**Marine Institute Job Description 02-02-2015**

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<th>Scientific &amp; Technical Officer, Hydrographic Data Processor (INFOMAR)</th>
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**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 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.

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 Marine Institute has six Service Areas; (1) Ocean Science & Information Services, (2) Marine Environment & Food Safety Services, (3) Fisheries Ecosystems Advisory Services, (4) Irish Maritime Development Office, (5) Policy, Innovation and research Services, (6) Corporate Services*


In July 2012 the Government launched *Harnessing Our Ocean Wealth* (HOOW), an all-of Government approach to delivering an Integrated Marine Plan for Ireland, which seeks to provide new momentum for growth of our marine economy, striking a balance between protecting the environment and maximising the use of our marine resources as a source of economic growth. 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. (see [www.ouroceanwealth.ie](http://www.ouroceanwealth.ie))
Brief Description of Service Group:

Ocean Science and Information Services (OSIS)

The mission of OSIS 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 Science and Information Services incorporate:

- Information Services & Development
- Advanced Mapping Services
- Research Vessel Operations
- Oceanographic Services
- Research Infrastructures
- Operational elements of Discovery R&D Programmes including
  - Advanced Technology including SMARTBAY
  - Ocean Energy

Advanced Mapping Services (AMS) & INFOMAR Programme:

Advanced Mapping Services are based within OSIS in Marine Institute, and together with the Marine Geophysics team in the Geological Survey of Ireland, they jointly manage the INFOMAR Programme. The team are comprised of marine geophysicists, hydrographic surveyors & data processors, and GIS and Data analysts. The INFOMAR Programme began in early 2006 and is a follow on initiative to the Irish National Seabed Survey. It is a multiyear programme that will concentrate to 2016 on mapping of priority bays and areas around Ireland, and remaining coastal areas thereafter to 2026. Designed to incorporate all elements of an integrated mapping programme, the key deliverables of the data acquisition will include hydrography, environmental, and heritage data, necessary to underpin a range of requirements, including:

- management plans for inshore fishing, aquaculture, coastal protection and engineering works;
- EC environmental directive obligations, and environmental impact assessments relating to licensable activities;
- support of evolving management needs in the coastal zone, and provision of safe navigation (hydrographic) information in compliance with SOLAS obligations.

INFOMAR incorporates a data management, exchange and integration programme linked to objectives proposed under the National Marine Research and Innovation Strategy, and contributing to the Irish Spatial Data Exchange service. Results include the improved dissemination of information to researchers, policy makers, the private sector and the public, as well as the adoption of standard operating procedures in data management to facilitate inter-agency data integration.

Additionally, INFOMAR supports a value added programme aimed at delivering advanced decision support tools and solutions driven by either policy or commercial requirements, and a programme of national and international value added research to leverage the skills, expertise and data from the Irish National Seabed Survey and INFOMAR.
Summary of the Role:

The individual will build on the capacity existing in the Marine Institute in the area of hydrographic data acquisition, quality control, and processing. The individual will primarily be responsible for integrating hydrographic data acquired during multiple hydrographic surveys, with different platforms and technologies, for production of composite data and chart products. In addition the individual will support seagoing activities, and on-board hydrographic data quality control and data processing. While improving and streamlining data workflows, the outputs will contribute to UKHO navigation charting, ongoing INFOMAR GIS chart production, as well as downstream digital web-mapping and data delivery services. The STO Hydrographic Data Processor will also support relevant seabed mapping and data analytics R&D initiatives undertaken by the team, as well as development of seabed classification and water column products associated with acoustic data analysis. This will augment existing skill sets, underpin operational programme needs, and support future R&D initiatives. The work focus will be on:

a) Processing and integration of hydrographic data (primarily multibeam, LiDAR & interfometric);  
b) Output of integrated hydrographic datasets for development of chart products and integration to GIS data services;  
c) Acquisition and quality control of multibeam survey data.

