing data. The scientist will also assist with data reporting, preparing assessments, and preparing technical reports for clients and stakeholders. Moreover, in liaison with the project team and the MI's Information Services & Development team, the data scientist will have a key role in identifying needs and developing processes and novel tools to enhance and automate data flows and processing throughout the cycle of data collection to reporting/evaluation. This will conform to the MI's Data Quality Framework.

The successful candidate will report to the WFD Team Leader, but will also work closely on daily basis with the Marine Chemistry team.

### What Will You Be Doing Every Day?

#### Principal Tasks:

The candidate will be responsible for carrying out a range of duties consistent with the work described above. These include:

- Oversee WFD data flows and processes and ensure the data are well-managed with appropriate procedures in place, in accordance with the MI Data Quality Management Framework
- Liaise with WFD Team Lead to ensure that the WFD monitoring schedule and WFD data are maintained in a timely manner, such that data is readily available for reporting.
- Collate and quality check field and *in situ* data, sampling information and analytical results generated by the Marine Institute and external laboratories/contractors and upload to the SQL databases

- Coordinate field work and sampling scheduling with partner laboratories and agencies, sample reception on return and ensure field kits are available and equipment calibration has been appropriately completed
- Work with subcontractors and partner agencies to ensure external analysis is delivered and meets all requirements
- Prepare analytical and technical reports for clients
- Work with the chemistry data manager in the submission of data to third party datacentres in required formats within reporting deadlines
- Oversee internal and external data requests
- With support of the MI data team and the Chemistry data manager, develop processes and tools (e.g. jupyter notebooks) to automate data ingestion to databases and quality checking of field and laboratory data
- Participate in the scientific and compliance assessment of data, and, working closely with the data manager for the section and team, develop appropriate tools and products to aid assessment and presentation of monitoring data
- Support the roll-out of laboratory data management systems and electronic sampling and in the laboratory to improve efficiencies
- Ensure all data management activities conform with the requirements of the MI quality system and the MI data Policy
- Assist in the development of MI Data Quality Management Framework as it relates to the management of WFD and related datasets
- Participate in data-related working groups as necessary – both internal and external to the Marine Institute
- Undertake sampling and field work as may be required from time to time
- Any other duties appropriate to the role and programme as may be required from time to time

### **What do You Need to Have Done to Apply for This role?** (Education, Professional or Technical Qualifications, Knowledge, Skills, Aptitudes, Experience and Training)

#### **Essential / Important:**

- A Degree in a relevant science or an equivalent qualification.
- A high degree of computer literacy and experience in the use of Microsoft Word, Excel, PowerPoint.
- Experience in dataset maintenance, data analysis and reporting of scientific/environmental data
- Experience in preparing technical reports and/or data products.
- The ability to communicate effectively both verbally and in writing.
- The ability to manage time effectively and work to deadlines.
- Ability to troubleshoot and research technical solutions to data management issues.
- Ability to work on own initiative and progress work independently.
- Willingness to work at sea on board research vessels.

#### **Ideally Nice to Have / Desirable:**

- A post-graduate degree in science discipline or an equivalent qualification.
- Experience in the use of a database interrogation language such as SQL and R, and mapping software such as ArcGIS.
- Knowledge of marine/environmental science and biogeochemical processes.
- Experience of working in an analytical laboratory and in dealing with laboratory data.
- Significant experience in managing complex environmental datasets and implementing quality assurance processes in line with FAIR principles.

- Good working knowledge of WFD legislation and regulatory assessment protocols for assessing water body status.
- Experience with SQL reporting services and/or other tools for data analysis such as R, Python. Note some experience of coding would be advantageous.
- Experience with mapping software (e.g. ArcGIS).
- Experience in working within a formal quality system (e.g. ISO17025).
- Highly skilled in analytical troubleshooting.
- Good report writing skills.
- A full driving license.

## What else do you need to know?

### (Special personal attributes required for the role)

- Be industrious, decisive and self-sufficient with a proven ability to use his/her own initiative while at the same time working well as a team player.
- Excellent oral and written communication skills
- Excellent interpersonal skills.
- Ability to manage time effectively and to deliver agreed outputs to deadlines and maintain focus under the pressure of multiple deadlines and deliverables.
- Experience in collaborating with scientists and members of a technical team.
- Analytical approach to problem solving.

## Description of Service Group: CORPORATE SERVICES – The Wider Team

### Marine Environment & Food Safety Services

Marine Environment & Food Safety Services provide government agencies, industry and other clients with food safety, environmental and fish health scientific services, primarily through the implementation of monitoring programmes and research programmes and the provision of advice. The successful candidate will primarily be based within the MI Marine Chemistry Section.

