

## IRELAND update on activities

### INFOMAR Overview

INFOMAR is a Department of the Environment, Climate and Communications (DECC) funded joint programme between the Geological Survey Ireland and the Marine Institute, surveying our unmapped marine territory and creating a range of integrated mapping products of the physical, chemical and biological features of the seabed

INFOMAR was initiated to follow the work of the Irish Nation Seabed Survey (INSS, 2000-2006) which covered Ireland's entire deep-water territory beyond 200m water depth to survey the remaining shelf and coastal waters between 2006 to 2026 and to deliver a seamless baseline bathymetry data set to underpin the future management of Ireland's marine resource.

Ireland's seabed mapping efforts initially began with the aim of developing a marine baseline dataset to underpin national security as well as future economic, environmental, infrastructural and policy decisions for Ireland as set out in the INFOMAR Proposal and Strategy. With over twenty years of seabed mapping undertaken to date, this endeavour is being steadily achieved with over 700,000 km<sup>2</sup> of the seafloor within the Irish designated area mapped to date in high resolution. As of 2019, the INFOMAR database (>120 terabytes (TB) and growing) comprises a range of geophysical data measurements including multibeam echosounder (MBES) bathymetry and backscatter, shallow seismic profiles, gravity, magnetics, sidescan sonar and oceanographic water column profiles. It also houses information on physical ground-truthing samples and over 420 shipwreck discoveries.

The INFOMAR seabed mapping programme has contributed data to EMODnet's Bathymetry, Geology and Seabed Habitats projects.

INFOMAR data are also integrated in the Nippon Foundation's Generalised Bathymetric Chart of the Ocean (GEBCO) compilation and are one of the largest data contributors to the Seabed 2030 initiative. Additionally, through participation in international partnerships such as AORA (Atlantic Ocean Research Alliance), ASMIWG (Atlantic Seabed Mapping International Working Group), CHERISH (Climate, Heritage and Environments of Reefs, Islands and Headlands) Ireland's seabed mapping results are further distributed to a broad international community of multidisciplinary data end users.

The INFOMAR programme continues to progress our knowledge and understanding of Ireland's marine territories, with the goal of completing the baseline mapping of Ireland's seabed by the end of 2026.

# Survey Plan 2022

## INFOMAR SURVEY PLANNING






Reference grid for 1000km<sup>2</sup> Standard Survey Units. Covers Infomar surveyed area and survey gap areas.

Survey Units that contain survey gaps below 50m have been symbolised by most common depth value (modal).




Survey Units that contain survey gaps have also been clipped to show gap area extent.

Date: 11/01/22

### Legend

-  1000km<sup>2</sup> Standard Survey Unit
-  Previous Surveys with different Vertical Exaggerations
-  Biologically Sensitive Area
-  Exclusive Economic Zone (EEZ)
-  30nm from Coast

