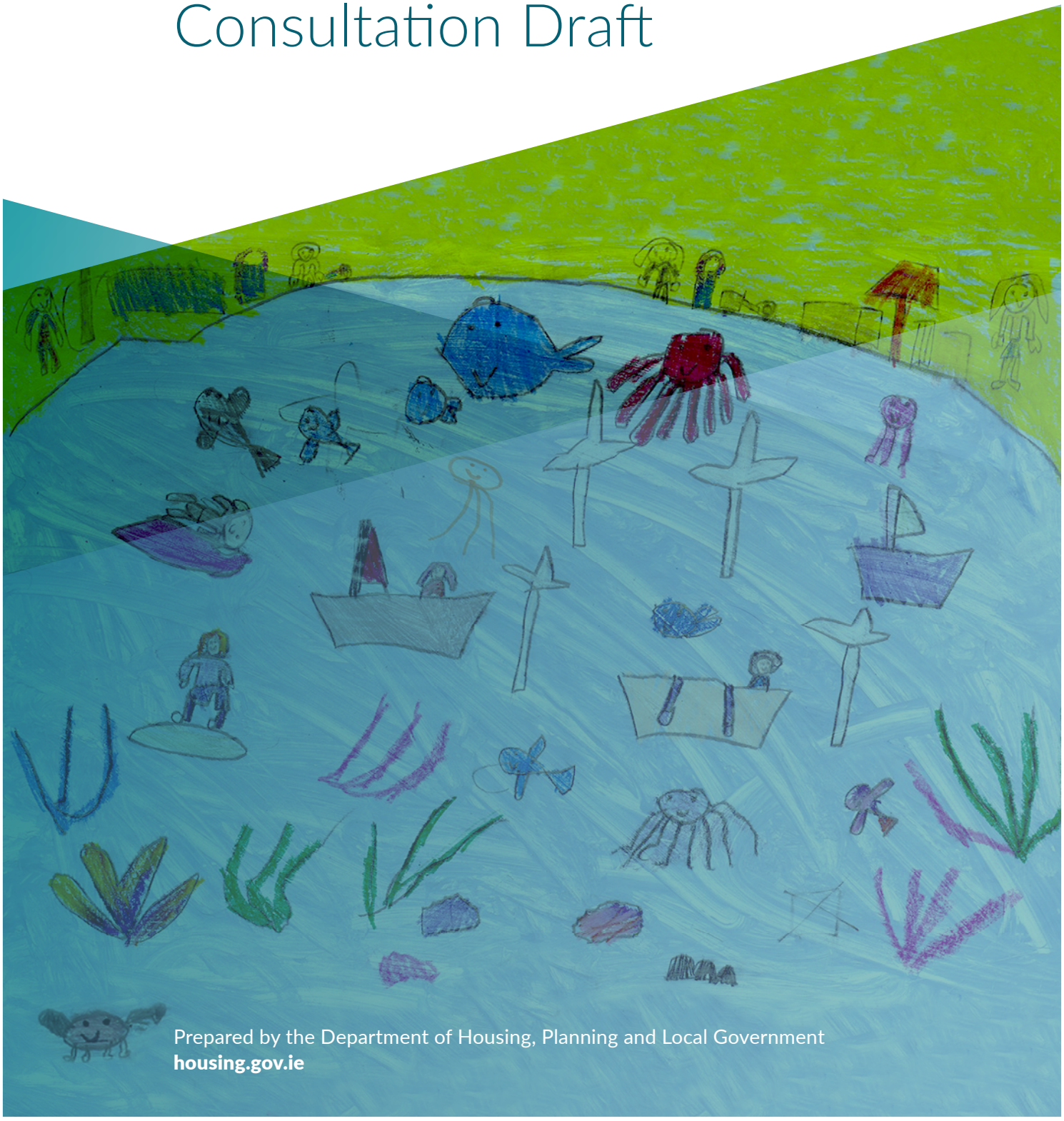
Rialtas na hÉireann
Government of Ireland

National Marine Planning Framework

Consultation Draft



Prepared by the Department of Housing, Planning and Local Government
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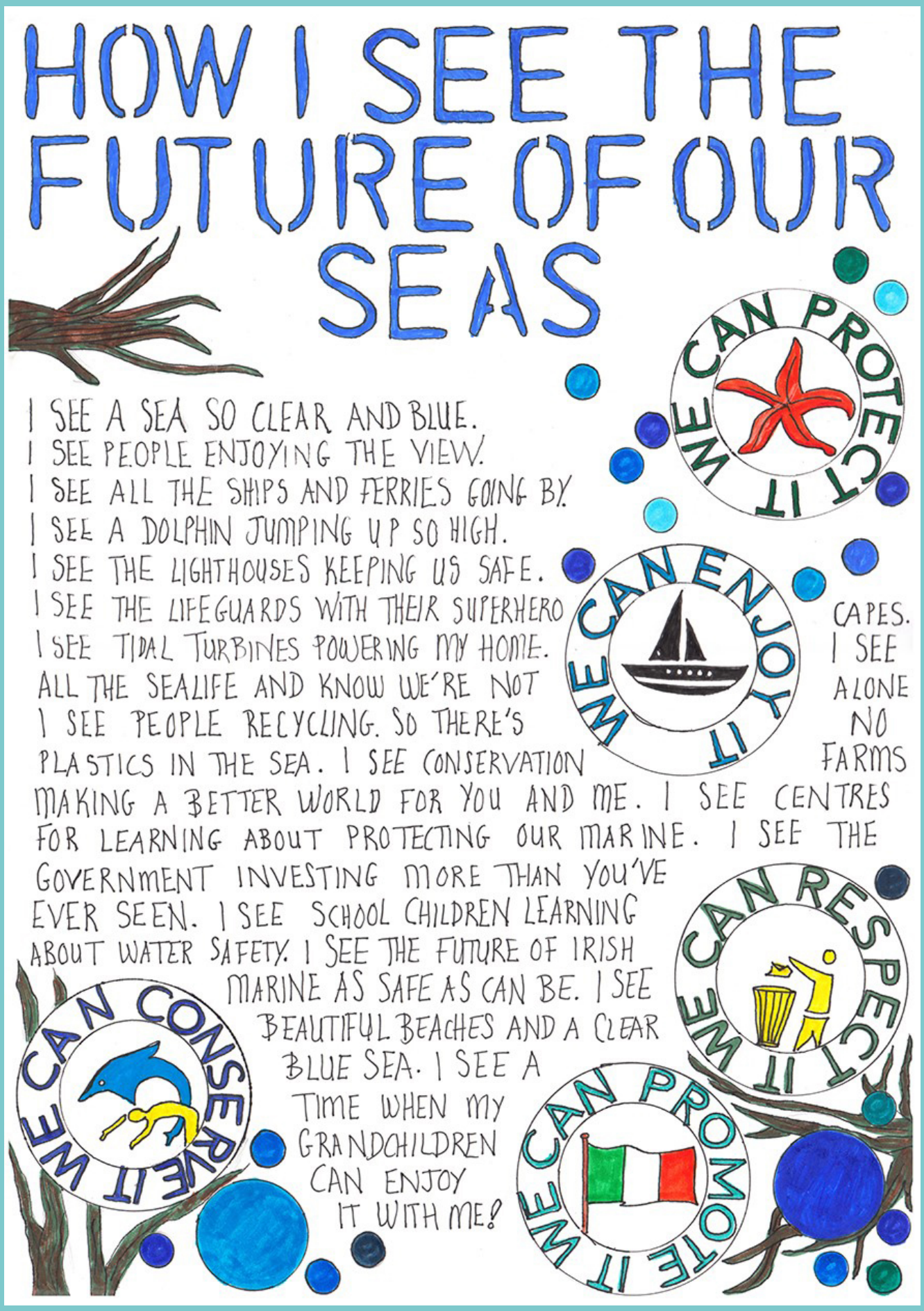

Cover Image: The Green-Schools Marine Spatial Planning Competition 'Our Seas Our Future' 2019 winners, run by An Taisce with the Department of Housing Planning and Local Government.

Front Cover: Aela Walsh, Baltydaniel National School
Inside Cover: Clark Kelly, Scoil Chaoimhin Naofa

Foreword

Ireland has a long maritime culture and tradition and Irish people have a strong affinity with the sea. 75% of our population live in coastal counties and for as long as people have lived on this Island our seas have held sway over our imagination, our sense of adventure and achievement. Our ocean is one of our greatest treasures. It supports a diverse range of economic activities such as seafood, tourism, renewable ocean energy, and has abundant potential to open new applications for health, medicine and technology.

Our ocean is responsible for our mild climate, our extraordinary biodiversity and our unique ecosystem. Our ocean is also where many of us spend our recreation time whether walking the beaches or enjoying the sea waters through different activities.

Our maritime area is seven times the landmass of Ireland, over 490,000 square kilometres of some of the most productive and diverse resource in the world. When we take our seabed area into account, Ireland is one of the largest EU States and our coastline of 7500km is longer than that of many European countries.

However, human activities are putting pressure on marine and coastal areas and whilst we have been planning for land use for decades, marine planning is a relatively new concept in Ireland. Given the importance of our seas to our lives and the lives of those generations not yet born, it is imperative that we plan and manage our seas properly.

The adoption by Government of this draft National Marine Planning Framework marks an important step in the proper management of our most important resource and marks the beginning of a long-term commitment to protect our seas for future generations. With such a diverse range of activities occurring within our marine area, the need for a coordinated and coherent approach to decision-making and governance cannot be emphasised enough and Government will move to give legislative grounding to that joined-up decision-making through the Marine Planning and Development Management Bill.

I would like to take this opportunity to recognise and acknowledge the commitment and input from a wide range of stakeholders throughout the development of this draft Plan. There was an enthusiastic response from you to the public consultations run by my Department leading up to and following the publication of 2018's *National Marine Planning Framework Baseline Report*. Our Advisory Group chaired by my colleague Minister of State English, was invaluable in imparting their collective knowledge and offering guidance. A huge role was played by other Government Departments and agencies with functional responsibility for various marine activities. It has been inspiring to see so many play their part in this process and their views are reflected in our draft Framework. Thank you all for your engagement to date.

This is our draft National Marine Planning Framework. You now have a further chance to respond, share your views on what it says about Ireland's future relationship with our seas, and help us to shape how we manage this most important resource.

It's time for us all to "seas" the day.

Eoghan Murphy, T.D.
Minister for Housing, Planning and Local Government

Foreword

"Did sea define the land or land the sea?
Each drew new meaning from the waves' collision.
Sea broke on land to full identity."

From "Lovers on Aran" by Seamus Heaney

Ireland has been defined through history by its relationship with coast, sea and ocean around us. Voyages have begun, seafood has been gathered and cultured, and technological advancements like the first transatlantic telegraph have been made. The essential nature of these functions in shaping Ireland hold true today and will shape our future as we explore an increasingly diverse range of opportunities in the maritime area including offshore renewable energy.

Ireland today has a better understanding of the marine environment and the activities that go on there than ever before. This knowledge, built upon and added to through consultation on the NMPF Baseline Report in 2018, has helped create a draft marine spatial plan for Ireland that reflects the need to be stewards of our marine environment whilst realising the benefits of marine resource use for communities and businesses, addressing activities from Aquaculture to Waste Water Treatment. As well as drawing upon the best available data, this document would not have been possible without the involvement of numerous stakeholders who have provided their insights, including through the Marine Spatial Planning Advisory Group.

This Consultation Draft NMPF is Ireland's first complete marine spatial plan document. It sets out a vision, objectives and policies to help direct decision-making in the maritime area using a plan-led approach. This Consultation Draft NMPF is an important milestone towards Ireland adopting our national marine spatial plan in 2020, meeting the requirements of the Marine Spatial Planning Directive. The aim of this endeavour is to recognise the increasing pressure on our maritime area and provide a common framework for environmental, social and economic factors to be considered in decision-making ranging from projects, plans and policy. In this way MSP will enable early identification of risks that can then be managed, identify opportunities for mutual benefit through efficient co-use of space, reduce the likelihood of conflict between activities, and steer decision-making at all levels towards sustainable management of Ireland's marine resources.

Since launch of the NMPF Baseline Report in 2018, DHPLG have continued to develop Ireland's MSP system alongside producing this Consultation Draft NMPF. This has included producing Ireland's Marine Planning Policy Statement (MPPS). The MPPS describes existing components of Ireland's marine planning system, outlines a vision for the future development of our marine planning system, and sets out the overarching priorities and principles the Government expects public bodies that engage with the marine planning system to observe. The MPPS serves as a parallel to the 2015 Planning Policy Statement which underpins the operation of the entire land-planning system in Ireland.

Following adoption of the NMPF in 2020, the Government will be exploring opportunities for the second cycle of MSP that includes the potential for different parts of the maritime area. This will include considering the potential for plans nested within the overall NMPF, providing a higher level of policy detail related to marine management tailored to the needs of a particular area or activity.

Keeping with the focus on engagement during MSP to date, during consultation on this Draft NMPF DHPLG will be convening a number of workshops around Ireland's coast. These events will be in addition to the opportunity to provide feedback on the NMPF via an online platform. Details of the events and online feedback process will be available on the DHPLG website and I would very much welcome your involvement, helping to shape Ireland's marine management future.

Damien English T.D.
Minister for Housing and Urban Development

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1.0 Introduction

1.1 As an island nation with sovereign rights over one of the largest marine areas in Europe, Ireland's economy, culture and society is inextricably linked to the sea. Our marine environment is a national asset that yields multiple commercial and non-commercial benefits from sectors such as seafood, tourism, recreation, renewable energy, petroleum, cultural heritage, and biodiversity. The sustainable development of our marine area affects many people. In order to support a marine that Ireland can use, enjoy and benefit from socially, environmentally and economically, the Government is putting in place a comprehensive new approach to marine planning across the three main areas of forward planning, development management and marine planning enforcement. This document sets the framework for the forward planning component of our marine planning system – the draft National Marine Planning Framework (NMPF). It is the product of extensive work across Government and of significant engagement and interaction with all marine stakeholders over a 2-year period.

What is marine spatial planning?

1.2 Marine spatial planning is a process that brings together multiple users of the ocean to make informed and coordinated decisions about how to use marine resources sustainably. It is a process by which the relevant public authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives. A marine spatial plan – in Ireland known as the NMPF – is the outcome of that process.

1.3 The NMPF is a national plan for Ireland's maritime area, setting out, over a 20 year horizon, how we want to use, protect and enjoy our seas. The NMPF sits at the top of the hierarchy of plans and sectoral policies for the marine area. The plan has been informed by existing sectoral plans and will, in turn, be used to inform future cycles of those plans in an ongoing feedback loop. It provides a coherent framework in which those sectoral policies and objectives can be realised. It will become the key decision-making tool for regulatory authorities and policy makers into the future in a number of ways including decisions on individual consent applications which will have to secure the objectives of the plan, similar to the way that terrestrial plans form part of the decision-making tool-kit in the on-land planning process.

1.4 The Department of Housing, Planning and Local Government (DHPLG) is leading the preparation of the plan on behalf of Government, with input from other Departments and Agencies. To provide for effective governance and coordination of the plan-making process an Interdepartmental Group has been established. The Group is chaired by DHPLG and includes high-level representatives of Government Departments whose policies and functions are relevant to the Plan. The group also contains one representative from the local government sector and one representative from the Marine Institute. One of the main objectives of preparing the plan is to provide a more integrated governance structure that will co-ordinate all of these specific departmental or 'sectoral' areas into an overall strategy.

1.5 The marine plan will cover Ireland's maritime area, including internal waters (sea area), territorial seas, exclusive economic zone (EEZ) and continental shelf. The maritime area comprises approx. 490,000 km^2 and extends from mean high water mark at the coast seaward to in excess of 200 nautical miles in parts. A single plan will be prepared for the entire area now with the possibility of more detailed regional plans being made at a later date.

Benefits of Marine Planning

1.6 The development of an overarching national marine spatial plan is identified as part of the suite of marine planning reform measures identified in the Marine Planning Policy Statement (October 2019).

1.7 Long-term forward planning for Ireland's maritime area will contribute to the effective management of marine activities and more sustainable use of our marine resources.

1.8 It will enable the Government to set a clear direction for managing our seas, to clarify objectives and priorities, and to direct decision-makers, users and stakeholders towards more strategic and efficient use of marine resources. It will inform decisions about the current and future development of the maritime area, aiming to integrate needs.

What is this document for and how should it be used?

1.9 This document is the draft NMPF which is now being published for a 3-month consultation and public engagement process. Ireland's final NMPF, to be published in 2020, will be the key consideration for decision-makers on all marine consents. All applications for activity or development in Ireland's maritime area, including those made within the new development management system being provided for under the Marine Planning and Development Management Bill 2019, will be considered in terms of its consistency with the objectives of the plan. It will therefore create the overarching framework for decision-making that is consistent, evidence-based and secures a sustainable future for the maritime area. Through extensive public involvement, it will offer everyone with an interest in our seas and coasts the opportunity to have a say in how their maritime area is managed.

1.10 Marine users, including regulators, applicants for consent and interested persons, should find that the system will reduce the regulatory burden on them by giving them more certainty regarding what can happen and where, thereby speed up the licensing process. Marine users should also feel more confident that decisions made on applications for projects will be robust in the face of challenge, provided they are made in accordance with the policy framework set out in the marine spatial plan. This is because the plan is based on the best available technical and scientific evidence, including early and consistent engagement with stakeholders together with a sustainability appraisal.

How is the draft NMPF structured?

1.11 This draft NMPF contains the objectives, policies and supporting actions the Government considers necessary to support the effective management of marine activities and more sustainable use of our marine resources. It sets out:

- the policy, legislative and regulatory context for Marine Spatial Planning in general and, more specifically, for the development of Ireland's first plan;
- a description, building on the NMPF Baseline Report (September 2018) of the "as is" situation in terms of existing sectoral development and activities in Ireland's maritime area, including an identification of the future opportunities and constraints for each;
- an initial elaboration of potential high level objectives for Ireland's first National Marine Planning Framework, informed by HOOW and the Maritime Spatial Planning Directive 2014/89/EU; and
- Overarching Marine Planning Policies (OMPP's) that will apply to all marine activities or development. These include policies in relation to, inter alia, coexistence, biodiversity, coastal and island communities, infrastructure. Each of these is separately numbered, contextualised and cross-referenced to other relevant OMPP's and SMPP's (see below)
- Activity-specific or Sectoral Marine Planning Policies (SMPP's) to guide decision-makers in assessing or dealing with specific proposals (for example, aquaculture, ORE, ports development etc.). These too are separately numbered and cross-referenced. Supporting context for each SMPP is provided in relevant activity chapters.
- Actions being taken in parallel to support the implementation of marine objectives and policies (for example, a commitment to prepare statutory marine planning guidelines on specific marine planning issues).
- Arrangements for the implementation of the plan, including proposed approaches to be deployed in relation to Regional Marine Planning and the involvement of local and coastal communities in the planning process through Marine Coastal Partnerships.
- An overview of the system of spatial designation to be introduced under the Marine Planning and Development Management Bill to allow for the zoning of specific areas of Ireland's seas for specified purposes (e.g. protection or for use by certain activity types including offshore renewable energy).

Public Participation, Communication and Engagement

1.12 As set out in the Government's marine plan roadmap, *Towards a Marine Plan for Ireland* (December 2017) the MSP team within the Department of Housing, Planning and Local Government have been carrying out and will continue to carry out extensive public and stakeholder engagement as the plan develops, including through the use of social media.

1.13 The NMPF Stakeholder Advisory Group, chaired by Minister of State Damien English, is the formal mechanism established to facilitate participation of relevant stakeholder groups, non-governmental organisations, professional bodies and technical experts in the planning process. Membership of the group is drawn from the economic, environmental and social pillars, and has been kept under review and updated to ensure that all interested sectors and stakeholders are represented. The current membership of the group is at Appendix B.

1.14 Between March and July 2018 the MSP team hosted public engagement events in almost all coastal counties across Ireland. These events were aimed at raising awareness around:

- the MSP concept,
- the Government's plans to develop a marine plan for Ireland,
- details on how people could engage with the plan-making process and
- providing a timeframe for the various phases of that process.

1.15 In parallel, we have had extensive direct engagement with a broad range of stakeholders in the marine sector (including port authorities, local authorities, sports and recreation organisations, regional and national inshore fisheries forums, sea fisheries organisations, environmental groups, renewable energy sector, tourism sector etc.) and have established a visible and active presence on social media platforms.

1.16 During the 3-month consultation period on the NMPF Baseline Report five regional public engagement events were held in Cork, Dublin, Galway, Sligo and Waterford with almost 350 people in attendance. Over 170 submissions were received on the Baseline Report and these have had a significant impact on the content of this draft NMPF (separate report being published on the Baseline Report consultation process).

1.17 Further details on public and stakeholder engagement events are at Appendix C.

1.18 The Department of Housing, Planning and Local Government also supported a Green Schools poster competition on the theme of Marine Spatial Planning in order to raise awareness among young people of the steps Ireland is taking to protect this asset with the development of our first national marine plan. Pupils were asked to prepare posters illustrating their take on the concept of "Our Seas, Our Future". The competition was launched in January 2019 and over 1000 submissions were received with the winning entries announced by Minister Damien English in Dublin in May. Some of the winning posters provide the cover images for this draft Plan.

1.19 The MSP Team also invited the public and stakeholders via Twitter to submit marine photographs for possible inclusion in the draft plan. A number have been selected for

inclusion and a list of those who provided images is set out after the Glossary at the back of the document. The photographs are used with their kind permission and inclusion of their photographs in this document does not imply their endorsement of its content. The MSP Team looks forward to their feedback on the draft plan as part of the public consultation.

1.20 Written submissions are now invited on the draft NMPF. Submissions can be made any time before midday 28 February 2020. You can make a submission by:

1. Email to the following email address only msp@housing.gov.ie; or
2. Writing to the following address:
   MSP Submissions, Marine Spatial Planning Section, Department of Housing, Planning, Community and Local Government, Newtown Road, Wexford Y35 AP90.

