

## Marine Institute Job Description

<b>Position</b>	<b>Postdoctoral Researcher (PDR) – Ocean Modeller</b>
<b>Grade &amp; Contract</b>	<b>Postdoctoral Researcher - Temporary specified purpose contract for a maximum duration of 22 months to 31<sup>st</sup> December 2025 (Funded via EPA Research Programme 2014-2020 project WFD Futures)</b>
<b>Service Group</b>	<b>Ocean, Climate and Information Services (OCIS)</b>
<b>Location</b>	<b>Marine Institute, Renville, Oranmore, Co. Galway (noting that we are piloting our blended working policy across 2023 which may apply to this role)</b>

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

This important role supports our organisation in delivery of its essential work programmes. This role provides candidates with the opportunity to work in a diverse organisation which invests in and celebrates its people.

The successful candidate will work within the Ocean Modelling team, part of the Oceanographic Climate Services section, as a Postdoctoral Researcher, with main responsibility for delivering modelling products and services for the WFD Futures (WFD Future Scenarios and Management Tools) project.

The successful candidate will be responsible for providing numerical modelling for the above project and will work closely with national partners. Specifically, the candidate will contribute to the development of coastal scale hydrodynamic and biogeochemical models and execute the simulations using the present day and future projected nutrient loadings in order to examine changes in biogeochemical cycling. Preparation of the reports and relevant documentation following strict deadlines and formats will also be part of the role. The candidate will also be expected to carry out other modelling duties within the modelling team, as required.

### What Will You Be Doing Every Day?

#### Principal Tasks:

- Expand the Marine Institute’s ocean modelling services in line with WFD Futures project objectives
- Liaise closely with national project partners
- Develop hydrodynamic and biogeochemical local scale models of two Irish bays
- Carry out simulations using the present day and future projected nutrient loadings into the bays in line with the scenarios developed in collaboration with the project partners
- Analyse the model outputs to identify changes to nutrient, phytoplankton and zooplankton cycling under the future nutrient loadings
- Contribute to the development of climate services using the outputs from the project and the simulations

- Participate in research activities that support projects milestones and related objectives and publish in the scientific literature
- Attend relevant meetings or working groups
- As necessary, carry out other modelling duties in the MI ocean modelling team.
- Any other duties as relevant to the position and grade.

### **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:**

- PhD in Physical or Biological Oceanography, Civil Engineering, numerical modelling or related discipline with sound numerical background.
- Experience in setting up and running numerical hydrodynamic and/or biogeochemical models in a high performance computing environment.
- Proven track record in programming in Fortran.
- Proven track record in using one or more scripting languages, e.g. Matlab, Python or similar.
- Proven experience in working with NetCDF file format.
- Demonstrated competence in a Linux environment.
- Effective numerical and literacy skills including report writing skills to include handling large volumes of observational and model oceanographic data.
- A high level of computer literacy (Word, Excel, PowerPoint, Internet/Email).
- The ability to be well organised and work to deadlines identifying priorities and managing time effectively.
- Excellent interpersonal skills and the ability to communicate effectively at all levels both in writing and verbally with technical and scientific and non-technical groups.
- The ability to work unsupervised and to work well with others.

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

- Previous postdoctoral experience.
- Experience as user and/or developer of ROMS and/or CROCO model.
- Experience with PISCES biogeochemical model.
- Statistical analysis of oceanographic data.
- Record of publishing in peer-reviewed scientific journals.
- A full clean Driving License.

