

Planning a sustainable future for Ireland's marine environments

Department of Housing, Local Government and Heritage

The Challenge

- Make the National Marine Planning Framework more accessible to a broader range of people

The Benefits

- A single online source of marine policies and data
- Better-informed, evidence-based decision making
- More efficient public sector collaboration
- Greater transparency about marine policies
- Effective marine planning for a sustainable future

The Department of Housing, Local Government and Heritage has launched a first-of-its-kind solution that makes policies and data relating to Ireland's marine environments accessible to everyone. Developed with Esri's ArcGIS system, this easy-to-use online data hub is supporting marine industry, improving public sector collaboration and helping the government to achieve its goals for a sustainable future.

The Challenge

Planning the future of marine areas is a complex undertaking. Many different uses of the sea need to be taken into account, ranging from shipping, fishing and producing offshore renewable energy to conserving marine habitats and protecting heritage sites like shipwrecks. To guide economic, social and environmental decisions relating to the sea around Ireland, the Department of Housing, Local Government and Heritage (DHLGH) developed the National Marine Planning Framework.

Produced in line with the EU Maritime Spatial Planning Directive 2014/89, this framework brought together 82 relevant government policies in a publication of over 200 pages, providing detailed information about a maritime area of around 490,000 km². DHLGH wanted to make it easier for people to find and use this information, so it decided to build an interactive, online version of the National Marine Planning Framework that would be accessible to everyone.

The Solution

In what was a highly successful collaboration, DHLGH's Marine Planning Policy and Legislation team set the brief; The Marine Institute collated and reviewed the spatial data; DHLGH's experienced, in-house geographic information system (GIS) team created the webservices that would drive the application; and Esri Ireland designed and built the online data visualisation solution, using multiple products from Esri's ArcGIS system to deliver the functionality, look and feel required.

"Esri Ireland listened to our requirements, built a test solution and then modified the solution as the project progressed to incorporate new ideas," explains Juliet Fitzpatrick, Assistant Principal Officer, Marine Planning Policy and Legislation at DHLGH. "I felt they definitely listened to us and delivered a user-friendly tool that was just what we wanted."

The resulting Digital Hub, known as Marineplan.ie, is hosted on Esri's ArcGIS Online. Data preparation was carried out by DHLGH in ArcGIS Pro on the desktop, while the interactive user interface was built by Esri Ireland with ArcGIS Experience Builder. "Using ArcGIS Online supports the Irish Government's 'Cloud First' approach and allows us to focus our time where it is most needed," says Rob Ovington, GIS Manager at DHLGH. "We can use our expertise to benefit the Marine Planning Policy and Legislation team, rather than worrying about building and maintaining the underlying IT infrastructure."

Marineplan.ie enables users to draw a shape over the marine area they are interested in to see a list of the policies that are applicable to this specific location, or search by activity/sectoral area, turning on and off data layers to see relevant information in the sea all around Ireland. As part of the Department's Open Data commitment links to the data are hosted on data.gov.ie, allowing users to download the data or use the web services directly in their own applications.

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“ Marineplan.ie will assist the achievement of government targets in areas such as renewable power, by helping the Irish Government and local authorities to make decisions in a timely manner. ”

Juliet Fitzpatrick, Assistant Principal Officer, Marine Planning Policy and Legislation, DHLGH

“ ArcGIS Online is an ideal platform for sharing information in a visual way with a broad audience. ArcGIS Experience Builder offers a flexible, data-driven approach to application creation. ”

Rob Ovington, GIS Manager, DHLGH

The Benefits

A single online source of marine policies and data

This remarkable project has brought together 123 data sets and 82 government policies for the first time, creating a single online source of data and policies about a vast marine space, 7.5 times greater than the landmass of Ireland. It was a worthy winner of Esri Ireland’s Stand Out Success Award for Visualisation and Mapping 2022. “The Digital Hub is the first tool of its kind in Ireland,” says Fitzpatrick. “Getting so much information together in the same place was a huge achievement.”

Better-informed, evidence-based decision making

Whether organisations are laying pipelines on the seabed, siting new wind turbines or planning new shipping routes, they can now refer to Marineplan.ie to help them find relevant policies and make better-informed decisions. “Marineplan.ie gives decision makers a good understanding of the possible impacts of their planned activities and lets them know about the government policies that they will need to consider,” Fitzpatrick explains.

More efficient public sector collaboration

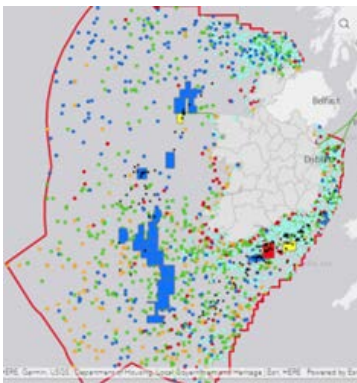
Marineplan.ie is expected to lead to considerable time savings throughout the public sector in Ireland. It improves inter-governmental collaboration, by giving policy makers across more than 30 departments and agencies easy access to marine information. The hub is particularly useful for the coastal local authorities that recently assumed responsibility for activities in the nearshore area which is from the High Water Mark out to three nautical miles offshore. Following the enactment of this new legislation, they can now use the hub to become familiar with policies relating to offshore activities in their areas.

Greater transparency about marine policies

Free for everyone to access online, Marineplan.ie enables anyone to explore marine policies and interact with marine data from a trusted source. “ArcGIS Online is an ideal platform for sharing information in a visual way with a broad audience,” says Ovington. “It gives people without GIS expertise and without access to their own GIS software the answers they need straight away. ArcGIS Experience Builder offers a flexible, data-driven approach to application creation.”

Effective marine planning for a sustainable future

Most importantly, the creation of Marineplan.ie will support planning for the future of Ireland’s marine areas. It is already being used to inform the development of new Designated Marine Area Plans showing where future renewable power facilities could be sited. According to Fitzpatrick, “Marineplan.ie will assist the achievement of government targets in areas such as renewable power, by helping the Irish Government and local authorities to make decisions in a timely manner.”



Current petroleum authorisations, gas pipelines and shipwrecks around the Irish coast within the National Marine Planning Framework boundary.

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