1.21 **The deadline for receipt of all submissions is midday 28 February 2020**. We cannot accept submissions for this draft stage beyond that deadline. Please make your submission by one medium only, either electronic or hard copy. All submissions must include the following:

- Your name and details of any organisation, community group or company you represent.
- An address for correspondence.
- Your submission on relevant planning issues for the National Marine Planning Framework.

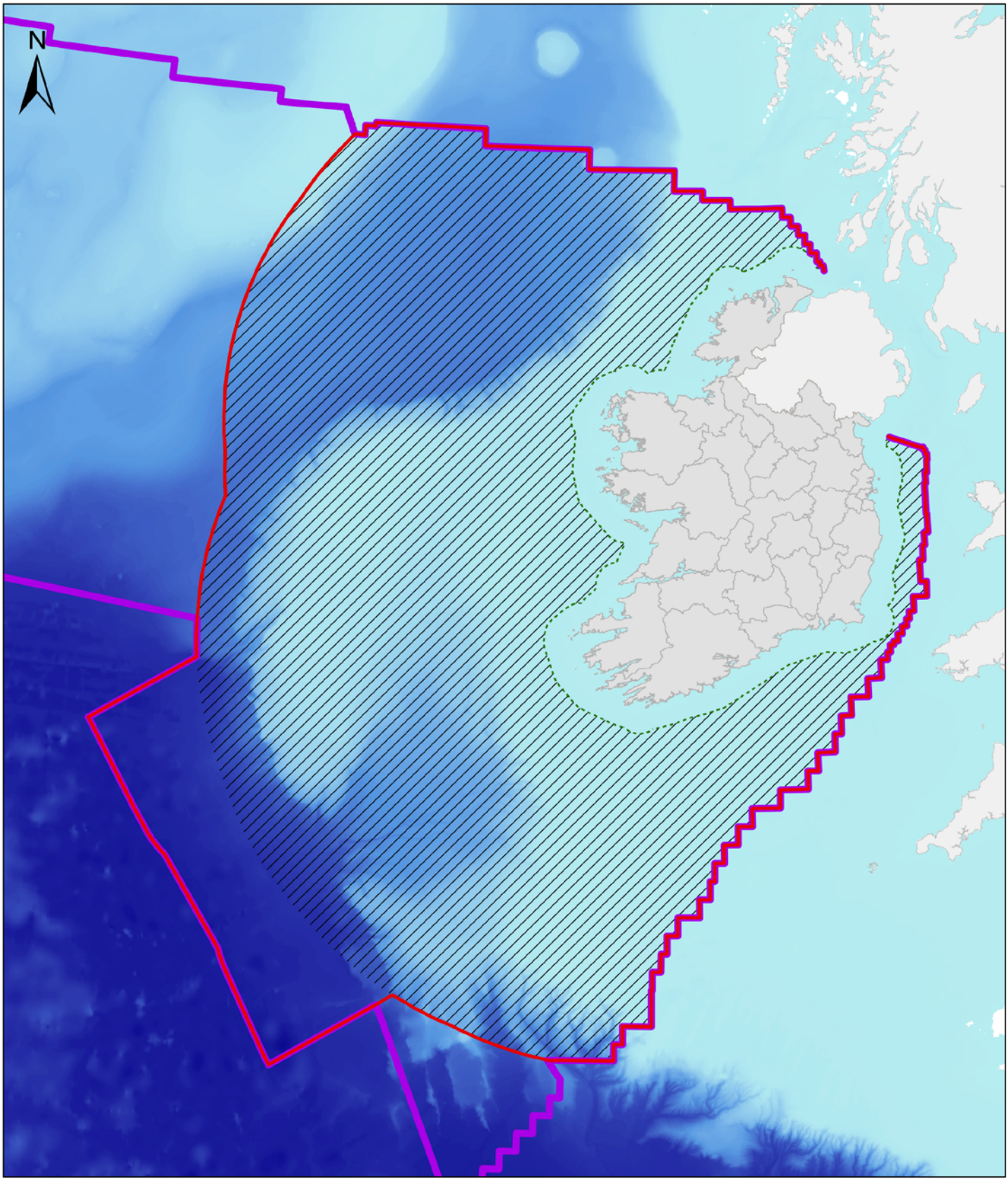
1.22 It should be noted that in the interests of transparency, all written submissions received will be made publicly available on the Department's website. Receipt of submissions will be acknowledged but it will not be possible to issue individual responses.

Privacy Statement

1.23 The Department is committed to protecting and respecting your privacy. The Privacy Statement published alongside this draft NMPF explains how the Department, as the Data Controller, will process the personal data provided to it in respect of submissions made during this public consultation; how that information will be used, and what rights you may exercise in relation to your personal data.

Public Events

1.24 To inform and support public and stakeholder participation, we are holding a series of regional public and stakeholder events throughout October. Details will be announced in the coming weeks.



Ireland's Maritime Boundaries

0 50 100 200 Kilometres

- National Marine Planning Framework Area
- Currently Designated Continental Shelf Boundary
- 12NM Territorial Sea Limit
- Exclusive Economic Zone
- Local Authority Area

Sea-floor depth below mean sea level (m)

1 1000 3000 4000 5000 6000

Credits: Department of Communications, Climate Action & Environment, 2006; The GEBCO_2014 Grid, version 20150318, http://www.gebco.net.

2.0 Marine Planning in Broader Context

Marine Planning Policy Statement

2.1 Ireland's first Marine Planning Policy Statement (October 2019) provides for the preparation, adoption and review of statutory marine planning policy statements on six-yearly cycles. It reflects the comprehensive updating and renewal now underway of Ireland's marine planning system, setting out core principles to inform evolving marine planning and development management process.

2.2 The Marine Planning Policy Statement:

- Describes the existing components of Ireland's marine planning system;
- Outlines a vision for the future development of our marine planning system;
- Sets out the overarching policies and principles the Government expects marine planning bodies and other public bodies that engage with the marine planning system to observe (in terms, for example, of public engagement, transparency, governance, environmental assessment, climate action, social and economic benefit);
- Sets out high-level priorities for the enhancement of the marine planning system in Ireland. This Marine Planning Policy Statement serves as a parallel to the 2015 Planning Policy Statement which underpins the operation of the entire land-planning system in Ireland.

2.3 The Statement sets out a vision for marine planning as follows: "A marine planning system with clear forward planning, development management and enforcement elements that promotes and sustains ocean health, and supports the sustainable (recreational) enjoyment, management and use of Ireland's marine resource." The policy statement also sets out ten strategic principles to guide all marine planning activity – forward planning, development management and enforcement. These strategic principles have therefore informed the development of this plan and the plan represents a spatial articulation of the MPPS.

Harnessing Our Ocean Wealth (HOOW)

2.4 *Harnessing Our Ocean Wealth* (HOOW) established the high-level vision, goals and targets for our ocean economy. The vision is that "our ocean wealth will be a key element of our economic recovery and sustainable growth, generating benefits for all our citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner."

Based on the concept of sustainable development, HOOW established three high level economic, environmental and social goals of equal importance.

2.5 Goal 1 focuses on a *thriving maritime economy*, whereby Ireland harnesses the market opportunities to achieve economic recovery and socially inclusive, sustainable growth. Getting the conditions right for growth, delivering business-friendly yet robust governance, policy and planning frameworks are critical to realising this ambition.

2.6 Our ocean wealth depends on *healthy ecosystems* (Goal 2). Our goal is to protect, preserve and, where possible, restore our rich biological diversity and ecosystems. We need to proactively manage our living and non-living resources in harmony with those ecosystems, so that they continue to provide essential monetary and non-monetary goods

and services (e.g. food, climate, health and well-being). Protection of our marine ecosystems and compliance with environmental legislation are essential components of our ecologically sustainable future and need to be seen as an essential enabler for a thriving maritime economy.

2.7 Goal 3 under HOOW is to strengthen our *engagement with the sea* – strengthening our maritime identity and increasing our awareness of the value (market and non-market), opportunities and social benefits. Our ocean wealth is a national asset and needs to be protected, managed and developed for and by our citizens.

2.8 HOOW established two overarching economic targets:

- to double the value of our ocean wealth to 2.4% of GDP by 2030, and
- to increase the turnover from our ocean economy to exceed €6.4bn by 2020.

2.9 Further information on the latest review of Ireland's ocean economy published by the Socio-Economic Marine Research Unit at NUI Galway in June 2019 can be found at Sections 3-144 to 3-148 below.

EU Policy and Legal Framework

2.10 While some countries have had systems of maritime planning for a couple of decades, marine spatial planning is a relatively new approach across most of the EU. In 2007 the EU adopted an Integrated Maritime Policy (EU-IMP) which seeks to provide a more coherent approach to cross-cutting maritime issues, with increased coordination between different policy areas such as blue growth, marine data and knowledge, integrated maritime surveillance, sea basin strategies and maritime spatial planning. EU-IMP encourages all coastal Member States to develop integrated maritime policy and plans at a national level.

2.11 In the intervening period the EU has adopted a number of policy initiatives and legislative measures aimed at advancing the integrated maritime policy agenda.

2.12 MSP Directive 2014/89/EU[1] establishing a framework for maritime spatial planning was adopted in July 2014. The Directive obliges all coastal Member States to establish maritime spatial plans by 2021.

2.13 When establishing and implementing maritime spatial planning, Member States are obliged by the Directive to consider economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses.

2.14 The Directive requires Member States to use their maritime spatial plans to aim to contribute to the sustainable development of energy sectors at sea, of maritime transport, and of the fisheries and aquaculture sectors, and to the preservation, protection and improvement of the environment, including resilience to climate change impacts. However it also allows Member States to pursue other objectives such as the promotion of sustainable tourism and the sustainable extraction of raw materials.

[1] Further Information on Maritime Spatial Planning Directive http://www.housing.gov.ie/node/7081

2.15 Similarly while the Directive sets the general ground rules in terms of criteria to be addressed, it is open to Member States to determine how the different objectives are reflected and weighted in their maritime spatial plan or plans.

2.16 The Marine Strategy Framework Directive[2] (MSFD) is the environmental pillar of the EU's Integrated Maritime Policy and requires European member states, including Ireland, to reach good environmental status (GES) in the marine environment by the year 2020 at the latest. The directive is very similar to the Water Framework Directive, but the focus is on the marine environment.

2.17 The aim of the Directive is to protect Europe's marine waters by applying an ecosystem-based approach to the management of human activities, while enabling the sustainable use of the marine environment for present and future generations. Good environmental status in the marine environment means that the seas are clean, healthy and productive and that human use of the marine environment is kept at a sustainable level.

2.18 Under MSFD, our marine waters must be assessed against an agreed set of standards across a number of important environmental areas (e.g. biodiversity, fish stocks, and contaminants). Based on the assessment, appropriate environmental targets and indicators must be set and programmes of measures put in place to reach GES.

2.19 The Water Framework Directive (2000/60/EC)[3] requires all Member States to protect and improve water quality in all waters so that we achieve good ecological status by 2015 or, at the latest, by 2027. It was given legal effect in Ireland by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these plans.

2.20 Obligations arising under a range of other directives may also be relevant in the context of marine spatial planning, including the Urban Waste Water Treatment Directive, Nitrates Directive, Bathing Waters Directive, and Floods Directive.

National Policy and Legal Framework

2.21 Ireland has transposed the MSP Directive through Part 5 of the Planning and Development (Amendment) Act 2018. The Act establishes the legal basis and broad framework for Ireland to implement MSP through the development of a maritime spatial plan (or plans) on a 10 year cycle. Under the Act, the Minister for Housing, Planning and Local Government is the competent authority for the purposes of the Directive and, by extension, for purposes of preparing Ireland's first marine spatial plan.

2.22 It also provides arrangements for the plan-making process including governance, public participation, review and Oireachtas involvement, to ensure that the process for making Ireland's National Marine Planning Framework is consistent and fully aligned with the arrangements for the National Planning Framework in the terrestrial planning system.

[2] Further Information on Marine Strategy Framework Directive http://www.housing.gov.ie/water/water-quality/marine-strategy/marine-strategy-framework-directive-msfd

[3] Further Information on Water Framework Directive http://www.housing.gov.ie/node/433

2.23 Implementation by Ireland of the requirements of the Marine Strategy Framework Directive (MSFD) has been carried out in a number of phases.

2.24 The first phase required an Initial Assessment of our marine waters, a determination of Good Environmental Status and the establishment of a set of environmental targets and indicators. This assessment described the prevailing status of the Irish marine environment across the 11 descriptors for GES.

2.25 The second phase was the establishment and implementation of monitoring programmes for the on-going assessment of the environmental status of marine waters which will form the primary data and information source for formal reporting to the EC.

2.26 The third phase involved the development of a programme of measures (POMs) to address factors that impact upon the achievement of GES. The main purpose of the POMs is to put in place actions and measures which will support the meeting of the environmental targets set out under the Directive, leading to the achievement (or maintenance) of Good Environmental Status (GES).

2.27 Work on implementing MSFD requirements is progressing separately and in parallel to the MSP process and is adopted as part of the environmental pillar of this draft National Marine Planning Framework (see Environmental – Ocean Health section of Chapter 3 below).

2.28 In broad terms, the objectives of the Water Framework Directive are (1) to prevent the deterioration of water bodies and to protect, enhance and restore them with the aim of achieving at least good status and (2) to achieve compliance with the requirements for designated protected areas. It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these plans.

2.29 River Basin Management Plans (RBMPs) are plans to protect and improve the water environment. They are prepared and reviewed every six years. The first RBMPs covered the period 2010 to 2015. The Government published a second-cycle RBMP[4] on 17 April 2018. It outlines the measures that will be taken to protect and improve water quality between 2018 and 2021.

2.30 The draft NMPF has been prepared to have regard to the measures contained in the RBMP, particularly those that relate to coastal waters.

Linkage with land planning and the National Planning Framework

2.31 The NMPF is a parallel document to the National Planning Framework[5] (NPF). The NPF is a national document to guide at a high-level strategic terrestrial planning and development for the country over the next 20+ years, so that as the population grows, that growth is sustainable in economic, social and environmental terms.

[4] The requirements of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, more commonly known as the Strategic Environmental Assessment (SEA) Directive.

[5] The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), transpose the Birds and Habitats Directives in Irish law. The regulations require that a screening for appropriate assessment (AA) is carried out and, if required, that an appropriate assessment is carried out.

2.32 Finalisation of the NPF alongside the ten-year National Development Plan puts together one plan to guide strategic development and infrastructure investment at national level.

2.33 The NPF with the National Development Plan also sets the context for each of Ireland's three regional assemblies to develop their Regional Spatial and Economic Strategies taking account of and co-ordinating local authority County and City Development Plans in a manner that will ensure national, regional and local plans align.

2.34 The NPF recognises the importance of integration between land and marine planning (Chapter 7) and the many shared aims and overlapping areas of co-ordination and activity across the two regimes. The NPF contains 6 national planning objectives that are specific to the marine sector.

2.35 Similarly, the NMPF mutually recognises the importance of integration and co-ordination with the land planning regime at national, regional and local levels. In future it will be equally important in turn that national, regional and local terrestrial plans are consistent with the NMPF – as they will be required to do under the Planning and Development Act 2018. Many activities and uses that take place on land or in the sea can have impacts on both the land and the maritime area. The MSP Directive requires that these interactions are considered.

Environmental Assessments

2.36 As part of the preparation of the Draft National Marine Planning Framework, a number of environmental assessments have been carried out. These include a Strategic Environmental Assessment (SEA)[6] and an Appropriate Assessment (AA)[7].

2.37 These assessments have been undertaken so the high-level impact of the proposed Overarching Marine Planning Policies and Sectoral Marine Planning Policies on the environment can be evaluated and used to inform the direction of the Draft NMPF. This is to ensure that the national objectives and outcomes respond to the sensitivities and requirements of the wider natural environment i.e. the likely environmental consequences of decisions regarding the future accommodation of development and how negative effects can be reduced, offset or avoided.

National Marine Planning Framework Adoption

2.38 The effective date from which it will become a legal obligation to comply with the requirements of the NMPF will be the date on which it is approved and adopted, currently expected to be late 2020. There is, in effect, no plan in place to comply with until then. For future iterations of the planning process and review of plans the current version of the NMPF in place at any given time will remain operative until such time as a new plan is adopted to replace it.

[6] The requirements of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, more commonly known as the Strategic Environmental Assessment (SEA) Directive.

[7] The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), transpose the Birds and Habitats Directives in Irish law. The regulations require that a screening for appropriate assessment (AA) is carried out and, if required, that an appropriate assessment is carried out.

Marine Consents and Licensing

2.39 The NMPF will not replace or remove existing regulatory regimes or legislative requirements governing the operation of various marine sectoral activities. Rather, it will provide an overarching framework for their continued operation.

2.40 As part of their decision-making processes public bodies involved in regulating marine development and activities will become obliged to take into account the objectives of plans, when adopted. However, decisions on applications for consent should not be delayed in anticipation of plans being adopted for the first time.

2.41 Cases currently in the system or submitted for consideration prior to the adoption of Ireland's first NMPF in 2020, as envisaged, will be dealt with on the basis of the currently applicable sectoral plans and regulatory requirements.

Marine Planning and Development Management Bill

2.42 As set out above, the Marine Planning Policy Statement sets out a vision for an integrated marine planning system with distinct forward planning, development management and enforcement components. The Government is developing new legislation to modernise elements of the marine development management and enforcement systems.

2.43 The Marine Planning and Development Management Bill 2019 (formerly the Maritime Area and Foreshore (Amendment) Bill) will, inter alia:

- Establish a statutory basis for the preparation of a Marine Planning Policy Statement;
- Introduce powers for the Minister for Housing, Planning and Local Government to put in place statutory marine planning guidelines (parallel to statutory planning guidelines under Section 28 of the Planning and Development Act 2000);
- Provide an enhanced statutory basis for marine forward planning;
- Introduce a single State consent system for the entire maritime area (replacing foreshore leases and licences which are limited to the territorial sea) with the Ministers for Housing, Planning and Local Government and Communications, Climate Action and Environment assuming responsibility for the State consents enabling occupation of the maritime area for development and activities within their respective remits;
- Eliminate the unnecessary duplication of development management processes (including environmental assessments) for activities or developments that are currently assessed under both the foreshore and planning regimes;
- Introduce a single development management process for the maritime area for activities and developments to be administered by An Bord Pleanála/local authorities as appropriate to development type and location;
- Provide for strengthened enforcement and compliance of State consents and development management;
- Provide for transitional arrangements including, inter alia, a future development management pathway for legacy offshore renewable energy projects.

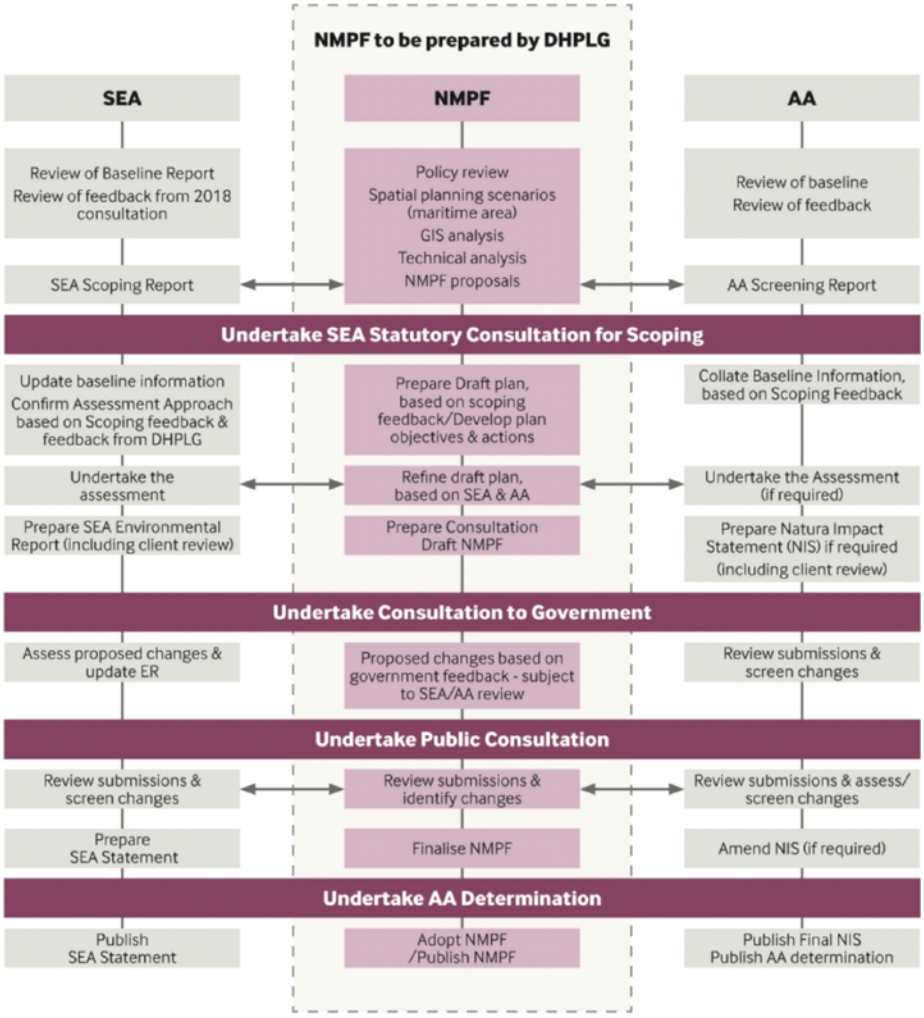


Figure 1: Integration of SEA/AA in NMPF Process (Source: RPS Consultants, 2019)

2.44 By bringing together these elements of forward planning and streamlined development management and enforcement, this new legislation will be a cornerstone of the future marine planning system in Ireland. It will be a key enabler of Ireland's ability to deliver on our obligations under the Marine Strategy Framework Directive and OSPAR Convention, our climate change and renewable energy targets, and on future ports development.