### Overview of M.I. Marine Chemistry Section

This section has a team of approximately 22 chemists, analysts, researchers and support staff engaged in statutory monitoring and complementary research activities relating to the health of the marine environment and the quality of marine foodstuffs. This monitoring is required to fulfil obligations under National and EU legislation and commitments under the Oslo and Paris Convention. In the course of this work, samples of fish, shellfish, sediments and water are collected and analysed for a broad range of determinants. The results are reported to National and International bodies and presented in the scientific literature. The work involves sampling, analysis, data assessment and reporting. A fundamental requirement for all research and monitoring programmes is the production of data of the highest quality. In this regard a quality system is in operation in the section with most test methods accredited by the Irish National Accreditation Board (INAB) to ISO17025 standard.

### Who Will You Report to / Who will Manage and Support You?:

The successful candidate will report to the Water Directive Framework Team Lead and will also be assigned a buddy and / or mentor to help you settle in to the organisation.

### What we offer

We value our staff, and we value their contribution to the work of the Marine Institute. In return for this, we provide benefits that promote a healthy work-life balance and which we hope will help them to develop professionally. These include personal and career development, work/life balance

policies, an employee assistance programme, “Bike to Work” Scheme, staff medicals and annual flu vaccination.

### Contacts:

#### **Within the Marine Institute:**

WFD Team Leader and WFD Team, Chemistry Data manager, Senior Chemist, Director MEFS, Section manager – Phytoplankton, Chemistry Section and Management Team & Staff of MEFS, Colleagues, CEO, Directors, Section Managers and Staff of all Service Groups.

#### **External:**

Suppliers, Auditors, Customers, Government Departments, and State Agencies and other relevant business / organisations including, subcontracted laboratories and scientists and officials from other government organisations, in particular the EPA.

### Salary:

Remuneration is in accordance with the Public Sector, Department of Finance approved Salary Scale for Scientific and Technical Officer (STO) which runs from €34,643-€71,568 on a full time basis per annum pro-rated with time worked. You will become a member of the Single Public Service Pension Scheme unless you are currently or have worked in the Public Sector in the past 6 months or are a member of another Public Sector Scheme.

### Annual Leave:

Annual leave entitlement for an STO (ENG III) is 25 days per annum. Annual leave entitlements are exclusive of Public Holidays and are managed using the Time & Leave Management System in Place in the organisation. All leave must be approved by your manager or their authorised representative; in advance of being taken and in line with Marine Institute leave policies.

### Duration of Contract:

This temporary specified purpose contract of employment, providing maternity leave cover for up to 6 months. You will be on probation for the duration of this contract.

## Who is 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 220-million-acre 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.

**Our vision - *The Marine Institute, as a global leader in ocean knowledge, empowering Ireland and***

*its people to safeguard and harness ocean wealth.*

**Our Mission - The Marine Institute, provides government, public agencies and the maritime industry with a range of scientific, advisory and economic development services that inform policy-making, regulation and the sustainable management and growth of Ireland's marine resources. The Institute undertakes, coordinates and promotes marine research and development, which is essential to achieving a sustainable ocean economy, protecting ecosystems and inspiring a shared understanding of the ocean.**

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

The Marine Institute 5 Year Strategic Plan (2018 to 2022) is available [here](#)

Harnessing our Ocean Wealth (HOOW) is an Integrated Maritime Plan (IMP) for Ireland. HOOW sets out a roadmap for the Irish Government's vision, high level goals and integrated actions across policy, governance and business to enable our marine potential to be realised. Goal 2 of HOOW focuses on healthy marine ecosystems and specifically; to protect and conserve our rich marine biodiversity and ecosystems; manage our living and non-living resources in harmony with the ecosystem; implement and comply with environmental legislation (see <http://www.ouroceanwealth.ie/>)

#### 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 **STO/MEFS/WFD/JAN23**

#### **Closing date for Applications:**

All applications for this post should be received by the Marine Institute in advance of **12 noon Friday 27<sup>th</sup> of January 2023**. Unfortunately, late applications cannot 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 General Data Protection Regulation Policy and data retention schedule. All information will be treated with the strictest confidence and accessed only by those involved directly in the campaign.

**The Marine Institute is an organisation that champions Diversity, Inclusion & Equality for all. We encourage and welcome applications from anyone interested in this role.**

**Please do advise if there are any special accommodations required for the recruitment process.**

**We are here to help you access opportunities with us.**