Background to Requirement:

Advanced Mapping Services, within Ocean Science & Information Services, are responsible for jointly managing the INFOMAR programme with the Geological Survey of Ireland, and delivering Marine Institute’s commitments relating to the programme. While a capacity exists within the AMS team in the area of hydrographic data processing, additional resourcing is required to focus on integrating historical data with data being acquired on an ongoing basis collectively by Marine Institute and Geological Survey of Ireland, for the generation of final INFOMAR products and data services.

Principal Tasks:

- Support the Advanced Mapping Services team in all aspects of hydrographic data processing.
- Responsible for the acquisition, quality control, processing and archiving of multibeam data and associated data including GNSS, sound velocity profiles & tidal coefficient values
- Responsible for integration of multibeam data with LiDAR and/or other relevant hydrographic data
- Responsible for logging of progress with data processing and product generation.
- Support hydrographic survey preparation, planning, and equipment mobilisation.
- Responsible for sea trials, survey equipment calibration, multibeam patch tests, and reporting of same.
- Liaise with Marine Institute AMS Team Leaders and offshore Party Chiefs and Geological Survey of Ireland data processors prior to, during and on completion of projects to ensure efficient operation of the data processing aspects of survey.
- Assist with survey and data processing report writing.
- Assist in the ongoing development of protocols for hydrographic data processing and quality analysis
- Maintain highest standard of safety, adhere to safety procedures, observe safe working practice at all times.
- Participation in multidisciplinary research and data analysis activities supporting integrated research.
### Reporting Structure:
- The individual will report to the AMS Hydrographic Team Leader.

### Contacts:
INFOMAR team members within AMS (Marine Institute) and Marine Geophysics (Geological Survey of Ireland), OSIS team members, external contacts including those involved in hydrography related R&D.

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

#### Essential:
- A degree in hydrographic surveying or an equivalent combination of experience/qualifications in Land Surveying, Geophysics, Earth Science, or a related discipline.
- Experience with offshore hydrographic data acquisition, quality control, and processing.
- An aptitude for acquiring and processing of multibeam data.
- A proven understanding of the key ancillary components of multibeam echosounders, including positioning and integrated motion reference units, and associated accuracies.
- A detailed understanding of geodetics and tidal information.
- A high level of computer literacy (including Word, Excel, PowerPoint, Internet/Email).
- Due to the nature of this position, Candidates must undertake and successfully complete both Offshore Safety and Offshore Medical Examination.

#### Desirable:
- Specific experience with Kongsberg Maritime EM 2040, 3002, 1002, Reson 7101 and R2Sonic multibeam systems.
- Experience with Seatex Seapath, Applanix POS MV, C&C Technologies (C-NAV) and RTK systems.
- Competent with CARIS software suite (HIPs & SIPS and Base Editor).
- Familiarity with LiDAR systems and associated data & outputs.
- Experience with ESRI ArcGIS software.
- Experience of marine data management, analysis and integration.
- Marine Mammal Observer (MMO) experience and qualification.
- Work experience on-board coastal or offshore vessels, or marine leisure craft.
- A post graduate or other professional qualification (e.g. marine science, hydrography, remote sensing, GIS, earth science, or oceanography).

### Special personal attributes required for the position:
- The ability to work in an organised manner, identify priorities, meet deadlines and manage time effectively.
- The ability to work unsupervised and to work well with others. Dynamic and reliable.
- Willingness to spend long periods of time (up to 4 weeks) away from home.
- Self-sufficiency, while being a good team player.
- Good interpersonal skills.
- Ability to effectively communicate results of teamwork in written and audio-visual formats.
- A full clean driving licence and own transport.
**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 €29,085 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 duration of up to the end of 2018 in line with INFOMAR Programme Funding for this post. 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 or posted to Human Resources at the Marine Institute, Rinville, Oranmore, Galway in advance of 16:00 on Friday 13th November 2015.

Please note that late applications will not be accepted.

All correspondence for this post should quote reference OSIS/STO-Hydrographic Data Processor