National Marine Planning Framework and Climate Change

2.45 Climate change is a central consideration throughout this draft NMPF. Climate disruption is already having diverse and wide-ranging impacts on Ireland's environment, society, economic and natural resources. It is causing significant adverse impacts on our oceans. The atmosphere and oceans have warmed, the amounts of snow and ice have diminished, and sea levels have risen. Rising sea-levels threaten habitable land and particularly coastal infrastructure. In vulnerable parts of the world extreme weather events, including

more frequent and intense storms and rainfall, are affecting our land, coastline and seas. Water quality is at risk, and changes are being observed in the distribution and lifecycle events of plant and animal species on land and in the oceans.

2.46 The Government published the *Action Plan to Tackle Climate Breakdown* in July. The Plan sets out how this Government will make Ireland a leader in responding to climate change by driving the delivery of policies to reduce emissions in all key sectors, including electricity, agriculture, transport, industry, buildings, and the public sector. The Plan builds on the actions already contained in the National Mitigation Plan, the National Adaptation Framework, the National Development Plan, and the Offshore Renewable Energy Development Plan. It features a strong focus on implementation, including clear timelines and steps needed to achieve each action.

2.47 The Action Plan also highlights the critical role of marine planning in our national climate action efforts in terms, for example, of realising our renewable energy targets through planning for the delivery of offshore renewable energy (ORE), carbon capture and sequestration. This draft NMPF sets out the forward planning framework within which Ireland's ORE targets will be realised, in conjunction with the new development management process for individual ORE projects.

2.48 Climate action is also embedded as a key theme throughout this plan through the application of a number of OMPP's specifically aimed at ensuring that marine regulators and decision-makers must take account of climate action when considering any proposal for marine use or activity (including, for example, ports development, aquaculture, shipping etc.).

National Marine Planning Framework and Sustainable Development Goals

2.49 The 2030 Agenda for Sustainable Development encourages countries to develop national responses to the Sustainable Development Goals (SDGs) and incorporate them into planning and policy. The Minister for Communications, Climate Action and Environment has lead responsibility for promoting and overseeing national implementation of the 2030 Agenda for Sustainable Development and its 17 SDGs. This is a whole-of-government initiative where all Ministers retain responsibility for implementing the individual SDGs relating to their functions. The NMPF is part of the Government's efforts to squarely incorporate relevant SDG's (set out below) into marine planning and policy.

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- *14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution*
- *14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans*
- *14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information*

Kilmore Quay,
Co. Wexford

Transboundary Cooperation

2.50 Marine planning administrations in England, Northern Ireland, Scotland and Wales have all been advancing the preparation of plans for their jurisdictions in recent years. England has plans in place for six of eleven marine plan areas and is preparing plans for the remaining five. Scotland has had a single national marine plan in place since 2015. Northern Ireland and Wales have prepared and published draft plans for public consultation. Arrangements are in place under the provisions of the MSP Directive 2014/89/EU to ensure consultation between EU Member States so that maritime spatial plans are coherent and coordinated across the marine region concerned.

2.51 At the initiation of the Department of Housing, Planning and Local Government, recognising the need for ongoing engagement across all the marine planning jurisdictions of Ireland and the United Kingdom, a new group has been established. The new grouping brings together senior policy and planning officials from the six marine planning administrations of Ireland, Northern Ireland, England, Scotland, Wales and the Isle of Man, on a 6-monthly basis to discuss latest developments in terms of national plans and planning-related issues of mutual concern or interest. It is intended that this forum will provide a standing mechanism for transboundary engagement and will continue to operate after the UK exits the EU.

International Boundary Issues

2.52 The resolution of jurisdictional issues in Lough Foyle and Carlingford Lough remains outstanding. Following discussions in 2011 between the Minister for Foreign Affairs and Trade and the British Foreign Secretary, the UK and Irish Governments agreed to seek to resolve these issues. Since then a series of meetings have taken place at official level between the Department of Foreign Affairs and Trade and the Foreign and Commonwealth Office. The issues involved are complex and involve a range of different actors, including the Crown Estate, and both Governments are committed to achieving a positive resolution as soon as possible.

Sub-National Planning

2.53 Regional marine planning or sub-national planning, is a feature of marine planning systems in other jurisdictions such as England, Scotland, France and Germany. During the public engagement phases undertaken by the Department of Housing, Planning and Local Government, many stakeholders expressed a view that Ireland should also provide for Regional Marine Plans. The focus – in this cycle of plan-making – has been on the preparation of a single National Marine Plan applying to Ireland's entire maritime area, including internal waters (sea area), territorial seas, Exclusive Economic Zone and Continental Shelf. However, the Government is committed to the preparation of Regional or sub-national plans in future MSP cycles. By definition, these plans would have a more local character and could potentially provide for quite detailed plan-making at bay or harbour area. Moreover, while the preparation of this National Plan has included multiple public engagement opportunities and has sought to be as inclusive as possible of all stakeholder views, localised or regional plan-making has the potential to be more empowering for coastal communities throughout Ireland.

2.54 The Regional plan-making process will be developed through a partnership approach between the National MSP team and groups of local authorities working on a regional basis. At least three such Regional plans will be prepared with local authority groups forming through one of a number of models (e.g. shared service, lead authority), and grouping together on the basis of, for example, shared coastline/geography, similar maritime challenges and opportunities and existing partnership arrangements (for example, local authorities along the Atlantic Economic Corridor).

Future of Petroleum Exploration in Ireland

2.55 In September 2019 the Taoiseach and the Minister for Communications, Climate Action and the Environment requested advice from the Climate Change Advisory Council on what the future of oil and natural gas offshore exploration and recovery should be in the context of the newly published Climate Action Plan. In responding, the Council noted that the Government's Climate Action Plan envisages a major shift away from oil combustion within heat and transport sectors towards renewables in the coming decade. Therefore, the Council advises that the exploration for and recovery of new offshore oil reserves is not compatible with a low carbon transition. The Council have further advised that the continued exploration for and extraction of new offshore natural gas reserves can be consistent with a low carbon transition. On 23rd September the Taoiseach and the Minister stated that this advice is accepted and will be acted upon. The Minister for Communications, Climate Action and Environment will bring a memorandum to Government within a month to set out the next steps in terms of how this advice is implemented.

3.0 Overarching Marine Planning Policies

3.1 The Overarching Marine Planning Policies (OMPPs) presented in this chapter apply to all proposals capable of having impacts in the maritime area. They apply equally to proposals that would be located in the maritime area, and to proposals that would be located outside of the maritime area but capable of having an impact in the maritime area. An example of the latter would be land-based development in a port that would support an offshore activity such as renewable energy.

3.2 As outlined in Table 1 below, OMPPs are grouped according to environmental, social and economic objectives and policies. OMPPs are supplemented by, and should be read in conjunction with, the Sectoral Marine Planning Policies (SMPPs) in the sector-specific chapters.

3.3 For any given proposal a range of OMPPs and SMPPs may need to be considered and applied to ensure full compliance with all relevant NMPF objectives and policies.

3.4 Many of the planning policies specify a requirement that proposals must demonstrate that they will, in order of preference:

a) avoid,

b) minimise, or

c) mitigate

significant adverse impacts on the subject matter of the policy.

3.5 To comply with this requirement proposals must demonstrate how avoidance of significant adverse impacts is considered as the preferred option. If the proposal demonstrates that significant adverse impacts cannot be avoided the proposal must then proceed to consider minimising significant adverse impacts. If the proposal demonstrates that significant adverse impacts cannot be avoided or minimised the proposal must then proceed to consider mitigating significant adverse impacts.

Baltimore Beacon, West Cork

High Level Objective	Policy Grouping	Planning Policies
Environmental – Ocean Health	Biodiversity	Biodiversity 1 Biodiversity 2 Biodiversity 3 Biodiversity 4
	Disturbance	Disturbance 1 Disturbance 2
	Marine Protected Areas (MPAs)	MPA 1 MPA 2 MPA 3 MPA 4
	Non-indigenous Species	Non-indigenous Species
	Water Quality	Water Quality 1 Water Quality 2
	Sea-floor Integrity	Sea-floor Integrity
	Marine Litter	Marine Litter 1 Marine Litter 2
	Underwater Noise	Underwater Noise
	Air Quality	Air Quality 1 Air Quality 2
	Climate Change	Climate Change 1 Climate Change 2 Climate Change 3 Climate Change 4 Climate Change 5 Climate Change 6
Social – Engagement with the Sea	Access	Access 1 Access 2
	Employment	Employment
	Cultural and Heritage Assets	Cultural and Heritage Assets
	Rural Coastal and Island Communities	Rural Coastal and Island Communities
	Seascape and Landscape	Seascape and Landscape
	Social Benefits	Social Benefits 1 Social Benefits 2
	Transboundary	Transboundary
Economic – Thriving Maritime Economy	Co-existence	Co-existence
	Infrastructure	Infrastructure

Table 1: Grouping of Overarching Marine Planning Policies

Environmental – Ocean Health

Existing environmental measures

3.6 Ireland's marine waters (offshore, inshore and coastline) are home to a rich and diverse range of species and habitats. Warm southern waters mix with cold northern waters, resulting in high levels of productivity and a food-rich environment. These seas are home to a diverse range of animals and plants, including plankton, cold water corals, fish, seabirds, dolphins and whales.

3.7 Our marine territory contains a rich variety of physical habitats and associated species, ranging from shallow inshore reefs and sandbanks to canyons, seamounts, troughs and coldwater coral reefs in deeper waters. As the marine environment is transboundary in nature, with species and currents freely crossing jurisdictions, governance arrangements reflect this with European and Regional Seas Conventions providing a common framework.

3.8 This Environment section of the NMPF intends to help realise the opportunities Ireland has to continually improve its marine and coastal environment. However, it should be recognised that in relation to policy related to management of marine Environment matters, that the NMPF is but one part.

3.9 Mechanisms already in place relating to management of marine environment matters include the following:

- Marine Strategy Framework Directive (MSFD) sets the benchmarks and criteria by which sustainability of maritime activities may be determined (more detail on the MSFD is provided in the following parts of this Environment section)
- European Communities (Environmental Liability)(Amendment) Regulations 2015: These regulations (S.I. No. 293 of 2015) extend the scope of existing environmental liability regulations to cover liability for environmental damage within the area covered by MSFD
- The Convention for the Protection of the Marine Environment of the NorthEast Atlantic (OSPAR) unified and updated the 1972 Oslo and 1974 Paris Conventions. Main work areas covered by the Convention are: Hazardous Substances and Eutrophication; Offshore Industry; Radioactive Substances; Biodiversity and Ecosystems; Environmental Impacts of Human Activity (including marine litter, noise and energy); Cross Cutting Issues
- The Habitats Directive that places strict legal obligations on EU Member States to ensure the protection, conservation and, if necessary, restoration of the habitats and species listed in the nature directives and particularly of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), transpose the Birds and Habitats Directives in Irish law
- Strategic Environmental Assessment (SEA) Directive
- Common Fisheries Policy (CFP)
- European Strategy for Plastics in a Circular Economy
- The Water Framework Directive requiring all Member States to protect and improve water quality

- National Biodiversity Action Plan 2017-2021
- National Adaptation Framework
- Climate Action Plan

3.10 DHPLG has the lead role in Ireland for implementation of MSFD and the OSPAR Convention. Due to the cross-cutting nature of marine issues, a number of other Departments and agencies are intrinsically involved in the process, including DAFM, DTTAS, DCHG, the DCCAE, the Marine Institute and the Environmental Protection Agency (EPA) as well as a wide variety of other agencies and stakeholders.

3.11 National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht is responsible for the conservation and protection of natural habitats and species and the protection of biological diversity in Ireland; it is also responsible for providing nature conservation observations to Licensing Authorities in that regard.

3.12 Acknowledging the far-reaching measures already in place, the NMPF sets out a range of policies that seek to complement rather than duplicate. Importantly, compliance or alignment with any of the policies in this section should be seen as additional to the important environmental regulations already in place for example the need to undertake an Appropriate Assessment (AA) for any plan or project that could have a significant effect on SACs or SPAs under Article 6.3 the Habitats Directive. Those seeking to propose activity in Ireland's maritime area should ensure they are compliant with prevailing regulations, consulting the public body responsible for the activity being proposed or the National Parks and Wildlife Service (NPWS) as necessary.

Objective

- Comprehensive, integrated management of human activities-based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity.

3.13 This objective is derived from the description of the ecosystem approach set out by OSPAR. It will be achieved through specific environmental policies that are directly aligned to Ireland seeking to achieve Good Environmental Status (GES) in its waters, directed by the descriptors set out in the Marine Strategy Framework Directive (MSFD).

3.14 In addition to policies related to the MSFD, policies on Air Quality and Climate Change are also included in this section.

Planning Policies

MSFD-led policy approach

3.15 Planning policies related to environmental matters are wide ranging and supported by extensive work at the international, national and local levels. Each marine environmental concern is at a different point in terms of supporting knowledge, existing policy and

management activity. Reflecting this, environment policies in the NMPF have been split into ten categories largely aligned to the MSFD GES descriptors as well as addressing air quality and climate change.

3.16 The aim of the Directive is to protect Europe's marine waters by applying an ecosystem-based approach to the management of human activities, while enabling the sustainable use of the marine environment for present and future generations. Good environmental status in the marine environment means that the seas are clean, healthy and productive and that human use of the marine environment is kept at a sustainable level.

3.17 The Marine Strategy Framework Directive (MSFD) is relevant to all users of the marine environment as well as those engaged in on-land activities that may have an impact on the marine environment. It was adopted in 2008 (Directive 2008/56/EC). It establishes a framework within which EU Member States are obliged to develop marine strategies, the aim of which is to achieve or maintain good environmental status (GES) in the marine environment by the year 2020. It is a multi-phase, multi-cycle process with the initial cycle concluding in 2020, after which Cycle 2 will commence. There is extensive work ongoing in Ireland to respond to the requirements of the MSFD.

3.18 MSFD requires member states to undertake an Initial Assessment (IA) of their marine waters to determine whether or not they are in GES. This establishes a set of environmental targets and indicators for our marine area. Ireland's Initial Assessment was submitted to the European Commission in April 2013. We are required to revisit our initial assessment for the next implementation phase of MSFD.

3.19 In April 2015 Ireland submitted its formal MSFD Monitoring Programme (MP) to the European Commission, formally establishing targets and indicators relating to the achievement of GES.

3.20 Ireland has developed a Programme of Measures (POM) to address factors that impact upon the achievement of GES. The development of the draft POMs required an interdepartmental and multi-agency approach which was managed by DHPLG. This was submitted to the European Commission in July 2016.

3.21 Provision was made for public and stakeholder participation in the development of each of the Initial Assessment, Monitoring Programme and Programme of Measures. Submissions received were considered and informed the finalised versions submitted to the European Commission. Mechanisms are being established to ensure on-going consultation and feedback loop for key stakeholders and eNGOs.

3.22 In this context, while the NMPF is playing a role in Ireland's response to requirements of the MSFD, it should be viewed as a part of this wider picture.

Good environmental status

3.23 Good environmental status (GES) is defined as 'the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic condition, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for users and

activities by current and future generations'. Good Environmental Status is determined by assessing our marine environment in accordance with a non-exhaustive set of criteria set out in Annex I of the Directive.

3.24 Not all MSFD GES descriptors are suitable for delivery through a State-level, plan-led approach to management for example, those descriptors related to fisheries management depend on a European-level regulatory framework. This does not mean that Ireland is not prioritising action towards GES in relation to these descriptors, rather they are being addressed through mechanisms parallel to marine planning in Ireland. As set out in the POM, the following descriptors are dealt with via policy which operates alongside the NMPF:

Descriptor 3
Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

- The main management measures to address targets for Descriptor 3 are delivered through the revised Common Fisheries Policy (CFP) which came into force in January 2014. Implementation of the CFP is expected to lead to a reduction in fish mortality rates, with the reductions for the major fish stocks and fisheries. In addition, a range of measures specific to exploited shellfish have been developed to provide protection for shellfish species in accordance with EU and national legislation. These measures include initiatives such as the introduction of landing size limits for lobsters, crabs and crawfish, and spawning closures for razor clam fisheries.

Descriptor 4
All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.

- The main management measures to address Descriptor 4 targets for marine fish communities are delivered through the revised Common Fisheries Policy (CFP) which came into force in January 2014. In addition, quality elements included in WFD assessments are subject to management measures to protect ecosystems in coastal and transitional waters. A number of policies in this NMPF document encourage consideration of cumulative effects and indeed the plan overall enables consideration of cumulative effects across activities by bringing information and policy together.

Descriptor 7
Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.

- Measures listed under Descriptor 7 are aimed at ensuring developments comply with existing regulatory regimes, such as the current Foreshore Consenting system, and that there is full consideration of potential impacts to the hydrographical conditions and impacts on the marine environment. A role for the NMPF is also identified in that adoption and implement of marine plans, under the Marine Spatial Planning Directive (2014/89/EU), will provide a plan-led structure to determine when and where human activities take place at sea.

Descriptor 9
Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.

- Measures contributing to Descriptor 9 focus on enforcing EU and national regulations that set maximum levels for certain contaminants in foodstuffs, together with the monitoring of concentration of contaminants in seafood for compliance with these regulations and reducing the levels of contaminants entering the marine environment.

Biological Diversity; Disturbance; Marine Protected Areas

3.25 The following policies seek to contribute to MSFD GES descriptor (1) "Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions."

Biodiversity

Planning Policies

- Proposals incorporating features that enhance or facilitate species adaptation or migration, or natural native habitat connectivity will be supported.
- Proposals that may have significant adverse impacts on species adaptation or migration, or on natural native habitat connectivity must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts on species adaptation or migration, or on natural native habitat connectivity.

- Proposals that protect, maintain, restore and enhance coastal habitats where important in their own right and/or for ecosystem functioning and provision of ecosystem services will be supported. Proposals must take account of the space required for coastal habitats where important in their own right and/or for ecosystem functioning and provision of ecosystem services and demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  for net loss of coastal habitat.

- Proposals that protect, maintain, restore and enhance the distribution and net extent of priority habitats and distribution of priority species will be supported. Proposals must avoid reducing the distribution and net extent of priority habitats and other habitats priority species rely on.
- Proposals must demonstrate that they will in order of preference:
  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts on marine or coastal natural capital assets, or

  d) if it is not possible to mitigate significant adverse impacts on marine or coastal natural capital assets proposals should state the case for proceeding.

  Proposals should seek to enhance marine or coastal natural capital assets where possible.

Key References

- Marine Planning Policy Statement
- National Parks and Wildlife Service
  Ecosystems Services, Mapping and Assessment
  Habitats Directive habitats (Annex I) and species (Annexes II)
  Red List Species
  Wildlife Acts
- Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)
  List of Threatened and/or Declining Species & Habitats
- National Biodiversity Action Plan 2017-2021 (Chapter 1 and Actions 1.1.9-1.1.11 concerning Natural Capital)

Background and Context

3.26 The seas around Ireland are used by roughly 60 species of resident and visiting birds of which 24 are considered “seabirds” (e.g. terns, puffins, guillemots, sea gulls and gannets) while the remainder include waders and sea ducks. Over 500,000 pairs of seabirds breed annually around the island of Ireland.

3.27 Our marine waters support over 400 fish and cephalopod (e.g. octopuses, squid, and cuttlefish) species, and contain some very important spawning and nursery areas for commercial fish species. The latter are important components of marine ecosystems in their own right as well as being a very valuable fishing resource.

3.28 Ireland’s marine territory also supports 18 species of resident or regularly-visiting whales (e.g. fin, humpback and minke whales) and dolphins (e.g. common, bottlenose, striped and white-sided), and sustains large numbers of basking shark and small numbers of leatherback turtles.

3.29 Evidence from monitoring of natural habitats and species in Ireland's marine environment indicates that many habitats are not in good condition. Improving and protecting these is a challenge to all users of the sea.

3.30 Like all Member States, Ireland reports every six years to the EU on the conservation status of the habitats and species listed in the Nature Directives. In the 2019 report marine habitats to be assessed as being in 'favourable' conservation status were sandbanks, submarine structures made by leaking gases, Salicornia mud, and sea caves. Estuaries, tidal mudflats, drift lines, vegetated shingle and sea cliffs, Atlantic and Mediterranean salt meadows, embryonic shifting and marram dunes, and reefs were assessed as being in 'inadequate' status. Lagoons, halophilous scrub, fixed dunes, and large shallow inlets and bays were in 'bad' status. Ireland's latest reports to the European Commission on the status and trends of bird species protected under the Birds Directive and the conservation status of habitats and species protected under the Habitats Directive were published in 2019.

3.31 In general, marine mammal species were reported as being in favourable status, although for some cetaceans their status was reported as unknown.

3.32 Ireland's National Biodiversity Action Plan 2017-2021 has as one of its seven objectives to "Conserve and restore biodiversity and ecosystem services in the marine environment". Much of this is foreseen to be achieved through the implementation of existing Directives and legislation. The Plan notes that pressures from human activities on Ireland's coastal and marine biodiversity and ecosystem services arise from a growing range of sources including nutrient and chemical discharge from human activities (for example from industry, agriculture, municipal wastewater) and through direct physical disturbance e.g. shipping, recreation and aquaculture; and habitat degradation from pollution, litter, artificial noise and light.

3.33 Some types of fishing can negatively affect both pelagic and seabed communities, particularly those that support species with low growth rates, soft substrates or cold water coral reefs, and some areas have been heavily impacted by fishing activity. There are also concerns about the level of by-catch of birds, sharks and marine mammals in certain fisheries.

3.34 Fish populations are generally improving since reform of the CFP and more sustainable management of fish populations with the setting of Maximum Sustainable Yield (MSY) for commercial species.

3.35 Climate change and ocean acidification present considerable threats to the marine environment and may modify effects of other pressures and facilitate further establishment and spread of invasive species.

3.36 In 2017 a first Red List of Cartilaginous Fish (sharks, skates, rays and chimaeras), showing risk of extinction, was published for Irish waters. Of the 58 species assessed, 6 (10.3%) were reported to be Critically Endangered: Portuguese dogfish; common (blue) skate; flapper skate; porbeagle shark; white skate and angel shark. A further 5 species (8.6%) were assessed as Endangered: leafscale gulper shark; basking shark; common stingray; undulate skate and spurdog.