### Standard Survey Units by Modal Depth Value for Areas containing Data Gaps

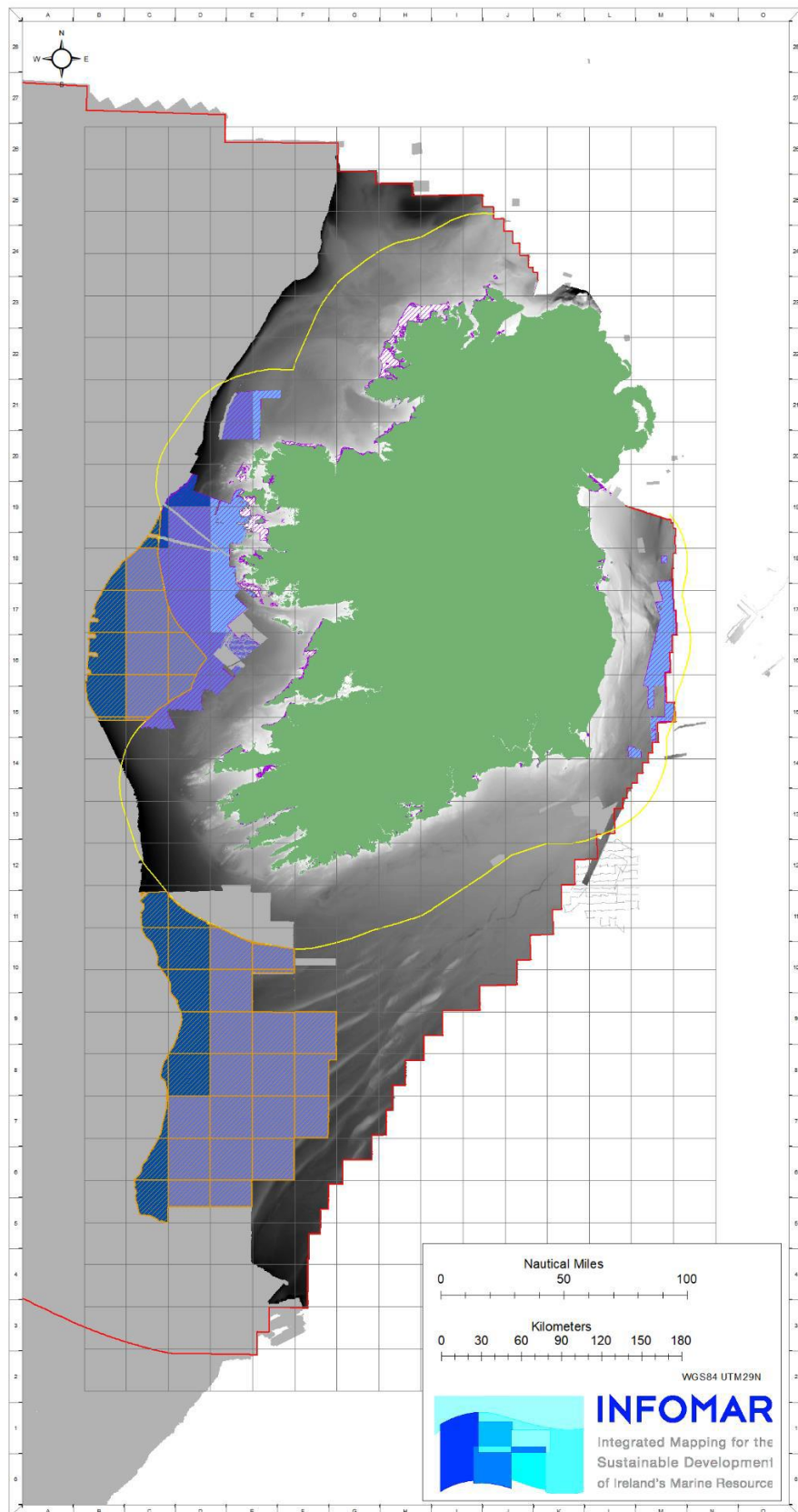
-  50m to 100m
-  100m to 150m
-  150m Plus

### Data Gaps by Depth Below 50m

-  0m to 50m

### Proposed Survey Areas 2020

-  Proposed Survey Areas MI Vessels
-  Proposed Survey Areas GSI Vessels



# INFOMAR Graduate Training

## **Maynooth University**

The INFOMAR graduate training module has been successfully delivered through a joint partnership between the Department of Geography Maynooth University and the Strategic Marine Alliance for Research and Training programme (SMART).

The level 9 post-graduate module, Marine Remote Sensing – INFOMAR, was run as part of NUIM's Masters Course in Geographic Information System (GIS) and Remote Sensing and teaches students about the science of seabed mapping by providing a combination of class based learning and practical offshore survey experience.

## **University College Dublin**

Two post-graduate training modules, developed to inspire the next generation of marine scientists, have been successfully delivered through a new joint-partnership between Geological Survey Ireland and the Marine Institutes' INFOMAR programme (Integrated Mapping for the Sustainable Development of Ireland's Marine Resource), UCD Department of Geography and the Strategic Marine Alliance for Research and Training (SMART) programme.

Created by Ireland's national seabed mapping programme, INFOMAR, two Level 9 post-graduate modules, Seabed Mapping Training and Marine and Survey Data, were hosted by University College Dublin's Department of Geography and delivered across MSc programmes in Risk, Resilience & Sustainability, Geospatial Data Analysis and MA Geography. Each explored the science of seabed mapping by providing class based theory and practical knowledge, along with relevant offshore survey experience.

Drawing on extensive survey and mapping experience acquired by the INFOMAR team, the Seabed Mapping Training module outlines the importance of mapping along with its impact on the economy, society and sustainability. Over the course of fifteen lectures with supplementary tutorials, practicals and on board ship experience, the students gained knowledge in marine survey equipment, learning how scientists image and describe the seafloor using state of the art acoustic sonar, positioning, and optical instrumentation.

# Marine Planning

Following last year's publication of the National Marine Planning Framework, Ireland has established a new Marine Area Consents regime, the MAC regime is provided for under the recently-enacted Maritime Area Planning (MAP) Act 2021. The legislation provides for the establishment of the Maritime Area Regulatory Authority (MARA) – a dedicated maritime area agency which is a priority for the Government. Work on the establishment of MARA is being led by the Department of

Housing, Local Government and Heritage and will be in place by Q1 2023, as set out in the Climate Action Plan. In the interim, the legislation provides the Minister for the Environment, Climate and Communications with the powers to assess the first batch of Maritime Area Consent (MAC) applications from a set of seven qualified Offshore Renewable Energy (ORE) projects.