#### **What else do you need to know?** (Special personal attributes required for the role)

- An analytical approach to problem solving.
- Ability to multitask successfully.
- An ability to work in an organised manner and progress work independently.
- Dynamic and reliable.
- Self-sufficiency, while being a good team player.
- Good interpersonal skills.
- Ability to effectively communicate results of teamwork in written and audio-visual formats

## Description of Service Group and the Wider Team

The mission of OCIS is *“To provide scientific, operational and analytical support and services to strategic RTDI and statutory monitoring programmes (at national and international level) to promote and support the sustainable development of Ireland’s marine resources”*

Ocean Climate and Information Services incorporates:

- Information Services & Development
- Advanced Mapping Services
- Research Vessel Operations
- Oceanographic and Climate Services
- Marine Research Infrastructures

### Oceanographic and Climate Services (OCIS)

The Oceanographic and Climate Services section within OCIS is responsible for the delivery of scientific services to users based on oceanographic data in a wide variety of fields including fisheries, marine environment, aquaculture, search and rescue, tourism and leisure among others. The group is the primary user of both ocean observations and model forecasts and projections in Ireland. The group is comprised of physical oceanographers, ocean modellers, plankton ecologists, project managers and administrators. The group also works with users of climate services in government departments and local authorities, assisting them in their preparedness for climate adaptation.

The Oceanographic and Climate Services section also works on various EU projects including the EuroSEA H2020 flagship project on ocean observing and forecasting, CleanAtlantic, iFado and CE2COAST and is active in the International Council for the Exploration of the Seas (ICES), EuroGOOS, Copernicus, GO-SHIP and the Joint Programming Initiatives for Oceans and Climate. We maintain a strong international collaborative network in oceanographic science.

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

The successful candidate will be based at the Marine Institute HQ in Oranmore and will report directly to the Team Leader – Ocean Modelling.

## 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:

Ocean Modelling team members within OCIS, Section Manager Oceanographic and Climate Services, Director OCIS, Data Services Team, other Sections Managers, Team Leaders, Scientific and Technical Officers and Postdoctoral Researchers across MI Service Groups

### External:

Regular liaison with seven national project partners, the Lead Partner at UCD, the Project funder (EPA), other stakeholders and collaborators in the area of ocean modelling nationally and internationally.

### Salary:

Remuneration is in accordance with the Public Sector, Department of Finance approved Salary Scale for Post-Doctorate Researcher which runs from €42,783-€49,117 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 a Post-Doctorate Researcher is 24 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 will be for the period up to 22 months or 31<sup>st</sup> December 2025. The successful candidate will be on probation for the first six months 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 Ireland’s scientific agency responsible for supporting the sustainable development of the state’s maritime area and resources. We do this through conducting applied research and providing scientific knowledge, advice and services to government, industry and other stakeholders and users. This policy advice capacity, our broad mandate, and the research programmes we fund and undertake, give us a unique insight into the science-policy interface and make us an exemplar in the provision of integrated ocean knowledge.

The Marine Institute provides a broad range of essential scientific support to its parent department, the Department of Agriculture, Food and the Marine (DAFM). There is an increasing demand from Government for the data and evidence that are essential to inform national policy and to underpin the state’s governance of our maritime area. Through laboratory, field and seagoing work, the Institute carries out statutory environmental, fisheries and aquaculture surveys, seafood testing and

other monitoring programmes assigned by government. The Institute plays an important role in supporting the state's response to the impacts of our changing seas and oceans, through working with the national and international scientific community to observe, study and understand our changing oceans. This essential scientific advice supports industry, protects consumers and underpins legislative and other obligations aimed at the protection and management of the marine environment.

**Our vision** - *The Marine Institute is a national and international leader in ocean knowledge that benefits people, policy and planet.*

**Our Mission** - *The Marine Institute provides scientific, research and development services to government, agencies, industry and society that support the sustainable use of our maritime area, the protection and restoration of marine ecosystems, and promote a shared understanding of the ocean.*

There are 6 broad service areas within the Marine Institute; (1) Ocean, Climate and Information Services, (2) Marine Environment & Fish Health Services, (3) Fisheries Ecosystems Advisory Services, (4) Irish Maritime Development Office, (5) Policy, Information and Research Services and (6) Corporate Services.

The Marine Institute 5 Year Strategic Plan (2023 to 2027) is available [Here](#)

## 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, H91 R673. All correspondence for this post should quote reference **OCIS/PDR/OCEAN/NOV23**

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

All applications for this post should be received by the Marine Institute in advance of **12 noon Thursday 16<sup>th</sup> November 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 (GDPR) 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.**