Key Issues for Marine Planning

3.37 Habitat is defined as the physical surroundings in which organisms live and interact. Coastal habitats occur where land meets sea. An ecosystem is the dynamic complex of plant and animal communities and the surrounding non-living environment that supports them.

3.38 Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly (as food and fibre) or indirectly by providing clean air and water.

3.39 Biodiversity plays a key role in the functioning of ecosystems and their ability to provide ecosystem services. The value of biodiversity and benefits from ecosystem services reach far beyond that which can be measured in financial terms. Many of the interdependencies between biodiversity, ecosystems structures, functions and processes, and benefits to humans are not yet fully understood or appreciated.

3.40 Priority habitats mean those defined under Annex I of the Habitats Directive and threatened and/or declining habitats as defined by OSPAR.

3.41 Within this section, priority species should be taken to include:

- Habitats Directive Annex II species that are known to occur (or to have occurred in recent times) as native populations within Irish waters;
- Threatened and/or declining species as defined by OSPAR;
- Those protected under the Wildlife Acts;
- Those with Red List status;
- Those with Birds of Conservation Concern Ireland red status.

3.42 Because of the variability in our appreciation of the value of ecosystems and habitats, when assessing potential impact upon space needed to protect, maintain, restore and enhance coastal habitats it is important to consider coastal habitats both in the context of the ecosystem in which they can be found along with the function(s)/service(s) of that ecosystem as well the intrinsic value of a given habitat beyond any value realised by humans.

3.43 Assessment of how a proposal affects coastal habitats in their own right and/or ecosystem functioning and provision of ecosystem services should be carried out on a case-by case basis. The Policy should be applied proportionally on proposals that will interact with coastal habitats in their own right and/or ecosystem functioning and provision of ecosystem services. Determination may be informed by a relevant assessment. An assessment to determine how a proposal can be beneficial to coastal habitats should:

- ensure understanding of habitat types within and adjacent to the area of proposal,
- ensure understanding of importance of these habitats to ecosystem functioning and ecosystem services, and
- consider the space required for effective function of coastal habitats and/or if the proposal could assist coastal habitat enhancement.

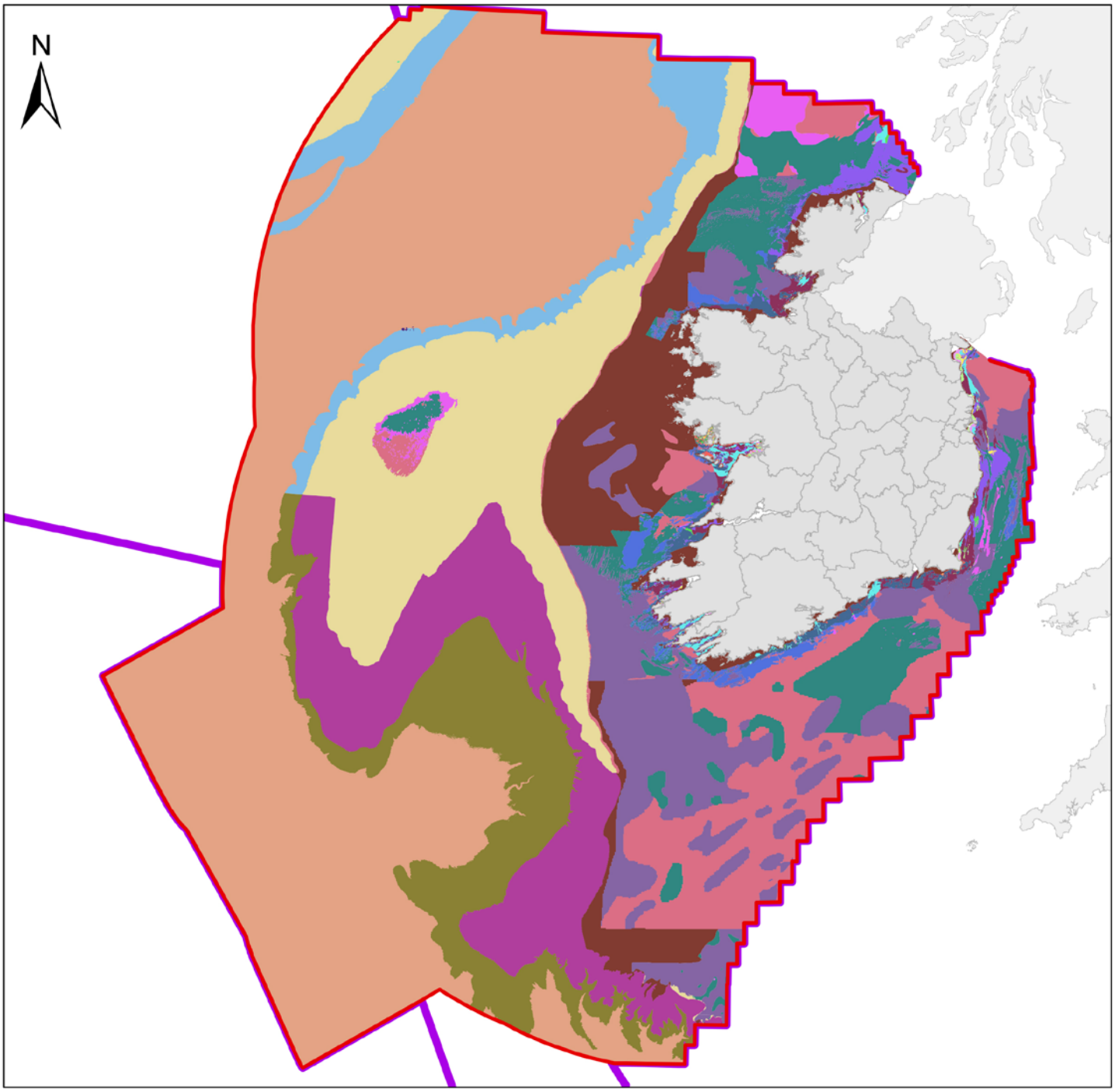
3.44 It is important to value our natural assets and ensure that cost benefit analyses are considered to promote Ecosystem-Based Adaptation options. This will increase the visibility of the importance of ecosystem services in cross-sectoral policy considerations. While the

Ardnakinna Lighthouse, Bere Island, Co. Cork

timing of this draft NMPF comes at a time of early thinking in relation to Natural Capital in Ireland, it is important that the concept is given a sound footing in regulation to enable the understanding it provides to play its part in an ecosystem approach to marine management.

3.45 References to natural capital in this section relate to the Irish Government National Biodiversity Action Plan 2017-2021, in which the concept of Natural Capital is embedded (see Chapter 1 and Actions 1.1.9-1.1.11 concerning Natural Capital). The Plan includes a commitment to the development of a natural capital asset register and national natural capital accounts by 2020, as well as the integration of these accounts into policy and decision-making. This work is being led by the Department of Agriculture, Food and the Marine (DAFM) working with the Central Statistics Office Ireland (CSO) and Irish Forum on Natural Capital (IFNC). The Plan also commits to undertake natural capital accounting through sectoral and small scale pilot studies.

3.46 DAFM's Biodiversity Sector Climate Change Action Plan also proposes the inclusion of action on natural capital accounting i.e. to undertake natural capital accounting in all sectors to ensure that natural capital is being valued and cost benefit analyses are undertaken to promote Ecosystem-Based Adaptation options where appropriate.

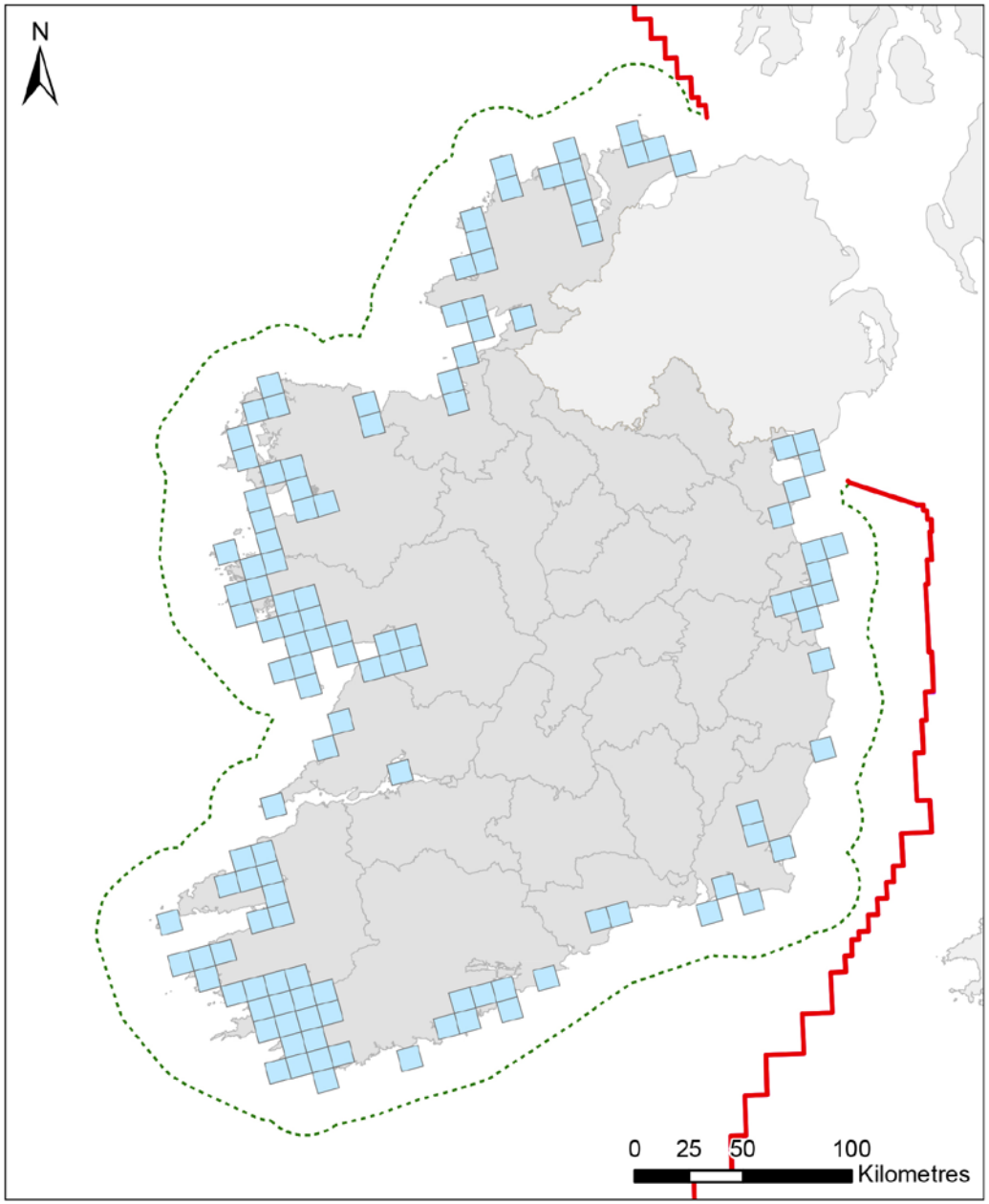


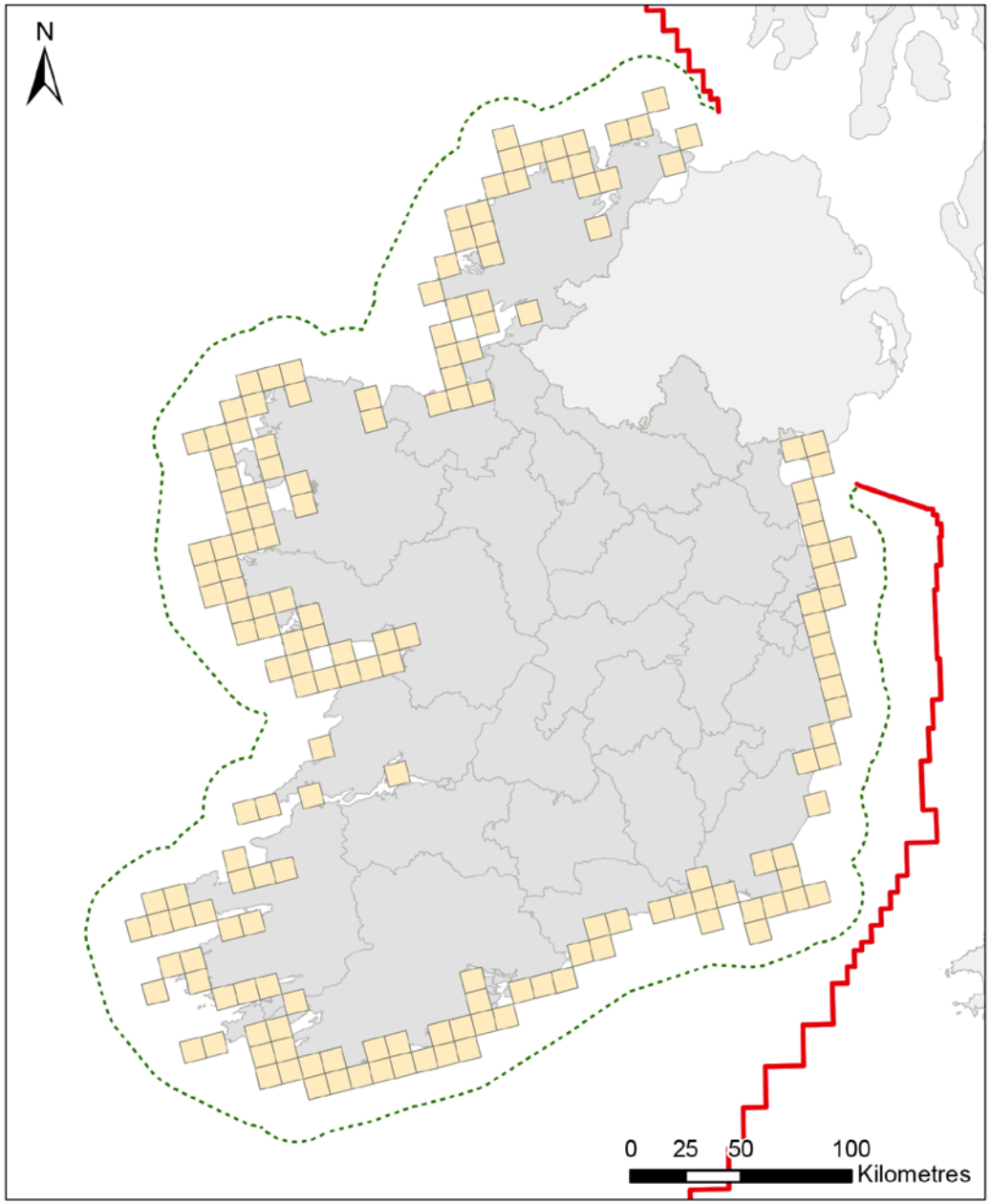
Benthic Habitats

0 50 100 200 Kilometres

- Abyssal
- Circalittoral coarse sediment
- Circalittoral mixed sediment
- Circalittoral mud
- Circalittoral rock and biogenic reef
- Circalittoral sand
- Infralittoral coarse sediment
- Infralittoral mixed sediment
- Infralittoral mud
- Infralittoral rock and biogenic reef
- Infralittoral sand
- Lower bathyal rock and biogenic reef
- Lower bathyal sediment
- Lower bathyal sediment or Lower bathyal rock and biogenic reef
- Na
- Offshore circalittoral coarse sediment
- Offshore circalittoral mixed sediment
- Offshore circalittoral mud
- Offshore circalittoral rock and biogenic reef
- Offshore circalittoral sand
- Upper bathyal rock and biogenic reef
- Upper bathyal sediment
- Upper bathyal sediment or Upper bathyal rock and biogenic reef

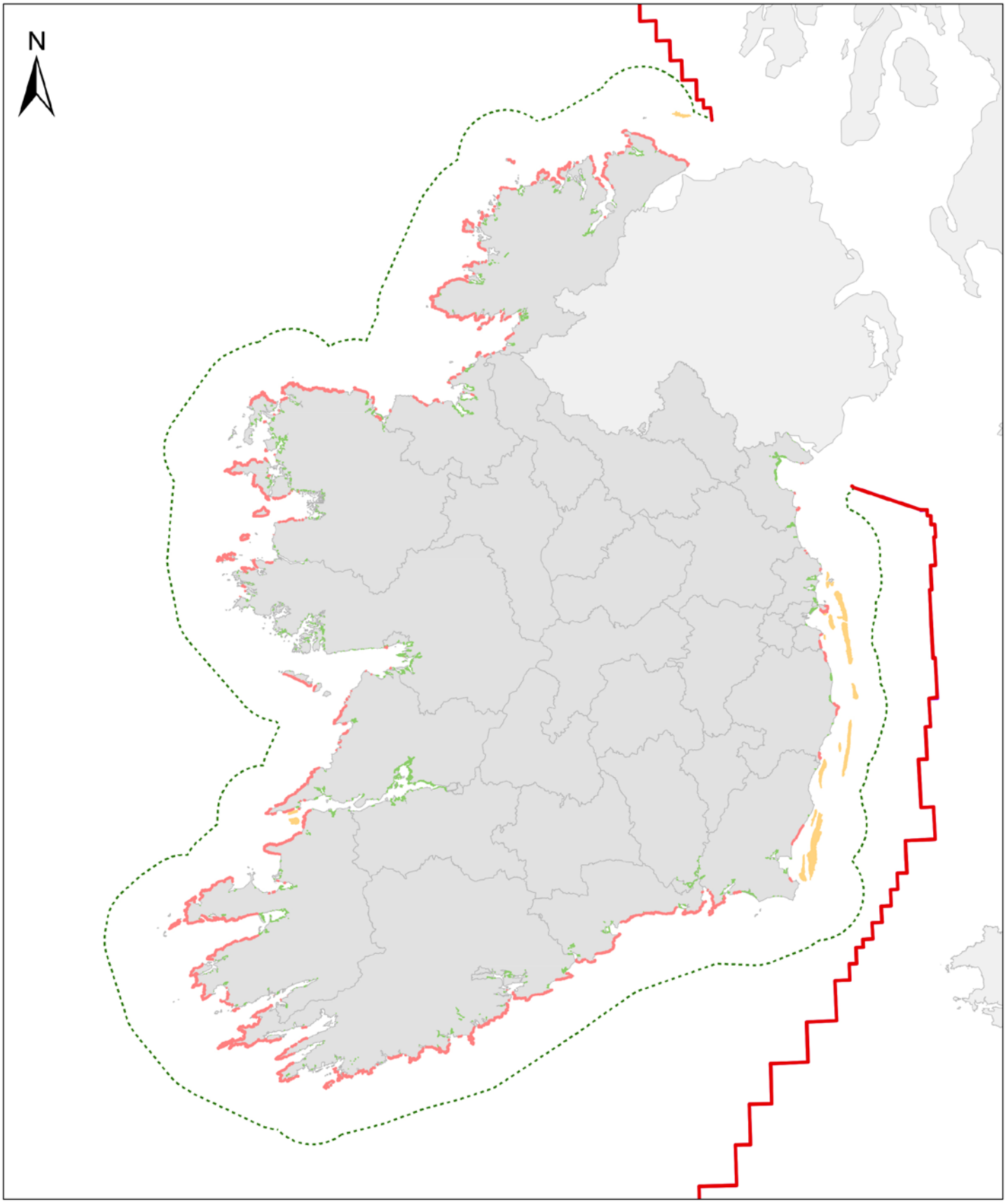
Credits: Information contained here has been derived from data that is made available under the European Marine Observation Data Network (EMODnet) Seabed Habitats project. INFOMAR, Government of Ireland, 2019.





Distribution of Harbour Seals and Grey Seals in Irish Waters

Harbour Seal
Grey Seal



Distribution of Sea Cliffs, Saltmarsh and Subtidal Sandbanks

0 20 40 80 Kilometres

Sea Cliff

Saltmarsh

Subtidal Sandbank

In general, areas of sea cliff and salt marsh are found in different areas but there may be overlap in a small number of cases.

Disturbance

Planning Policies

- Proposals must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant disturbance to, or displacement of, highly mobile species.

- Proposals, including those that increase access to the marine plan area, must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  adverse impacts on priority habitats.

Key References

- Marine Planning Policy Statement
- Wildlife Act 1976 as amended (Section 23 (5)(d)) and Section 23 (7)(c))
- Threat Response and Conservation Plans
- Irish Wildlife Manuals
- Habitats Directive (including Annex I that sets out habitats)
- Guidance on Articles 12 & 16 of the Habitats Directive
- Birds Directive
- Threatened and/or declining habitats as defined by OSPAR

Background and Context

3.47 Highly mobile species are those that range over large distances and include fish, birds, marine mammals and turtles. Individuals are often part of more widespread international populations and may only be present in Ireland on a seasonal basis or for part of their life cycle.

3.48 Disturbance is when species spend extra time or energy to avoid a human activity or output. The expenditure of extra energy affects the ability of a species to survive, breed, rear or nurture young or it affects the local distribution or abundance of the species. Displacement is when the number of highly mobile species in an area is suppressed due to a human activity. Highly mobile species are displaced such that they cannot access habitats essential to their success, such as foraging areas or breeding grounds.

3.49 Sources of displacement and disturbance include, but are not limited to, the physical presence of vessels or offshore structures, lighting on offshore structures and underwater noise, for example during construction activities.

3.50 These policies seek to address disturbance across the maritime area including outside MPAs. Such an approach is supported by Article 10 of the Habitats Directive that encourages Member States to manage features of the landscape that are of major importance for the migration, dispersal and genetic exchange of wild species of fauna and flora. Such measures may involve land that is not designated as SACs or SPAs.

3.51 The importance of areas for birds outside SACs and SPAs is also reflected in Article 3 (b) and 4 of the Birds Directive, which require Member States to strive to upkeep and manage habitats inside and outside the protected zones in accordance with the ecological needs and to avoid pollution or deterioration of habitats.

Key Issues for Marine Planning

3.52 Periods of breeding, rearing, hibernation and migration are considered as especially sensitive periods in relation to disturbance. These periods can only be defined by using a species-by-species approach, due to ecological, biological and behavioural differences between species. The seasonal and temporal variations which exist are species and project dependent and individual projects will need to consider these temporal aspects of highly mobile species. Decision-makers will need to apply the best available evidence and the precautionary principle on a case-by-case basis.

3.53 Accounting for disturbance includes compliance with relevant regulations including those related to management of the breeding places of any wild animal, the breeding and resting sites of bats and otters, and photography and filming of wild animals or birds.

3.54 Priority habitats mean those defined under Annex I of the Habitats Directive and threatened and/or declining habitats as defined by OSPAR.

3.55 Application of these policies should account for any Threat Response and/or Conservation Plans in place.

Marine Protected Areas

Planning Policies

- Proposals that support the objectives of marine protected areas and the ecological coherence of the marine protected area network will be supported.
  Proposals that may have adverse impacts on the objectives of marine protected areas must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  adverse impacts.

- Proposals that enhance a marine protected area's ability to adapt to climate change, enhancing the resilience of the marine protected area network will be supported. Proposals that may have adverse impacts on an individual marine protected area's ability to adapt to the effects of climate change and so reduce the resilience of the marine protected area network, must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  adverse impacts.

- Where statutory advice states that a marine protected area site condition is deteriorating or that features are moving or changing due to climate change, a suitable boundary change to ensure continued protection of the site and coherence of the overall network should be considered.

- Until the ecological coherence of the marine protected area network is confirmed, proposals should demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  adverse impacts on features that may be required to complete the network, or

  d) if it is not possible to mitigate adverse impacts, proposals should state the case for proceeding.

Key References

- Marine Planning Policy Statement
- Marine Strategy Framework Directive
- Habitats Directive
- Birds Directive
- Protected marine sites (SACs, SPAs, NHAs)

Background and Context

3.56 Article 13.4 of the MSFD requires that a coherent and representative network of spatial protection measures, including marine protected areas (MPAs), be put in place where appropriate in order to achieve or maintain the good environmental status of our national and shared maritime area.

3.57 MPAs may take a wide variety of forms including the incorporation of existing SPA and SACs under the Birds or Habitats Directives where measures are put in place to restrict certain human activities to protect vulnerable species and habitats. MPAs may also be established under Article 11 of the CFP which may designate areas where certain types of fishing or all fishing is prohibited or limited to protect commercial fish stocks.

3.58 MPAs can also consist of new types of protected areas or may cover species or ecosystems not identified under the Birds or Habitats Directive but to which MSFD applies. In such MPAs some or all human activities may be restricted or limited some or all of the time.

3.59 As well as providing measures to protect the environment, MPAs may also incorporate measures to protect localised social, cultural or economic activities that are deemed important (such as traditional fishing, aquaculture or seaweed harvesting methods).

3.60 Whilst MPAs can be very diverse in form and purpose a feature all have in common is that they are spatial protection measures.

3.61 Legislation is being prepared to provide the Minister for Housing, Planning and Local Government with the powers to designate different types of MPA in identified locations and to put measures in place to protect MPAs, including offences and penalties.

Key Issues for Marine Planning

3.62 Ireland has a network of protected marine sites, including SACs and SPAs designated under the European Nature Directives (i.e. the Habitats and Birds Directives. See https://www.npws.ie/marine for further details). Lough Hyne, Co. Cork is the one Marine Nature Reserve designated under the Wildlife Acts. The directives require that habitats and species listed in them are maintained, or if necessary restored, to favourable conservation status.

3.63 Under the Habitats Directive, EU Member States must designate SACs for habitats listed in Annex I and species listed in Annex II of the directive. Seven marine habitats types require SACs to be designated: sandbanks, sea caves, estuaries, tidal mudflats, large shallow inlets and bays, reefs (both rock and biogenic reefs) and submarine structures made by leaking gases. Coastal habitats that are transitional from land to sea include saltmarshes and lagoons.

3.64 Four entirely marine species require SAC designation: harbour porpoise, bottle-nosed dolphin, grey seal and harbour (common) seal. Other partly marine species such as otter may also be listed for marine sites.

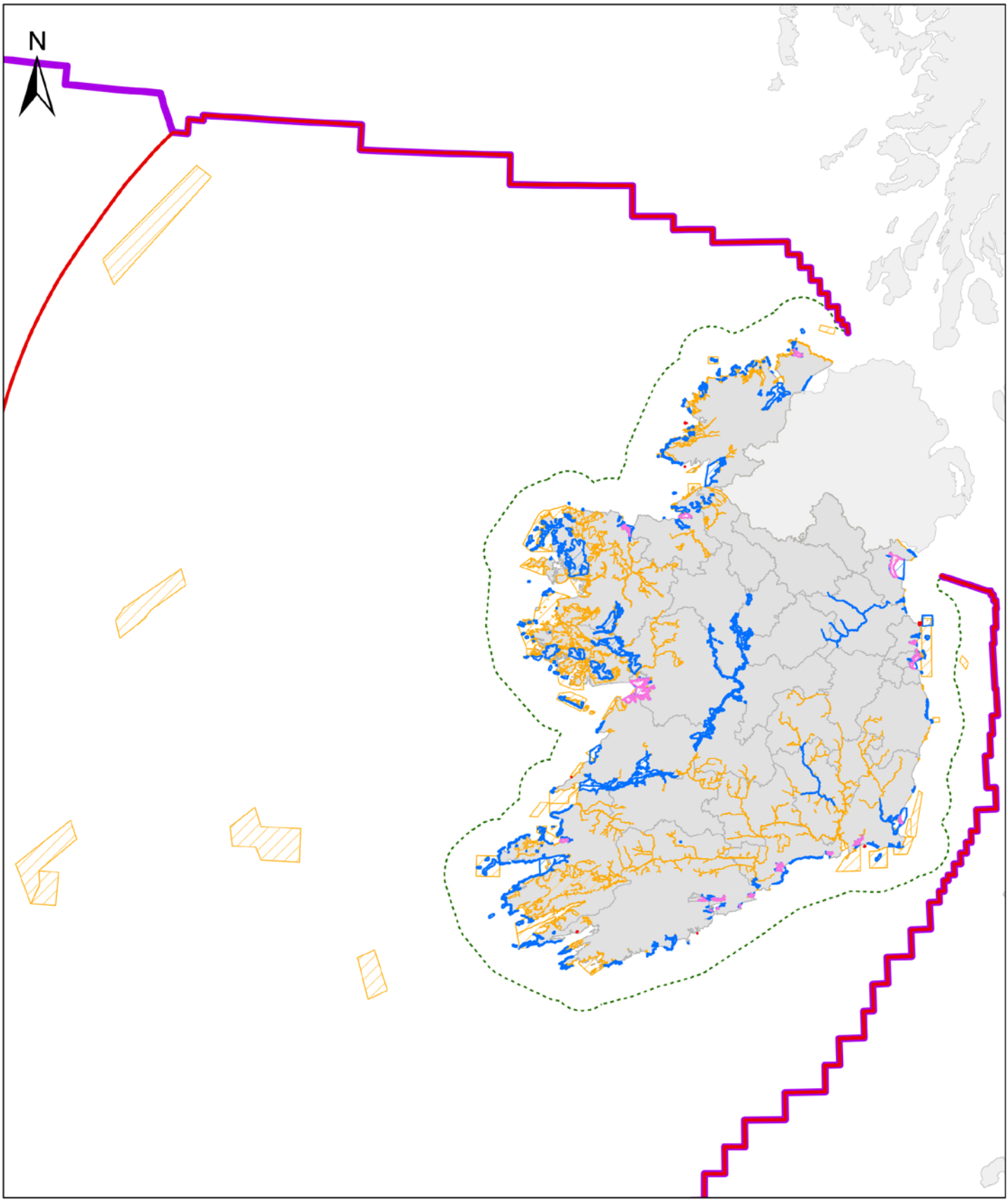
3.65 One or more of the above listed habitats or species are included as qualifying interests in 159 SACs. These are mostly inshore but a small number of reef sites lie far offshore. The total area of the marine SAC network is 10,420km^2.

3.66 In addition to the marine mammals listed on Annex II of the Habitats Directive, there are further 22 cetacean species and the leatherback turtle listed on Annex IV. These species require strict protection and, like species on Annex II, require monitoring.

3.67 Ireland has 89 Special Protection Areas (SPAs) with a marine element designated under the Birds Directive. The maritime area involved is 1,593km^2. Many of these encompass cliffs and islands and adjacent waters that support breeding seabirds. Others comprise bays and estuaries that host important populations of wintering water birds.

3.68 Article 6.3 of the Habitats Directive obliges member states to undertake an Appropriate Assessment (AA) for any plan or project that could have a significant effect on SACs and SPAs. The outcomes of such AAs fundamentally affect the decisions that may lawfully be made by competent national authorities in relation to the approval of plans or projects. In the marine environment this includes decision-making in relation to large infrastructure projects such as offshore wind turbines and port and harbour developments, as well as licensing activities such as aquaculture and wastewater discharge.

3.69 DCHG is a statutory consultee in relation to aquaculture licence applications and other development applications that might affect designated sites.



Designated Sites

0 35 70 140 Kilometres

- Natural Heritage Area
- RAMSAR wetland site
- Special Protected Area
- Special Area of Conservation

Credits: National Parks and Wildlife, 2019.

Non-indigenous Species

Planning Policies

The following policy seeks to contribute to MSFD GES descriptor (2) "Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems."

- Proposals that reduce the risk of introduction and/or spread of invasive non-indigenous species should be supported. Proposals must demonstrate a risk management approach to prevent the introduction of and/or spread of invasive non-indigenous species, particularly when:
  a) moving equipment, boats or livestock (for example fish or shellfish) from one water body to another,
  b) introducing structures suitable for settlement of non-indigenous invasive species, or the spread of non-indigenous invasive species known to exist in the area of the proposal.

Key References

- Marine Planning Policy Statement
- European Communities (Birds and Natural Habitats) Regulations 2011 (particularly: Part 4; Part 6; THIRD SCHEDULE part 2)
- National Parks and Wildlife Service (NPWS)
- National Biodiversity Data Centre Catalogue of Ireland's Non-native Species
- Department of Agriculture, Food and the Marine (DAFM)
- National Biodiversity Action Plan 2017-2021
- Marine Strategy Framework Directive (MSFD)
- Convention on Biological Diversity Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that threaten Ecosystems, Habitats or Species

Background and Context

3.70 In the context of the MSFD, non-indigenous (also referred to as non-native) species are described as species introduced outside their natural past or present range, which might survive and subsequently reproduce. These species are introduced in situations where exchange of people or goods takes place between countries and continents, by shipping for example.

3.71 Implementation and adoption of international commitments, such as the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), will help control harmful invasive alien species and reduce the risk of spread of new species. Another example of international regulation the 2007 EU regulation on the use of non-indigenous and locally absent species in aquaculture, aiming to create a framework governing aquacultural practices in order to ensure adequate protection of the aquatic environment from the risks associated with the use of non-native species.

3.72 The impact of invasive non-native species in Ireland is described in the National Biodiversity Action Plan 2017-2021. It sets out that the occurrence and spread of invasive and non-native species in Ireland is increasing for all environments. Invasive species, such

as the Zebra Mussel and Pacific Oyster, may displace native species and considerably alter biodiversity, and subsequently, ecosystem processes and services. To date, the majority of invasive species in Ireland have been plants but the future trend may be towards invertebrates and vertebrate species comprising a greater percentage of new arrivals. The direct annual cost of invasive species to Ireland's economy was estimated in 2013 to be over €200 million, but with an increase in introductions and impact there may also be an increase in economic cost. Invasive species are identified amongst the main threats and pressures reported on EU protected habitats and species. The urgent need for action to reduce pressures including those brought about by invasive species is made clear.

3.73 The National Biodiversity Action Plan 2017-2021 goes on to identify a target: "Harmful invasive alien species are controlled and there is reduced risk of introduction and/or spread of new species", with a range of supporting actions.

Key Issues for Marine Planning

3.74 Public bodies should support proposals that reduce the risk of spread and/or introduction of non-native species where they comply with other policies in this plan and other relevant legislation.

3.75 Proposals that reduce the risk of spread and/or introduction of non-native species should include information demonstrating how this will be achieved. Examples of how to avoid or minimise the risk of introduction, transportation and/or spread of non-native invasive species include, but are not limited to:

- biosecurity action planning, implementation and monitoring during the operational stages of a proposal,
- providing freshwater wash-down facilities in new marinas, clubs and training centres with appropriate training facilities,
- maintaining boat hulls clear of fouling organisms, particularly when moving to and from different areas,
- cleaning boats and equipment (for example. aquaculture cages, fouled buoys and lines) before transporting them from one water body to another,
- cleaning and drying recreational gear (for example dive and fishing gear) after use, and
- minimising the amount of vessel traffic to offshore platforms.

3.76 Public bodies must assess new proposals for measures to avoid or minimise significant adverse impacts on the maritime area from the introduction and transport of non-native species, or the spread of non-native invasive species known to exist in the area. Best available evidence and application of the precautionary principle should be used as a way of approaching decision-making in the absence of full scientific certainty in line with the Convention on Biological Diversity Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that threaten Ecosystems, Habitats or Species.

3.77 This policy should be applied in such a way as to account for requirements of the European Communities (Birds and Natural Habitats) Regulations 2011 (particularly: Part 4; Part 6; THIRD SCHEDULE part 2). In 2014 Inland Fisheries Ireland (IFI) and National Biodiversity

Data Centre were tasked by the National Parks and Wildlife Service (NPWS) to undertake risk assessments on certain non-native species listed in the Third Schedule to the European Communities (Birds and Natural Habitats) Regulations 2011. This resulted in Non-native Species Risk Assessments being published for Ireland.

3.78 The list of species categorised as an invasive non-indigenous flora and fauna will change over time and consideration of this policy should include efforts to identify species beyond EU concern. Where relevant, the National Parks and Wildlife Service should be consulted.

3.79 On 11 June 2007, the European Commission introduced Council Regulation (EC) No 708/2007 concerning the use of alien and locally absent species in aquaculture. Aquaculture operators intending to undertake the introduction of an alien species or the translocation of a locally absent species must apply for a permit from DAFM.

Water Quality

Planning Policies

The following policies seek to contribute to MSFD GES descriptors "(5) Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters." and "(8) Concentrations of contaminants are at levels not giving rise to pollution effects" (NOTE: These Descriptors are paired given related policies are relevant to both).

- Proposals that may have significant adverse impacts upon water quality, including upon habitats and species beneficial to water quality, must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts.

- Proposals delivering improvements to water quality, or enhancing habitats and species which can be of benefit to water quality, should be supported.

Key References

- Marine Planning Policy Statement
- Marine Strategy Framework Directive (MSFD)
- Bathing Water Quality
- Shellfish Waters
- Water Framework Directive
- River Basin Management Plan 2018-2021

- Local Authority Waters and Communities Office
- EPA Catchments
- Nitrates Directive
- Urban Waste Water Treatment Directive
- Floods Directive

Background and Context

3.80 These policies on water quality seek to contribute to improving water quality by highlighting the need to consider water quality to those seeking to undertake activity in the maritime area as well as recognising that habitats – or green infrastructure – can play a part in managing water quality issues. The policies target two factors that may negatively impact the maritime area namely undesirable enrichment of waters by nutrients that may lead to eutrophication and related effect (GES descriptor 5) and contaminants (GES descriptor 8).

3.81 Excess nutrients, commonly nitrogen and phosphorus, introduced into the sea by human activities (a process known as eutrophication) can disturb the natural balance between nutrient availability and marine plant and animal growth. The predominant nitrogen load comes from diffuse sources on land, especially agricultural areas. Other sources of nitrogen include nitrogen gases (e.g. ammonium from manuring, nitrogen oxides from ships, which are transferred via the atmosphere to oceans through precipitation), aquaculture, waste water treatment plants, industrial water and adjacent oceans.

3.82 Increased availability of nutrients can cause the proliferation of rapidly reproducing opportunistic species of marine plants and animals, some of which can adversely affect ecosystems. Phytoplankton, for example, can occur at sufficient densities to form blooms, which reduce light availability for marine plants such as seagrass. As the nutrients become depleted, the algae begins to die and the microorganisms feeding on the dead algae multiply and greatly reduce dissolved oxygen levels, often leading to fish and benthic invertebrate mortalities.

3.83 Eutrophication can lead to a shift in species composition to fast growing algae species (including toxic species) and a shift from long lived macroalgae to more nuisance species. Secondary impacts from large algal blooms can lead to various effects throughout the ecosystem.

3.84 Oxygen depletion can also reduce fish and shellfish stocks, having an economic impact on the fishery industry. Algal toxins from harmful algal blooms can cause shellfish poisoning in humans and be of danger to live stocks in coastal water. The water quality can be reduced due to decaying algae with foul odours and foam on beaches, or toxins from blooms, impacting the tourism industry.

3.85 Chemical substances form an essential part of our everyday life. They can be naturally occurring (non-synthetic) with natural background levels in the marine environment or man-made (synthetic) products with no natural background levels. Examples of non-synthetic contaminants include trace metals found in the earth's crust or polyaromatic hydrocarbons which predominantly result from the combustion of fossil fuels and organic materials, while synthetic contaminants include polychlorinated biphenyls (PCBs), pesticides, organotins (e.g. tributyltin – TBT) and many brominated flame retardants.

3.86 Once released into the environment, these substances can end up in sea water and sediments and be accessible for uptake by living organisms. The unwanted effects of this include harm to organisms at lower levels of the food chain (e.g. plankton and invertebrates) and a magnification of concentrations through food webs, resulting in higher concentrations and potential impacts at the top of the food chain, affecting species groups such as seabirds, marine mammals and seafood consumers.

3.87 Water quality can be affected by:

- physical modifications to water ways,
- changes to the natural flow and level of water,
- negative effects of invasive non-native species,
- resuspension of sediment,
- extreme weather such as drought followed by intense rainfall, and
- seasonal population variation.

3.88 The objectives of the Water Framework Directive are (1) to prevent the deterioration of water bodies and to protect, enhance and restore them with the aim of achieving at least good status and (2) to achieve compliance with the requirements for designated protected areas. It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these River Basin Management Plans (RBMPs). Beyond RBMPs, the the Programme of Measures (POM) sets out how related regulatory tools and international measures will all contribute to improving water quality.

3.89 Water filtration, nutrient assimilation and hazardous chemical sequestration are ecosystem services essential to achieving and maintaining a long-term improvement in water quality.

3.90 Coastal saltmarsh habitats, reed beds and intertidal mudflats aid in reducing turbidity and sedimentation and in the longer term can remove through isolation hazardous chemicals and nutrients. Seagrass beds play a role in the removal of nitrogen and can reduce turbidity. There is also evidence that seagrasses are effective in the removal of hazardous chemicals from the water column. Filter feeding shellfish, such as blue mussels, filter water and absorb nutrients (particularly nitrogen) from the water column thereby improving water quality.

Key Issues for Marine Planning

3.91 Proposals should be compliant with and contribute to the aims and objectives of River Basin Management Plans (RBMPs) that protect and improve the water environment. They are prepared and reviewed every six years. The first RBMPs covered the period 2010 to 2015. The Government published a second-cycle RBMP on 17 April 2018. It outlines the measures that will be taken to protect and improve water quality between 2018 and 2021.

3.92 In accounting for water quality in decision-making, Public bodies should seek to ensure consideration of those measures set out in the POM that are of relevance to any particular activity being considered.

3.93 The following aspects of any proposal will be relevant in identifying and managing water quality matters:

- water body (or bodies) potentially affected, including adjacent water bodies,
- duration of the activity,
- location,
- physical footprint with respect to the water body size,
- scale of impact,
- mitigation measures that could reduce any potentially adverse impact,
- presence of sensitive habitats, and
- presence of contaminated sediments.

3.94 Public bodies should also seek to address water quality issues through ensuring consideration of habitats and species that provide water filtration, nutrient assimilation and hazardous chemical sequestration services. Proposals seeking to contribute to improving water quality, or enhance habitats and species which benefit water quality, may seek to consider steps including but not limited to:

- habitat restoration works,
- provision of natural sediment settling areas, and
- building in beneficial features as part of good design, for example that enhance habitat and species assemblages that provide regulatory services.

Maps of Coastal Bathing Water Quality and Locations of Raw Sewage Discharge around the Irish coast can be found in the Waste Water Treatment and Disposal chapter of this draft NMPF.

3.95 Proposals should note that identifying positive impacts or enhancement of an ecosystem service is not a substitute for avoidance, minimisation or mitigation of significant adverse impacts.

Sea-floor Integrity

Planning Policies

The following policies seek to contribute to MSFD GES descriptor (6) "Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected".

- Proposals which incorporate measures to support the resilience of deep sea habitats will be supported. Proposals which may have significant adverse impacts on deep sea habitats must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate significant adverse impacts on deep sea habitats.

Key References

- Marine Planning Policy Statement
- Marine Strategy Framework Directive (MSFD)
- OSPAR List of threatened and/or declining habitats and species

- National Parks & Wildlife Service (NPWS)
- Habitats Directive
- Birds Directive
- Foreshore Consenting
- Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (INFOMAR)

Background and Context

3.96 Deep waters in Ireland's maritime area comprise diverse sediments which create mixed habitats for species such as molluscs, crustaceans and burrowing megafauna. These species support diverse food webs including fish and cetaceans. Amongst these habitats, cold water coral reefs in particular are known to be slow growing habitats and highly sensitive to physical damage. Cold water coral reefs are known to be present from 200-1600m, where the water temperature is 4-8°C and the salinity is 32-36%. Coral reefs found to date are generally associated with carbonate mounds, features that rise up to 300-500m above the sea floor. These are found close to the continental shelf slope and on the Rockall Bank. Corals are also recorded on the Hatton Bank. Typical reef forming species include *Lophelia pertusa* and *Madrepora oculata*. They create a complex 3-dimensional structure and provide a habitat for many other species which exist both on live and dead coral or in the spaces between the coral branches.

3.97 The growth rate of *Lophelia pertusa* has been shown to vary from ~2-25mm per year depending on location. The potential for *Lophelia pertusa* to recover after physical damage is uncertain but is likely dependant on the extent of the damage and size of remaining fragments. *Lophelia pertusa* habitats are highly sensitive to various pressures, including but not limited to disturbance or penetration of the surface of the seabed, suspended particles in the water column and smothering.

3.98 The POMs for Ireland describe a number of measures aimed at control (or mitigation) of the potential impacts human pressures may have on biological/ecological elements of the Descriptors and/or support status assessments of the biological/ecological elements themselves.

3.99 The Habitats Directive (HD) and Birds Directive (BD), and the MSFD are inter-related in that they all share a common overall goal of conserving biodiversity. While the final objectives of the Directives are defined differently and are not equivalent, they are complementary. The BD and HD have similar conservation aims; protecting habitat and species (including plants, invertebrates, fish, marine mammals and birds) and the establishment of a network of protected sites for the conservation of biological elements listed under the Directives. Protected sites include Special Areas of Conservation (SACs) designated due to their ecological importance for species and habitats protected under the HD and Special Protected Areas (SPAs) designated for the protection of bird species under the BD. For each designated area the Directives require site-specific Conservation Objectives to be set for the species and habitats of interest and subsequent management to ensure those objectives are achieved.

3.100 MSP in Ireland – including the forward planning and accompanying decision-making processes – will also make a positive contribution towards the achievement of GES in relation to deep sea habitats. In addition to enabling creation and application of plans, decision-making processes, such as the current Foreshore Consenting process, provide a mechanism under which Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) Directives and associated national regulations as set out in Ireland's Planning and Development Acts and Regulations can be applied. It should be noted that whilst deep sea habitats are a focus of this policy, this is complemented by other policies in this NMPF that address a wide range of other areas, including policies related to biodiversity and MPAs.

Key Issues for Marine Planning

3.101 Compliance with this policy should include the consideration of:

- The conservation objectives of SACs and SPAs, including the need for Appropriate Assessment under the Habitats Directive (HD) where relevant;
- Environmental requirements under relevant consenting regimes including Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA).

3.102 Decision-makers will support proposals that incorporate measures that support the resilience of deep sea habitats, enabling the environment to respond to climate change and development. This may include novel designs, and collaboration between developers and public bodies. The policy requires proposals to avoid negative effects which may restrict the functioning deep sea habitats.

3.103 Public bodies should apply these policies proportionally on proposals that will interact with deep sea habitats. Determination may be informed by a relevant assessment. An assessment to determine how a proposal can be beneficial to deep sea habitats should:

- ensure understanding of habitat types within and adjacent to the area of proposal,
- ensure understanding of importance of these habitats to species – including rare and vulnerable species, and
- consider the resilience of habitats changing climate and/or if the proposal could assist habitat resilience.

3.104 Given the uncertainty around the distribution and nature of deep sea habitats, a precautionary approach should be taken to identification as well as ascertaining potential impacts and related steps to avoid, minimise, or mitigate them. Proposals must consider the available evidence and identify any significant adverse impacts on deep sea habitats. It is important to note that where evidence is not available there may still be deep sea habitats that are sensitive or of conservation concern and a baseline may need to be established using site specific surveys. Proposals may require additional and more specific evidence.

3.105 Deep sea habitats are those which occur beyond the continental shelf break, typically starting at depths of 200 metres. Several deep sea habitats are listed in the OSPAR List of threatened and/or declining habitats and species, including coral gardens, deep-sea sponge aggregations, seapen and burrowing megafauna communities and Lophelia pertusa reefs.

3.106 Ireland is seeking to improve its knowledge of deep sea habitats through a range of initiatives including Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (INFOMAR). This is a twenty year programme to map the physical, chemical and biological features of Ireland's seabed. INFOMAR is funded by the Department of Communications, Climate Action and Environment (DCCAE), and delivered by joint management partners Geological Survey Ireland and the Marine Institute. A map of Benthic Habitats, including deep sea habitats, can be found in the Biodiversity section of this draft NMPF.

Marine Litter

Planning Policies

The following policies seek to contribute to MSFD GES descriptor (10) "Properties and quantities of marine litter do not cause harm to the coastal and marine environment".

- Proposals that facilitate waste re-use or recycling, or that reduce marine and coastal litter will be supported.

  Proposals that could potentially increase the amount of marine litter that is discharged into the maritime area, either intentionally or accidentally, must include measures to, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  the discharges. Demonstration of these measures must provide satisfactory evidence that the proposal is able to manage all waste without creation of litter.

Key References

- Marine Planning Policy Statement
- National Waste Prevention Programme
- OSPAR Regional Action Plan on Marine Litter
- Waste hierarchy
- Act to provide for the prohibition on the manufacture or placing on the market of certain products containing microbeads; to impose restrictions in relation to the disposal of substances containing microbeads; and to provide for matters connected therewith

Background and Context

3.107 Marine litter is defined as "any solid material which has been deliberately discarded, or unintentionally lost on beaches and on shores or at sea, including materials transported into the marine environment from land by rivers, draining or sewage systems or winds. It includes any persistent, manufactured or processed solid material."

3.108 An increase in waste created by human use, the growing dependence upon plastics and poor waste management has led to a rise in litter in the marine environment. Supported by recent research and evidence the issue of marine litter has risen on the global platform and is being debated at many levels.

3.109 Litter in plastic form is one of the most challenging environmental problems of our time. It can be found in all aspects of our environment, including lakes, rivers, beaches and throughout our oceans. Due to its buoyancy, it can easily be washed down rivers, blown offshore and dispersed by currents. It can also be dumped or lost directly from vessels at sea. As it does not biodegrade it persists in the environment in the long-term and can break down into smaller particles through erosion.

3.110 Plastic litter in our oceans ranges in size from large objects such as fishing nets or shipping containers to micro-particles (smaller than 5mm in diameter) and nano-particles (smaller than 0.05mm in diameter).

3.111 While it is considered that most marine microplastic litter is created through the erosion of larger pieces of plastic, microplastics are also entering the marine environment in other forms such as micro-fibres from artificial fabrics worn off clothes by washing; or lost nurdles (very small pellets of plastic used as raw material in product manufacture).

3.112 The extent of the marine litter problem and the harm it causes to the environment has yet to be fully established and is subject to ongoing research, although the scale of the problem is clear. There is increasing evidence of harm to marine ecosystems with negative impacts on marine fauna and potentially human health.

3.113 In addition to harming the environment, marine litter causes socio-economic damage to sectors such as tourism, fisheries, and shipping. Microplastics ingested by marine life may ultimately enter the food chain and may affect consumer confidence in seafood.

3.114 All maritime activity should be undertaken in such a manner as to reduce the likelihood of marine litter generation. Waste management, prevention of loss of items into the marine environment, reuse of materials and increased recyclability are required as key considerations of any maritime activity.

3.115 A number of measures proposed under the European Strategy for Plastics in a Circular Economy strategy target causes of marine litter specific to the marine sector:

- To reduce discharges of waste by ships, the Commission is presenting a legislative proposal on port reception facilities involving measures to ensure that waste generated on ships or gathered at sea is delivered on land and adequately managed;
- The Commission intends to develop targeted measures for reducing the loss or abandonment of fishing gear at sea with options to be examined including deposit schemes, Extended Producers Responsibility schemes and recycling targets;
- The Commission will also further study the contribution of aquaculture to marine litter and examine a range of measures to minimise plastic loss from aquaculture.

3.116 The OSPAR Regional Action Plan on Marine Litter to reduce marine litter, which covers measures to address land-based and sea-based sources of marine litter, is also developing measures designed to complement EU measures to reduce marine litter. Ireland co-leads a number of these actions.

3.117 A certain amount of marine microplastic litter is caused by plastic microbeads used in cosmetics, cleansing products, abrasive scouring agents and detergents. Microbeads cannot easily be removed by treatment of wastewater and therefore enter the marine environment via wastewater discharges or land spreading of sludge from wastewater treatment plants.

3.118 In relation to microbeads, following consultation in November 2018, an Act to provide for the prohibition on the manufacture or placing on the market of certain products containing microbeads; to impose restrictions in relation to the disposal of substances containing microbeads; and to provide for matters connected therewith is currently being considered by the Houses of the Oireachtas.

Key Issues for Marine Planning

3.119 As waste prevention is to be preferred to any waste management option, Ireland will continue to implement measures that guide actions in this area under its National Waste Prevention Programme. This includes improving resource efficiency and a progression towards a circular economy. To dispose of waste correctly and, to avoid it becoming litter the waste hierarchy should be applied. All maritime activity should be undertaken in such a manner as to reduce the likelihood of marine litter generation. Waste management, prevention of loss of items into the marine environment, reuse of materials and increased recyclability are required as key considerations of any maritime activity.

3.120 Decision-makers considering proposals for marine related activities should consider the need for a waste management plan, which includes measures to minimise the risk of litter escape.

3.121 Measures included within such a plan could include:

- avoid – avoiding the discharge of any items of marine litter during development and once operational via methods outlined in a thorough waste management plan,
- minimise – developers will monitor and remove any items of marine litter from the development and other sources in the area surrounding the development, during development and once operational outlined in a thorough waste management plan, and
- mitigate – developers will monitor and remove any items of marine litter from the development or other sources in the area surrounding the development as well as; once operational support a re-use or recycling scheme for marine litter or extend their clean-up operation further into the surrounding area to leave the maritime area cleaner than before their development e.g. adopt sea bins or financially support coastal clean-up operations – all of which can be outlined in a thorough waste management plan.

3.122 Proposals should include an explanation or evidence of a plan to manage waste during construction and once operational.

3.123 The POMs includes details of a range of waste prevention steps being taken by Ireland that should also inform proposals.

3.124 For sea-based sources of litter, Ireland's marine strategy focuses on the implementation of measures through existing legislation and international agreements and industry-based initiatives. Marine litter-related measures are included in the Foreshore and Dumping at Sea (Amendment) Act (2009), EC Port Reception Facilities Directive, the International Convention for Prevention of Pollution from Ships (MARPOL 73/78) and associated regulations.

3.125 In addition, the application of the Code of Conduct for Responsible Fisheries, support of the Responsible Irish Fish initiative, and implementation of the Fishing for Litter scheme, are measures engaging the fishing industry in tackling marine litter.

Underwater Noise

Planning Policies

The following policy seeks to contribute to MSFD GES descriptor (11) "Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment".

- Proposals that generate impulsive or continuous noise must take account of any currently agreed targets under Marine Strategy Framework Directive descriptor 11 and demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts on highly mobile species.

  Where significant impact on highly mobile species is identified and cannot be mitigated, a Noise Assessment Statement should be prepared by the proposer of development. The findings of the Noise Assessment Statement should demonstrably inform determination(s) related to the activity proposed and the carrying out of the activity itself.

  The content of the Noise Assessment Statement should be relevant to the particular circumstances and could include:
  - An assessment of the potential impact of the development or use on the affected species in terms of environmental sustainability;
  - A recognition that the impacts on highly mobile species should be minimised as far as possible;
  - Demonstration of the public benefit(s) that outweigh the significant impacts identified;
  - Reasonable measures to mitigate any impacts which the proposed development or use may place on highly mobile species.

Key References

- Marine Planning Policy Statement
- National Biodiversity Action Plan 2017-2021
- Marine Strategy Framework Directive (MSFD)
- MSFD Programme of Measures (POMs)
- Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters

Background and Context

3.126 Energy in the marine environment refers to the introduction of light, electricity, heat, noise, electromagnetic radiation, radio waves or vibrations. Under Descriptor 11, the primary energy source of concern in an Irish context is underwater noise, which is categorised as either impulsive or continuous. Impulsive noise is defined as: "One or more sound pulses, each of short duration and with long gaps of no significant sound emission between pulses". Continuous or ambient noise is commonly defined as: "Background noise without distinguishable sources".

3.127 All marine activities introduce sound into the marine environment to a greater or lesser extent during construction, operation or decommissioning. Noise generally refers to anthropogenic sound. Underwater noise occurs either as continuous (including ambient noise, shipping propulsion, operational vibrational noise) or as discrete impulsive sounds (including detonation of explosives, seismic surveys or construction piling).

3.128 There are natural sources of sound in the marine environment, such as communication between marine fauna, wave action and lightning, but growing human use has increased background continuous noise levels over the last 50 years. While impulsive sound has also increased, less is known about its temporal and spatial distribution and the magnitude of trends.

3.129 At present, our knowledge of the current status of underwater noise and the data that underpins it remains poor. Ireland's POMs target sets out the need to establish a noise register in support of a better understanding of the levels and risks associated with the underwater noise pressure. It is anticipated that threshold levels that distinguish between benign sound and harmful noise levels will eventually be determined as more information becomes available through the register.

Key Issues for Marine Planning

3.130 The NPWS document Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters provides best-practice and knowledge-led guidance for managing developments and activities that have the potential to affect sensitive marine mammal species and the recommendations contained within it are integrated into the consents and licensing conditions for all planning applications.

3.131 When considering noise in relation to those affected by it, there are seasonal considerations due to migration, spawning and foraging behaviour.

3.132 For proposals and public bodies considering how best to manage underwater noise, for impulsive noise, measures could include:

- avoid – marine mammal observers or passive acoustic monitoring that can stop noise generation while sensitive species are present. Not generating impulsive noise generating during sensitive periods (such as breeding, rearing, hibernation, migration),
- minimise – eliminating or controlling noise at source, for example using alternative quieter approaches like drilling foundations instead of pilling, and
- mitigate – soft start piling allowing sensitive species to avoid the area or attenuation measures, for example bubble curtains or pile collars.

3.133 For continuous noise, these measures could include:

- avoid – change vessel routing away from sensitive species or areas,
- minimise – design specifications to reduce operational vibration (for example, in vessels or infrastructure) or imposing speed restrictions in sites of sensitivity that reduce noise generated, and
- mitigation – use attenuation measures, for example acoustic baffles.

3.134 Proposals and public bodies should use best available evidence and, where knowledge gaps exist, expert judgement.

3.135 As and when a noise register is established, proposals should seek to contribute to it.

Air Quality

Planning Policies

- Proposals that support a reduction in air pollution will be supported. Proposals must demonstrate consideration of their contribution to air pollution, both direct and cumulative.
- Where proposals are likely to result in or facilitate increased air pollution, proposals should demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  air pollution.

Key References

- Marine Planning Policy Statement
- International Maritime Organisation emissions measures
- EPA air quality monitoring and management measures
- National Clean Air Strategy

Background and Context

3.136 Scientific knowledge of the threats posed to people's health and the environment by air pollutants is improving. It is now clear that air pollution causes more damage than previously understood. We can reduce levels of pollution by tackling emission sources.

3.137 Recent studies have identified air pollution as the top environmental cause of premature death in Europe. The World Health Organisation (WHO) and the EU estimates that each year more than 400,000 premature deaths are due to poor air quality in Europe. The most common causes of premature death due to poor air quality are strokes and heart disease. The economic impact is also major with increased cost of healthcare and lost working days. Air pollution also has significant impacts on ecosystems and buildings.

3.138 In Ireland, for 2013, the European Environment Agency estimates that approximately 1,600 premature deaths were due to fine particulate matter and other air pollutants. In addition, estimates indicate that air pollution has health-related costs in Ireland of over €2 billion per year. In other words, a loss of 382,000 workdays per year.

3.139 The relationship between activities in the maritime area as a source of air pollution and the consequent impacts of these emissions on people relates to the point at which emissions occur i.e. the closer the maritime area sources of emissions are to people, the more likely they are to be a factor in air quality issues. Another consideration is density of activity. Whilst maritime activity is more dispersed at sea, reducing intensity of the level of emissions observed, issues may arise at ports where vessels (a source of emissions) are concentrated. With this in mind, port construction and operational activities can have adverse impacts on air quality and overall, sulphur and nitrogen oxides (air quality pollutants) from global shipping are a significant concern.

3.140 Prevention of pollution by international shipping represents a significant element in the work of the International Maritime Organization (IMO), where substantial progress has been made in lowering shipping emissions. In relation to shipping, the upcoming IMO requirement for 0.5 % sulphur standard for marine fuel oil from 2020 will significantly reduce sulphur emissions from shipping around the coast of Ireland and in its ports, however will not be as protective as the standards now applying in Sulphur Emission Control Areas (SECA) in the North Sea and the Baltic Sea.

Key Issues for Marine Planning

3.141 Some development and use may result in increased emissions to air, including particulate matter and gasses. Impacts on relevant statutory air quality limits must be taken into account and mitigation measures adopted, if necessary, to allow an activity to proceed within these limits. Marine and terrestrial planners should liaise to consider how air quality may be improved, particularly where air quality management measures are in place.

3.142 Proposals should seek to incorporate measures to reduce air pollution. This may include novel designs, smart technology, proposals or collaboration between developers, public bodies and distribution network operators. As appropriate measures are identified and incorporated proposals must comply with relevant legislation and other marine plan policies.

3.143 Proposals must demonstrate that they have considered the interaction between sectors, particularly in relation to indirect and cumulative consequences on air pollution, such as:

- port developments to attract more vessels,
- developments to increase short sea shipping,
- indirectly increasing road or vessel transit, and
- greater travelling distances of vessels from placement of new marine infrastructure resulting in increased fuel consumption and in turn air pollution.

Measures to reduce emissions in port, for example, use of shore side electricity could be relevant particularly where such emissions contribute to air pollution in urban areas. Commitment to use renewable energy to charge vessels may also be relevant.

Climate Change

Planning Policies

- Proposals that support a reduction in greenhouse gas emissions will be supported. Proposals must demonstrate consideration of their contribution to greenhouse gas emissions for the lifetime of the proposal, both direct and indirect.
  Proposals should demonstrate for the lifetime of the proposal that they:

  1) have considered the impacts of climate change and coastal change, and

  2) have incorporated appropriate adaptation measures where necessary, and

  3) will not have a significant adverse impact upon climate change adaptation measures elsewhere, or significantly increase the risks of adverse impacts of climate change elsewhere.

  In respect of 3) proposals should demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  the adverse impacts upon these climate change adaptation measures or the risks of adverse impacts of climate change.
- Proposals that are likely to result in significant adverse coastal change should not be supported.
- Proposals that enhance habitats that provide a flood defence or carbon sequestration will be supported.
- Proposals that may have a significant adverse impact on habitats that provide a flood defence or carbon sequestration ecosystem service must demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts.
- Proposals that reduce or buffer carbon dioxide concentrations in seawater should be supported.

Key References

- Marine Planning Policy Statement
- Climate Action and Low Carbon Development Act 2015
- National Mitigation Plan (NMP)
- National Adaptation Framework (NAF)
- National Biodiversity Action Plan 2017-2021
- Draft Biodiversity Sector Climate Change Action Plan
- Climate Action Regional Offices
- Climate Action Plan 2019
- Irish Coastal Protection Strategy Study

Background and Context

3.144 The NMPF considers climate change from two perspectives; how actions under the plan may help mitigate climate change and how actions under the plan need to be adapted to take account of the effects of climate change.

3.145 The Climate Action and Low Carbon Development Act 2015 provides the statutory basis for the national transition objective laid out in the national policy position. As provided for in the 2015 Act, in order to pursue and achieve the national transition objective, the Minister for Communications, Climate Action and Environment must make and submit to Government a series of successive National Mitigation Plans (NMPs) and National Adaptation Frameworks (NAFs). The first NMP was published in July 2017 and the first NAF was published in January 2018.

3.146 The Draft Biodiversity Sector Climate Change Action Plan sets out a number of changes in Ireland's maritime area that are attributed to climate change as follows:

- Increase in sea surface temperature of 0.6°C per decade since 1994 is unprecedented in the past 150 years,
- Increase in wave heights of 0.8 m off southwest Ireland
- Satellite observations indicate that the sea level around Ireland has risen by approximately 4–6 cm since the early 1990s,
- Ocean acidity has increased significantly in sub-surface and deep offshore waters around Ireland between 1991 and 2010,
- Phytoplankton – Increased numbers of diatoms and dinoflagellates around the Irish coast since 1998,
- Increase in warm water *Calanus spp* and gelatinous zooplankton species in recent years,
- Increased numbers of most warm water marine fish species in Irish waters with increased sightings of exotic fish species, and
- Decline in salmon, trout and eel populations since the 1980s, to which climate and ocean change may have had a role.

3.147 The National Biodiversity Action Plan 2017-2021 sets out that climate change and ocean acidification present considerable threats to the marine environment and may modify effects of other pressures and facilitate further establishment and spread of invasive species.

3.148 Ocean acidification (OA) refers to changes in seawater chemistry as a result of increases in concentrations of the dissolved anthropogenic (human-emitted) CO_2 absorbed from the atmosphere. There has already been an increase in ocean acidity of 26% since preindustrial times, with a 170% increase predicted by 2100 if human CO_2 emissions continue to increase at their current rate. Under the current CO_2 emission trajectory, warming and acidification is likely to result in significant alterations of our marine ecosystems.

3.149 Acidification, or the reduction in pH, leads to an increasing difficulty in the formation of calcium carbonate shells and support structures by some calcifying organisms. Responses of marine organisms are species-specific but include reduced calcification, reduced rates of repair and weakened calcified structures in calcifying organisms like corals, molluscs and crustaceans. The Irish shellfish aquaculture industry plays an important role in the Irish coastal economy. Commercially important farmed shellfish such as mussels and oysters may be at risk from OA and increased ocean temperatures.

3.150 Cold water corals are deep water reef structures that support a rich biodiversity that are vital to fisheries, but which are particularly vulnerable to OA. The Rockall Trough hosts an array of these structures interacting with a range of water masses along the Irish continental margin. The Rockall Bank and Porcupine Bank areas provide a natural laboratory to study the effects of OA on deep water coral ecosystems.

3.151 Changes expected by mid-century that give cause to ensure adaptation steps are built in to proposed activity in the maritime area include:

- Storms affecting Ireland will decrease in frequency, but increase in intensity, with increased risk of damage,
- Increase in the frequency of storm surge events around Irish coastal areas,
- Extreme wave heights are also likely to increase in most regions,
- Continued warming of Irish water consistent with global ocean projections,
- Changes in freshwater temperatures, dissolved oxygen and river flows with possible negative consequences for fish growth and survival and knock-on impacts in estuaries, and
- Sea levels will continue to rise in line with global projections.

3.152 As an example of the impact of such changes on maritime activities, it is estimated that increased intensity of storms and the frequency of storm surge events will result in damage to vessels and infrastructure including gear loss in inshore and coastal sector of fisheries and aquaculture, such as crab/lobster pots, oyster trestles etc. The fishing fleet would need to tie-up for lengthy periods leading to reduced annual effective fishing effort. There would also be health and safety impacts through increased risk of working at sea and the coast in more challenging conditions.

Key Issues for Marine Planning

3.153 The Office of Public Works (OPW) have functions and responsibilities in relation to coastal protection and coastal flooding. Their main role in this area is:

- Undertaking risk assessments associated with coastal flooding and coastal erosion at selected coastal sites making use of innovative technologies and methodologies.
- Provision of an advisory service in relation to coastal flooding and coastal erosion to support the preparation of annual coastal protection funding programmes, the Catchment Flood Risk Assessment and Management (CFRAM) programme, and to inform broader policy development.
- Maintenance of coastal protection schemes constructed under the Coast Protection Act, 1963.

3.154 "The coastal environment is constantly changing. Coastal change is primarily concerned with coastal erosion and accretion. Climate change is expected to alter patterns in storm surges, sea level rise, and floods that can all play a part in coastal change. In identifying measures in relation to proposals and coastal change, the most recent reports, strategies and policies made available by the OPW should be accounted for as well as relevant material available through local public bodies e.g. Local Authorities."

3.155 Proposals should demonstrate that they are resilient to the effects of climate change for the lifetime of the proposal. Proposals that are likely to be at risk from climate change

and do not include appropriate adaptation measures to make them resilient, should identify existing measures such as flood defences, providing resilience to any adverse impacts of climate change.

3.156 In line with the Draft Biodiversity Sector Climate Change Action Plan, ensure assessment of seafood-related public funding applications considers impacts of climate change taking sea level rise, increased wave heights, forces and storm surges into consideration.

3.157 Direct contribution to greenhouse gas emissions (GGE) is the increase caused by the proposal itself. Indirect contribution to GGE is the increase in GGE of other activities caused by the proposal e.g. a proposal that requires shipping to take a longer sea route will increase fuel consumption and associated GGE.

3.158 In considering contribution to GGE for the lifetime of a proposal, both direct and indirect, and seeking reductions, the following may be appropriate in relation to indirect emissions:

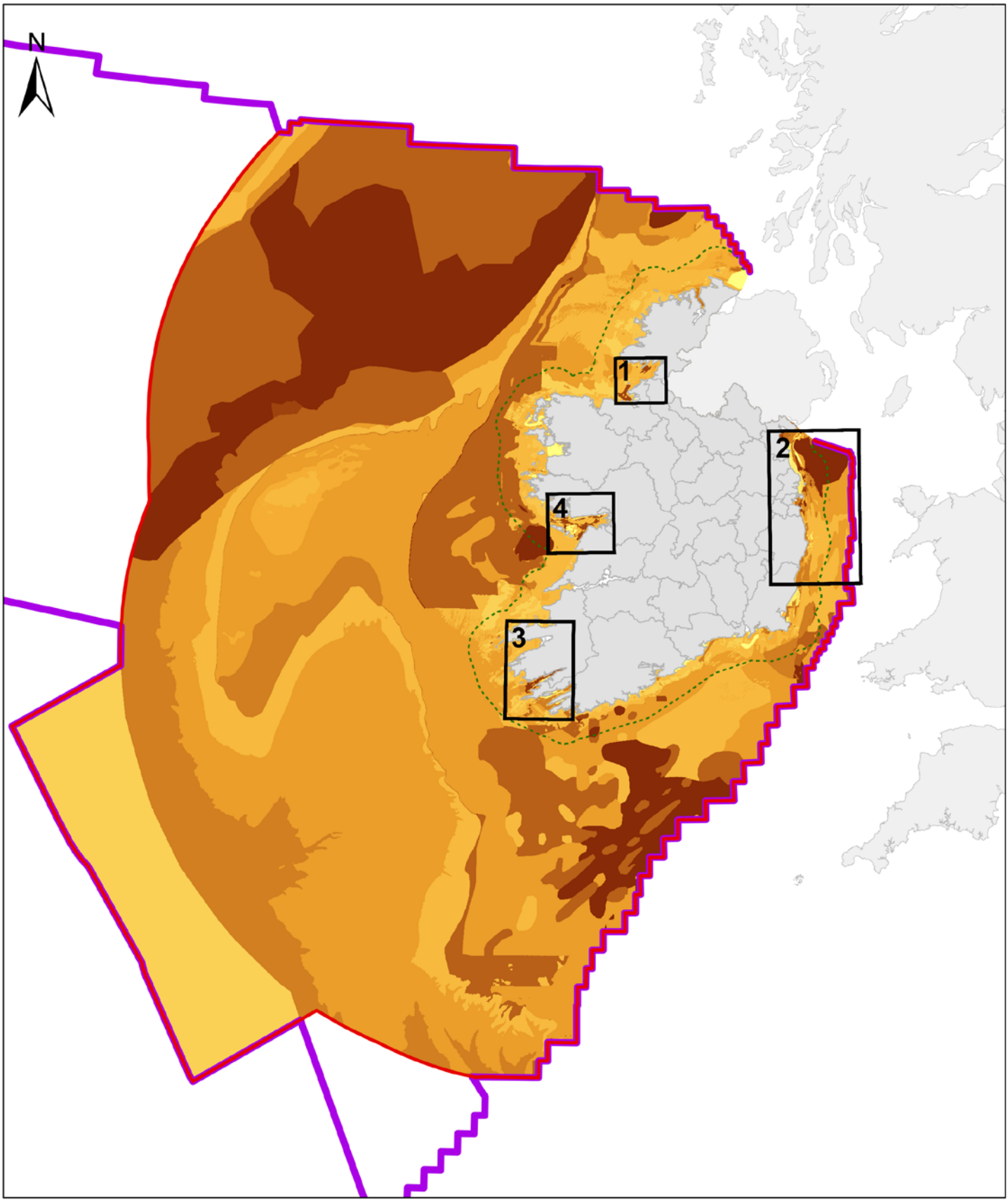
- An example of avoidance would be to allow access to continue unimpeded through their development, not increasing any emissions,
- An examples of minimisation would be to consider the access through the development but allow access at certain times on the same route, and
- An example of mitigation would be to offset the emissions through available methods or provide devices/technology to reduce emissions such as slow steaming, optimising hull design, propeller optimisation, waste heat recovery, energy storage using batteries or shore-side electrical provision or lower carbon fuels.

3.159 Due regard should also be had to ensuring proposals will not undermine the resilience of habitats and species to adapt to climate change. For example, coastal habitats will face challenges in expanding and contracting as needed, due to the pressures of coastal squeeze. They will be vulnerable to the projected impacts of climate change due to increased storminess and sea level rise, and increased precipitation that may cause sediment loading. Proposals must demonstrate that they have considered available evidence and identified any significant adverse impacts on habitats that provide flood defence and/or carbon sequestration ecosystem services. Proposals should identify and describe habitats within the immediate vicinity and determine whether those habitats provide carbon sequestration or flood defence ecosystem services.

3.160 Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impact on habitats that provide a flood defence or carbon sequestration ecosystem service. For example:

- avoid – through alternative location;s
- minimise – minimising the size of structures or the amount of timework is undertaken to make sure natural processes can continue;
- mitigate – innovative engineering design, sediment bypassing to avoid sediment loss or reductions to the overall size and scope of a project.

3.161 Public bodies should support proposals that incorporate measures that result in a reduction or buffering of carbon dioxide concentrations. This may include novel designs of proposals or, and collaboration between developers and public bodies. Proposals must comply with relevant legislation and other marine plan policies.



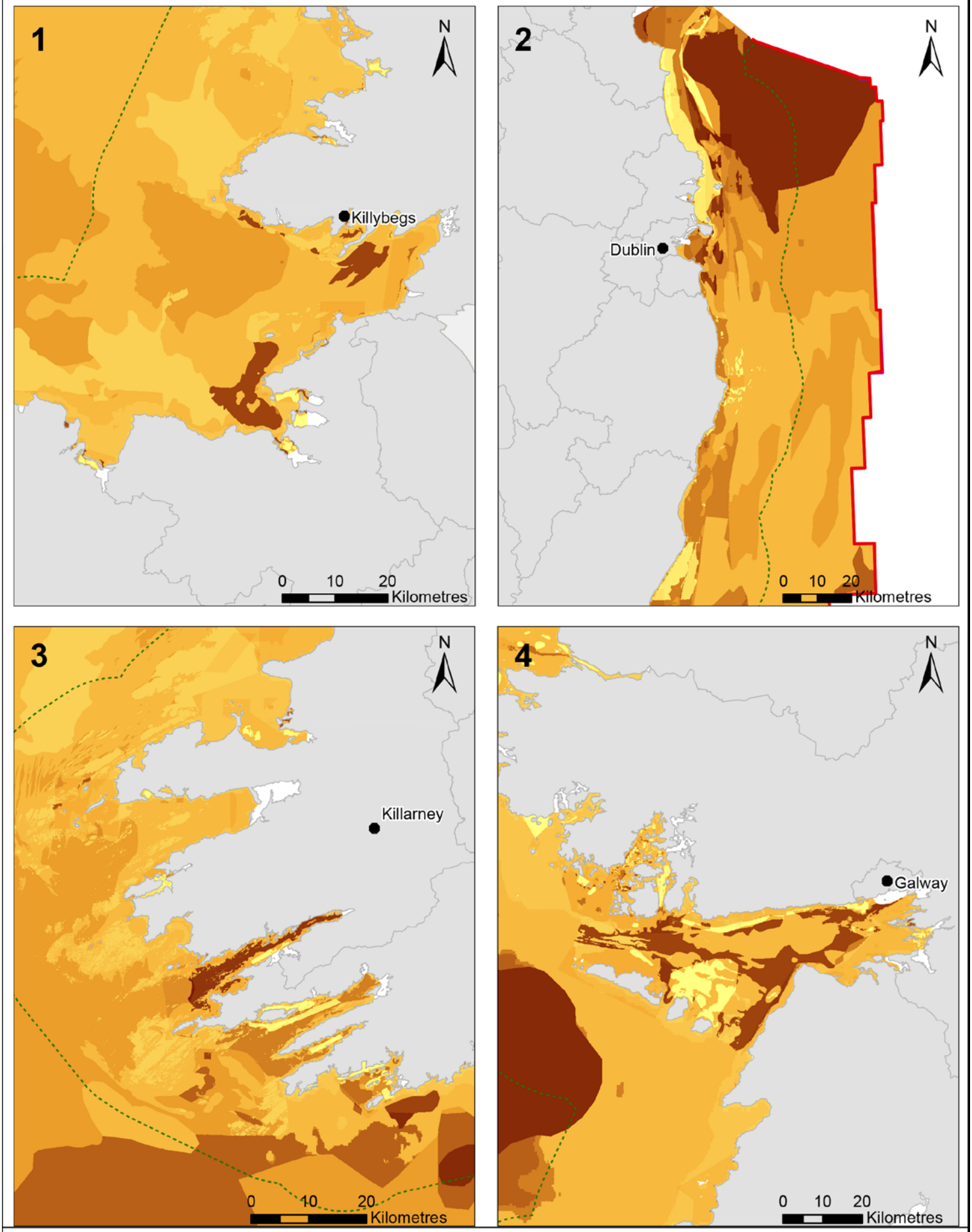
National Marine Sediments that Store Carbon

0 50 100 200 Kilometres

Contribution to Carbon Sequestration

Higher Moderate Lower

Credits: Department of Culture, Heritage and the Gaeltacht, 2016.



Regional Marine Sediments that Store Carbon

Contribution to Carbon Sequestration

Higher Moderate Lower

Credits: Department of Culture, Heritage and the Gaeltacht, 2016.

Economic – Thriving Maritime Economy

Objectives

- Promote the sustainable development of a thriving ocean economy.
- Promote the development of vibrant, accessible and sustainable rural coastal and island communities.
- Help realise the potential of marine resources in an integrated fashion and deal with interaction between different interests in a fair, balanced and transparent manner, including those who are employed in the marine sector.

Key References

- Marine Planning Policy Statement
- *Harnessing Our Ocean Wealth* – An Integrated Marine Plan for Ireland
- Ireland's Ocean Economy (June 2019)

Background and Context

3.162 HOOW established two overarching economic targets:

- to double the value of our ocean wealth to 2.4% of GDP by 2030, and
- to increase the turnover from our ocean economy to exceed €6.4bn by 2020.

	2014	2016	% Change 2014-2016	2018	% Change 2016-2018
GVA	€1.49 billion	€2.00 billion	33%	€2.23 billion	11%
% GDP	0.9% GDP	0.9% GDP		1.1% GDP	
Turnover	€4.65 billion	€5.52 billion	18%	€6.23 billion	13%
Employment	27,391 FTEs	30,208 FTEs	10%	34,132 FTEs	13%

Table 2: The Irish Ocean Economy – Key Figures and Trends, 2014, 2016 and 2018

3.163 Ireland's Ocean Economy, the latest review of Ireland's ocean economy published by the Socio-Economic Marine Research Unit at NUI Galway in June 2019, found that in 2018, Ireland's ocean economy had a turnover of €6.2 billion. The direct economic contribution, as measured by Gross Value Added (GVA)[8] was €2.2 billion or 1.1% of GDP. Ireland's ocean economy provided employment for 34,132 FTEs. Compared to 2016, 2018 saw a 13% increase in turnover, an 11% increase in GVA and a 13% increase in employment.

	2007 Baseline	2018 Status	HOOW Target
% of GDP	1.2%	2.0%	2.4% (2030)
Turnover	€3.4bn	€6.2bn	€6.4bn (2020)

Table 3: The Irish Ocean Economy – Progress Towards HOOW Targets (Based on data from Ireland's Ocean Economy (SEMRU, NUIG))

[8] Gross value added is the value of output less the value of intermediate consumption and it is a measure of the contribution to GDP made by an individual producer, industry or sector.

3.164 The indirect GVA that is generated from ocean related activity in Ireland in 2018 amounts to €1.96 billion, with a total GVA (direct and indirect) of €4.19 billion, which represents 2% of GDP.

3.165 Sustainable development and use of marine resources can provide multiple economic benefits at a community, regional and national level, including economic growth, skills development, employment, maintaining or increasing population levels, and opportunities for investment and trade.

3.166 Consideration should be given to opportunities that may benefit the sustainability of rural coastal and island communities, including local job creation and local training either directly or through supply chain projects.

Planning Policies

3.167 Overarching Marine Planning Policies for Co-existence and for Infrastructure relate to economic objectives. Although there are just two economic policies in this section it should be noted that they are supplemented by the Sectoral Marine Planning Policies, most of which are aimed at achieving economic objectives.

Co-existence

Objective

- To encourage effective use of space to support existing and future sustainable economic activity through co-existence, mitigation of conflicts and minimisation of the footprint of proposals.

Planning Policy

- Proposals should demonstrate that they have considered how to optimise the use of space, including through consideration of opportunities for co-existence and co-operation with other activities, enhancing other activities where appropriate.

If proposals cannot avoid significant adverse impacts of their activity (including displacement) on other activities they must, in order of preference:

(a) minimise significant adverse impacts,

(b) mitigate significant adverse impacts or

(c) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Background and Context

3.168 Marine planning seeks to manage and allocate space in a way that minimises conflicts among human activities, as well as conflicts between human activities and nature, and, where possible, maximises compatibilities among uses. Managing interactions to enhance compatibilities and reduce conflicts is an important goal and intended outcome of marine planning.

3.169 Both space and time are important considerations. Some parts of the maritime area are busier than others, both ecologically and economically. Species, habitats, populations, resources, shipping lanes are all distributed in various places and at various times. Successful marine planning and management needs to understand how to work with the spatial and temporal diversity of marine interests and activities. Understanding these spatial and temporal distributions and mapping them is an important part of marine planning.

Key Issues for Marine Planning

3.170 This policy supports the optimal use of available space, and consideration of the interaction of a proposal with other activities, either existing or planned.

3.171 Co-existence is where multiple developments, activities or uses exist alongside or close to each other in the same area or at the same time. To manage available space effectively and to maximise the economic, social and environmental benefits of access to it, there is a need to minimise the footprint of proposals and consider co-existence of activities where possible. This will enable activities to continue and/or grow, minimise conflict, and meet local, regional and national policy aims including economic development. This is particularly important in areas close to the coast where many locations are already busy with aspirations for growth emerging.

3.172 If growth of development and activities is not managed effectively it can lead to degradation in environmental quality and restrict growth of activities dependent on a high quality marine environment. Unmanaged growth can also squeeze out new or emerging industry if insufficient space is made available for such activities.

3.173 Space is essential for activities to function, for example, shipping requires room for transit and anchorage and fishing requires access to grounds. Some activities operate in the same space, such as recreational activities in a protected site (depending on site objectives). Others require either temporary or long-term exclusive use of an area, for example, navigational safety of shipping.

3.174 In addition to considering current activities and conditions, marine planning is also a forward-looking process that seeks to plan and project for future spatial demands based on policies, plans and actions that will apply over the lifetime of the plan.

3.175 Defining and analysing future conditions may involve the following tasks:

- Projecting current trends in the spatial and temporal needs of existing human uses,
- Estimating spatial and temporal requirements for new demands of space, and
- Considering areas that are available for use or development and areas that need special protection.

Infrastructure

Planning Policy

- Appropriate land-based infrastructure which facilitates marine activity (and vice versa) should be supported. Proposals for appropriate infrastructure that facilitates the diversification or regeneration of marine industries should be supported.

Background and Context

3.176 Land-based infrastructure is critical to realising the economic and social benefits of marine activities, which only accrue when brought on land. The type of infrastructure concerned includes but is not limited to physical structures or facilities for landing, storage and processing of catch or freight, for passenger transfer or utilities transmission, slipways, and boat repair facilities.

3.177 For certain developments and activities that are primarily land-based their associated marine infrastructure is critical to their effective operation. For example, a waste water treatment and disposal plant located at the coast requires a marine outfall pipe for the discharge of treated water.

Key Issues for Marine Planning

3.178 This policy supports proposals for the development of land-based infrastructure which facilitates marine activity, and the diversification or regeneration of marine industries. It also supports proposals for the development of marine infrastructure that facilitates land-based activity.

3.179 There are many examples of land-based infrastructure facilitating marine activity. Fishing and aquaculture require port and harbour facilities to bring product ashore and for berthage. Shipping and ferry services require port facilities to transport cargo and passengers from source to destination. Offshore renewable energy requires onshore cabling and collector or convertor stations to feed into the national grid. Offshore petroleum must connect to onshore facilities for storage, processing, or supply into national networks. Offshore energy infrastructure of all types depend on ports for support and supply chain services, both during construction and ongoing operation. Energy and telecoms interconnectors need to connect with land-based substations to feed into national networks.

3.180 With regard to diversification or regeneration of marine industries, examples of the type of proposal concerned might include adaptation of existing port facilities, or development of new port facilities, to support emerging industries such as offshore renewable energy. Adaptation of port facilities might also support repurposing of decommissioned offshore infrastructure.

3.181 As an example of marine infrastructure that facilitates land-based activity, urban waste water treatment and disposal plants located at the coast require a marine outfall pipe for the discharge of treated water.

3.182 The successful implementation of this policy requires close integration between the terrestrial and marine planning systems. Much of the infrastructure concerned involves proposals that have both land and marine elements that straddle the interface between the terrestrial and marine planning systems. As such, both systems need to take account of each other's objectives and policies on a reciprocal basis.

Social – Engagement with the Sea

Objectives

- Promote the development of vibrant, accessible and sustainable coastal and island communities.
- To promote the preservation and enjoyment of marine-related cultural and heritage assets.
- To strengthen our maritime identity and increase awareness of the value, opportunities and social benefits of engaging with the sea.
- Establish robust governance, policy and planning frameworks to enable growth of the ocean economy and the sustainable utilisation of our marine resources, with an emphasis on ensuring effective and meaningful public and stakeholder participation in planning processes.
- Address land and sea interactions and promote integration, coordination and coherence between land and marine planning systems.

Planning Policies

3.183 Overarching Marine Planning Policies for access, employment, cultural and heritage assets, rural coastal and island communities, seascape and landscape, social benefits, and transboundary relate primarily to social objectives. However, many of these policy groupings also support economic and environmental objectives and, similar to other OMPPs, they are supplemented by Sectoral Marine Planning Policies.

Access

Planning Policies

- Proposals, including in relation to tourism and recreation, should demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts on public access.

- Proposals demonstrating appropriate enhanced and inclusive public access to and within the marine area, and that consider the future provision of services for tourism and recreation activities, will be supported.

Key References

- Marine Planning Policy Statement

Background and Context

3.184 Access includes 'physical' access to the maritime area to participate in tourist, sporting or recreational activities, or associated facilities and infrastructure on land to enable and support those activities in the maritime area (for example, paths, benches, slipways and marinas). Access also includes 'interpretative' and 'virtual' access that increase awareness and understanding of the maritime area. For example, interpretation boards, viewpoints, signage, films, literature and web-based interpretation tools.

3.185 Access to the maritime area to participate in tourist, sporting or recreational activities makes an important contribution to the health and well-being of communities, as well as generating economic opportunities for operators.

Key Issues for Marine Planning

3.186 Increased access for tourism and recreation can impact on the environment that draws visitors to a location. For example, disturbance can impact on achieving conservation objectives of protected sites, or harm biodiversity and heritage assets. To avoid adverse impacts (including temporary and cumulative impacts) new access needs to consider the appropriateness of the setting and potential impacts on biodiversity, heritage assets, landscape/seascape, existing access and use for recreation and tourism.

Employment

Planning Policies

- Proposals resulting in a net increase to marine related employment should be supported, particularly where the proposals are in line with the skills available adjacent to the maritime area.

Key References

- Marine Planning Policy Statement
- Ireland's Ocean Economy (June 2019)
- Oireachtas Joint Sub-Committee on Fisheries – Report on Promoting Sustainable Rural Coastal and Island Communities – Jan 2014

Background and Context

3.187 This policy aims to improve access to employment in rural coastal and island communities. It places emphasis on ensuring that local communities can meet the employment requirements of current and future maritime activities through appropriate use and development of skills. This policy has scope for improving access to direct employment, through new or existing activities (including offshore wind energy and fisheries), and indirect employment, through supporting industries (such as manufacturing and port services).

Key Issues for Marine Planning

3.188 Marine planning has a role to play in facilitating growth in new and existing industries which bring associated socio-economic benefits including employment. Marine planning can encourage sustainable economic growth that supports local jobs and contributes to strong local economies through integration with terrestrial planning and engagement with rural coastal and island communities. Barriers to employment may include low quality of local jobs, skills deficit and poor transport connectivity.

3.189 Appropriately planned and sited development and associated supply chains can help encourage investment and stimulate demand for marine products and services. In turn, investment can create job opportunities which bring primary and secondary socio-economic benefits through improved levels of employment and spending of wages, which may be particularly important to areas currently experiencing deprivation.

Heritage Assets

Planning Policies

- Proposals that demonstrate they will contribute to enhancing the significance of heritage assets will be supported. Proposals unable to contribute to enhancing the significance of heritage assets will only be supported if they demonstrate that they will, in order of preference:

a) avoid,

b) minimise, or

c) mitigate harm to the significance of heritage assets,

d) if it is not possible, to minimise or mitigate harm, then the public benefits for proceeding with the proposal must outweigh the harm to the significance of the heritage assets.

Key References

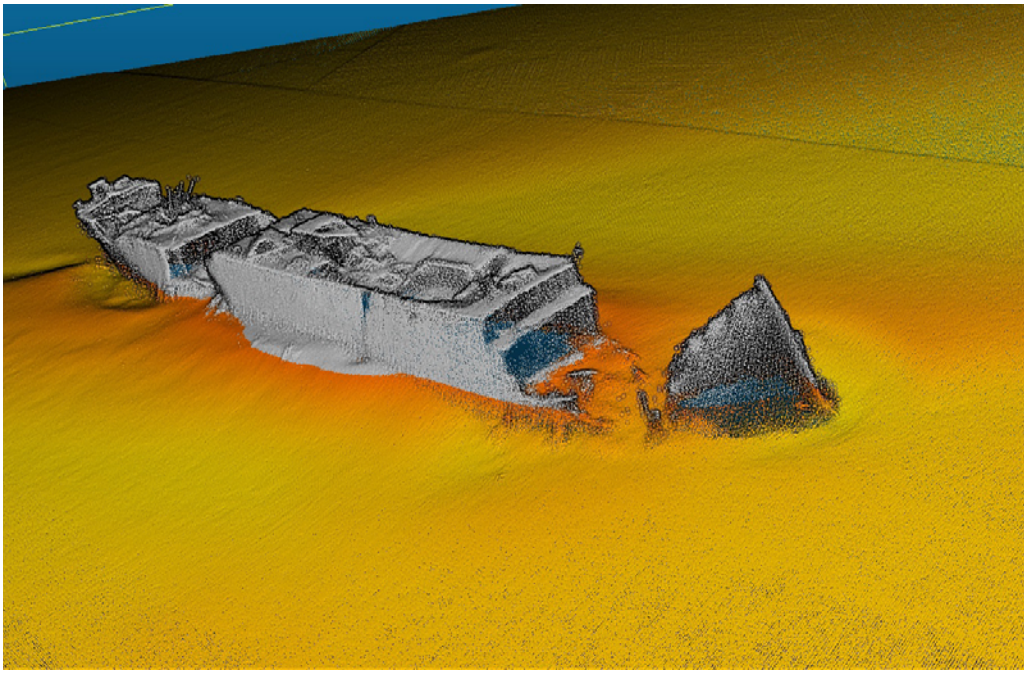
- Marine Planning Policy Statement
- Historic Environment Viewer
- National Monuments Acts 1930-2014

Background and Context

3.190 Ireland's coastal waters have been central to the development of life on this island since the first water craft crossed the seaways from Britain and the European continent almost 10,000 years ago. Waterborne vessels of various shapes and sizes have explored the coast and used the rivers as route ways into the interior where settlements were established, resources exploited, trade developed and conflict often took place over territory and control of the same resources and waterways. With such a long-standing maritime legacy, it is no surprise that significant numbers of shipwrecks have been recorded from around our coast and while ongoing work by the National Monuments Service (NMS) has created an archive of over 18,000 wrecking events, it is estimated that the true figure could be as high as 30,000 wrecks. These losses off the Irish coast and in our inland waterways represent a wide variety of vessel types including logboats, currachs, medieval ships of all classes, fishing and trading vessels, steamships, submarines, warships, ocean-going liners and approximately 1,800 wrecks relating to World Wars I and II.

3.191 Other cultural sites and culturally significant environments including submerged landscapes, harbours, jetties, landing places, fish traps, kelp grids, bridge sites, crannogs and tidal mills attest to Ireland's rich underwater cultural heritage in the context of the wider landscape within which they are to be found. Evidence for this underwater heritage is found in Ireland's designated waters, along the Irish coastline (over 7,000km), in rivers, wetland environments, intertidal zones and beneath reclaimed areas of land which were formerly seabed. The underwater cultural heritage is a finite and irreplaceable resource, with both natural and man-made pressures threatening its preservation, which can include expanding marine development, threats from treasure hunting, unregulated salvage or increased erosion of our coastal areas as a result of climate change.

3.192 The NMS is responsible for maintaining the Sites and Monuments Record (SMR). The SMR provides details of all monuments and places (sites) in Ireland and there are in excess of 150,800 records in the database and over 138,800 of these relate to archaeological monuments. Many monuments are located in or adjacent to Ireland's coastal, intertidal,



SS Polwell

estuarine and subtidal zones. Information regarding these monuments can be accessed through the Historic Environment Viewer[9] which is an online digital mapping service providing access to both the databases of the NMS Sites and Monuments Record (SMR) and the National Inventory of Architectural Heritage (NIAH). All recorded monuments are afforded statutory protection under Section 14 of the National Monuments Acts 1930-2014.

3.193 Our maritime villages and towns are an integral part of Ireland's built heritage, many of which have an idyllic setting in relation to natural coastal or riverine features. The abundance of the major historic towns and ports are predominantly situated on the east, south east and southern coast of Ireland that afforded strategic access to Europe and the wider Atlantic and global trading routes over the centuries. These sites represent Ireland's past maritime trading interests and industry in exporting and importing goods and materials as well as being the nostalgic points of departure of Irish immigrants that made passage to new lands of opportunity. Many of these towns retain a distinct character arising from the development of prominent defensive infrastructure, harnessing dramatic topographical settings and lookouts which are evident from the sea approach and engineering ingenuity in the construction of harbours, piers and landings.

3.194 These historic coastal towns and harbours define our open island character and their surviving heritage assets, both above and below the water, provide a historic environment that is irreplaceable to coastal communities and is strategic for the on-going development of cultural tourism, such as that of the Wild Atlantic Way initiative. They present the opportunity for economic development, expansion and cultural developments where adaptation and re-use is well considered in the context of retaining original character, patina of age and structural integrity.

3.195 Legislation is in place to protect wrecks and archaeological objects in Ireland's territorial waters, in the intertidal zone and within the inland waterways. Section 3 of the National Monuments (Amendment) Act 1987 is the primary piece of legislation for the protection of wrecks over 100 years old and archaeological objects underwater irrespective of age. Wrecks that are less than 100 years old and archaeological objects, or the potential

[9] http://webgis.archaeology.ie/historicenvironment/http://webgis.archaeology.ie/historicenvironment/

location of such a wreck or archaeological object, can also be protected under the Act. An Underwater Heritage Order (UHO) can be placed on a wreck or object if it is considered to be of sufficient historical, archaeological or artistic importance to merit such protection. In 1995 the wreck of RMS Lusitania, torpedoed in 1915 by German submarine U-20 off the Cork coast, was protected under the relevant provisions of the Act, though it was less than 100 years old at the time.

3.196 The National Monuments Acts 1930-2014 also provide for the protection of monuments and archaeological sites and the regulation of archaeological works. All known archaeological monuments are entered into the statutory Record of Monuments and Places (RMP) and any person proposing to carry out works at or in relation to a recorded monument must give 2 months written notice to the Minister for Culture, Heritage and the Gaeltacht.

Key Issues for Marine Planning

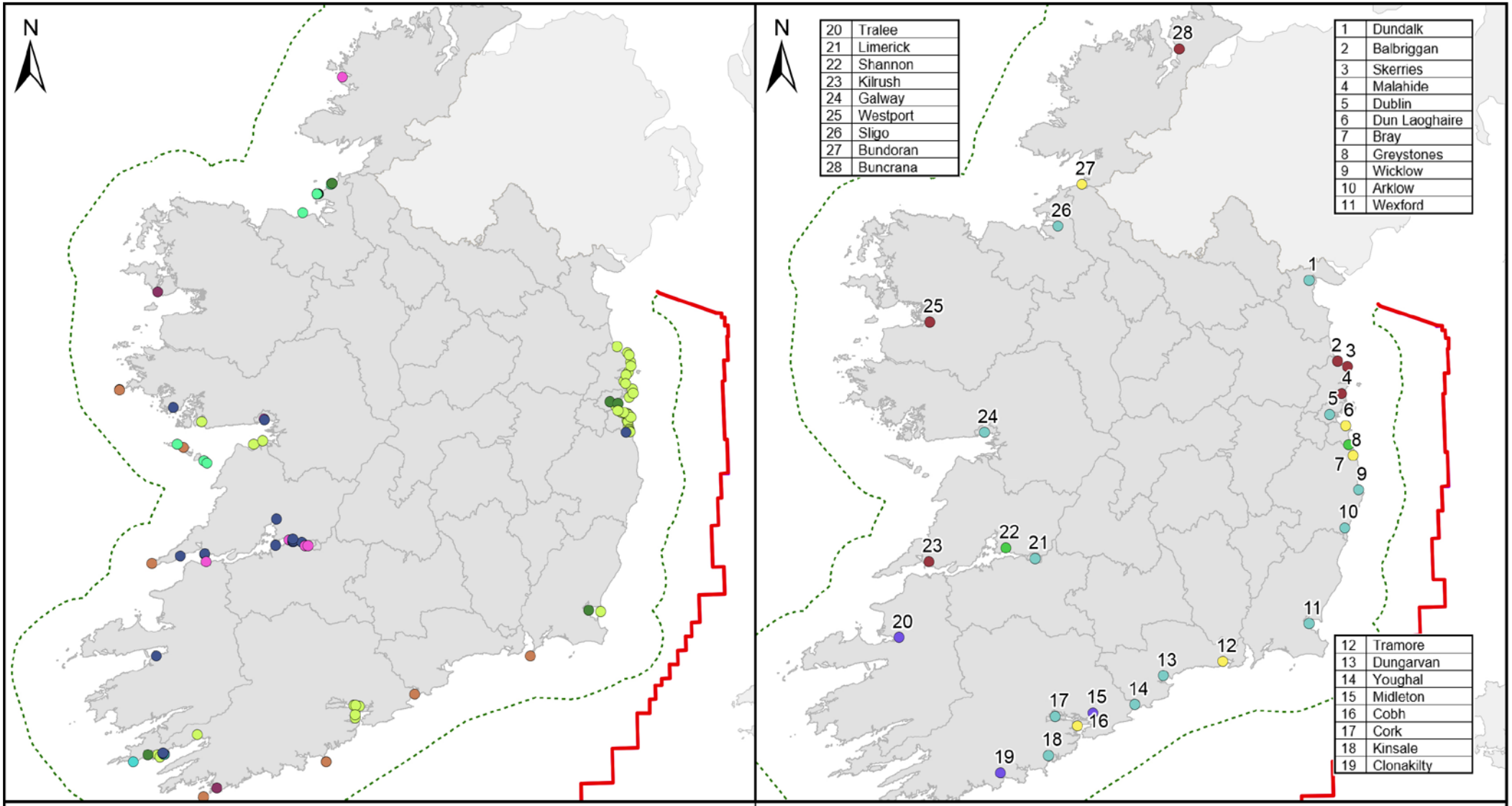
3.197 This policy supports the conservation of the historic environment and heritage assets both along the coast and beneath the waves. Current activity and predicted growth in marine industries pose an increasing threat to the historic environment and heritage assets. Safeguarding the historic environment for its intrinsic value, social benefits, services to other activities and access to it is important. Several activities have the potential for significant adverse impacts upon heritage assets. This includes tourism and recreation (such as through footfall on land) and activities at sea such as infrastructure development, dredging and fishing.

3.198 The aim of this policy is to make sure proposals do not have a detrimental impact on marine and coastal heritage assets and to extend consideration to those assets that are or have the potential to become significant. It will make sure that assets are considered in decision-making processes and extends to those assets that are discovered during the course of developments. The significance of heritage assets is determined by the type of designation and / or features of any given asset. The level of significance attached to a heritage asset should be considered in relation to any proposal along with the scale and type of impact that might occur in relation to said asset, enabling any impacts to be identified and managed.

3.199 Proposals unable to contribute to enhancing the significance of heritage assets will only be supported if they demonstrate that they will, in order of preference, avoid, minimise, or mitigate harm to the significance of heritage assets. If it is not possible, to avoid, minimise or mitigate harm, then the public benefits for proceeding with the proposal must outweigh the harm to the significance of the heritage assets.

3.200 Proposals should consider the potential impact of proposals on heritage assets taking into account the risk of damage to, or degradation of, assets. Proposals may include plans to avoid locations where heritage assets may be located, or to minimise compromise or harm through the use of less invasive construction techniques.

3.201 Proposals should consider evidence for the level of significance of a heritage asset, including information and advice from relevant regulators and advisors and how they are managed. This applies to both identified heritage assets and the potential for such assets to be discovered during development or activity.



Coastal Built Heritage sites

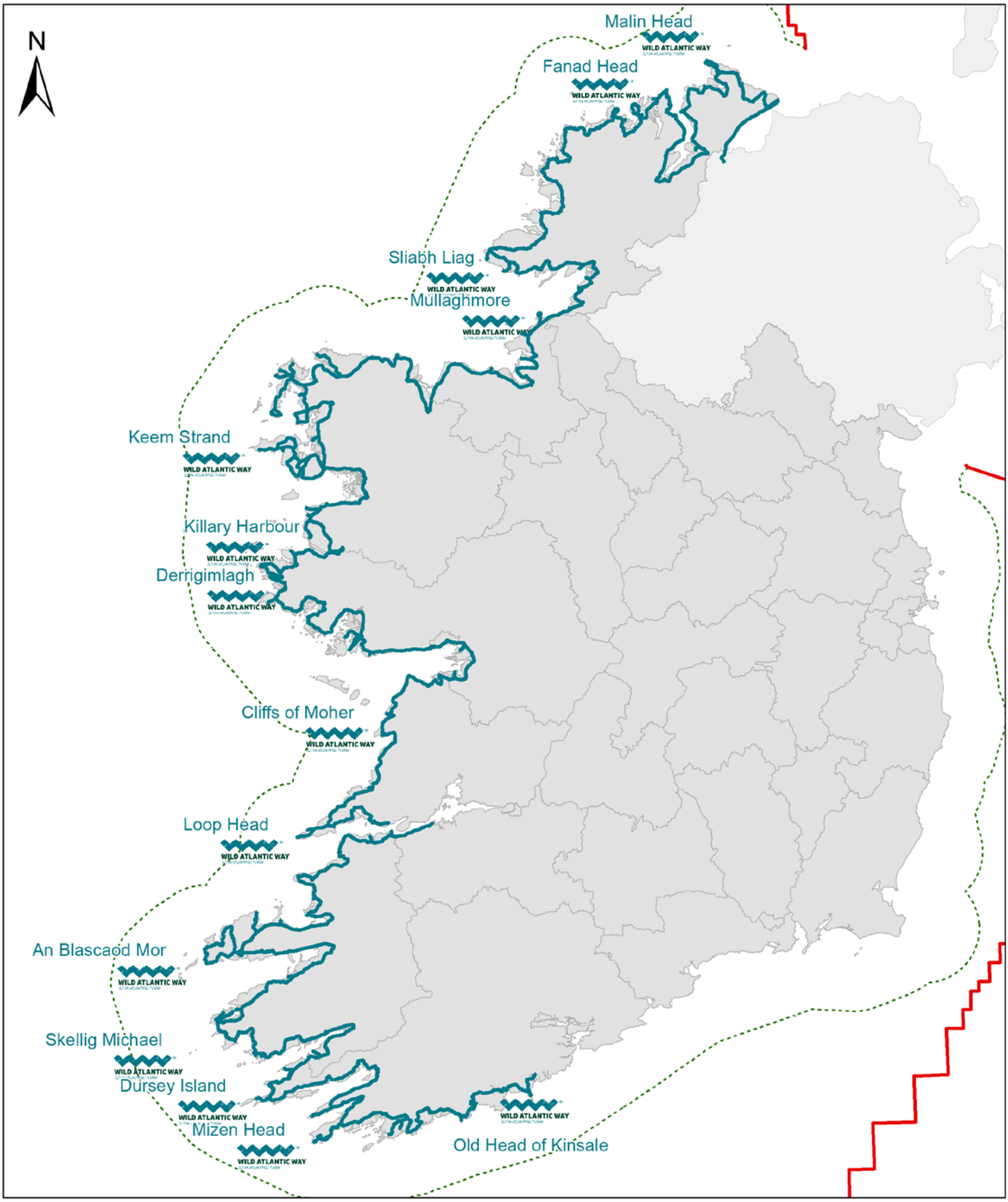
0 25 50 100 Kilometres

- Breakwater
- Causeway
- Lighthouse
- Martello tower
- Pier/Jetty
- Sea wall
- Seaweed stand
- Slipway

Historical Coastal Towns

0 25 50 100 Kilometres

- 12-15th Century Anglo-Norman
- 16-17th Towns of the Tudor-Stewart Plantation Period
- 18th Century Estate Towns
- 19th Century New Towns
- 20th Century New Towns and Satellite Towns



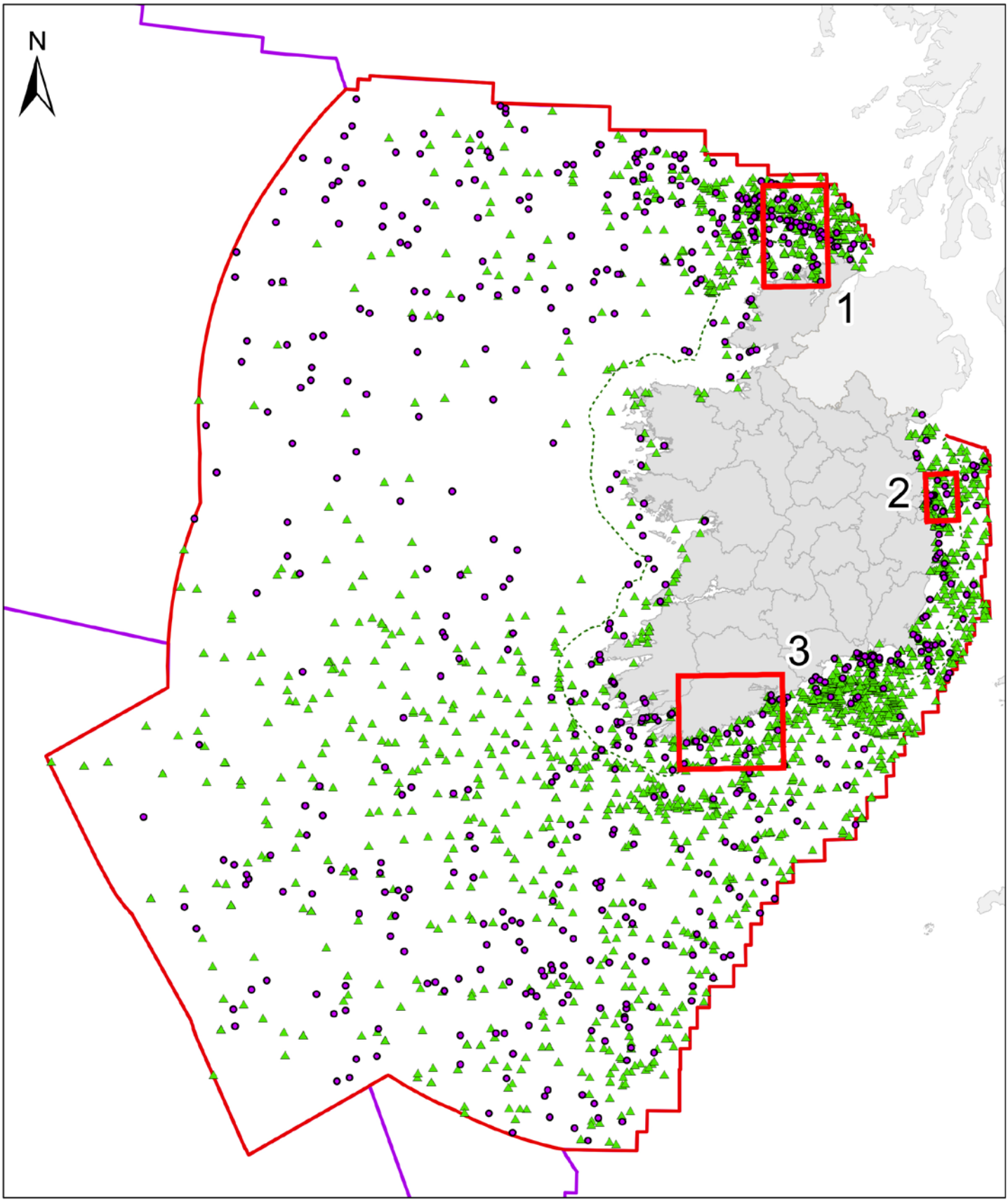
The Wild Atlantic Way

0 20 40 80 Kilometres

Wild Atlantic Way

Signature Discovery Points

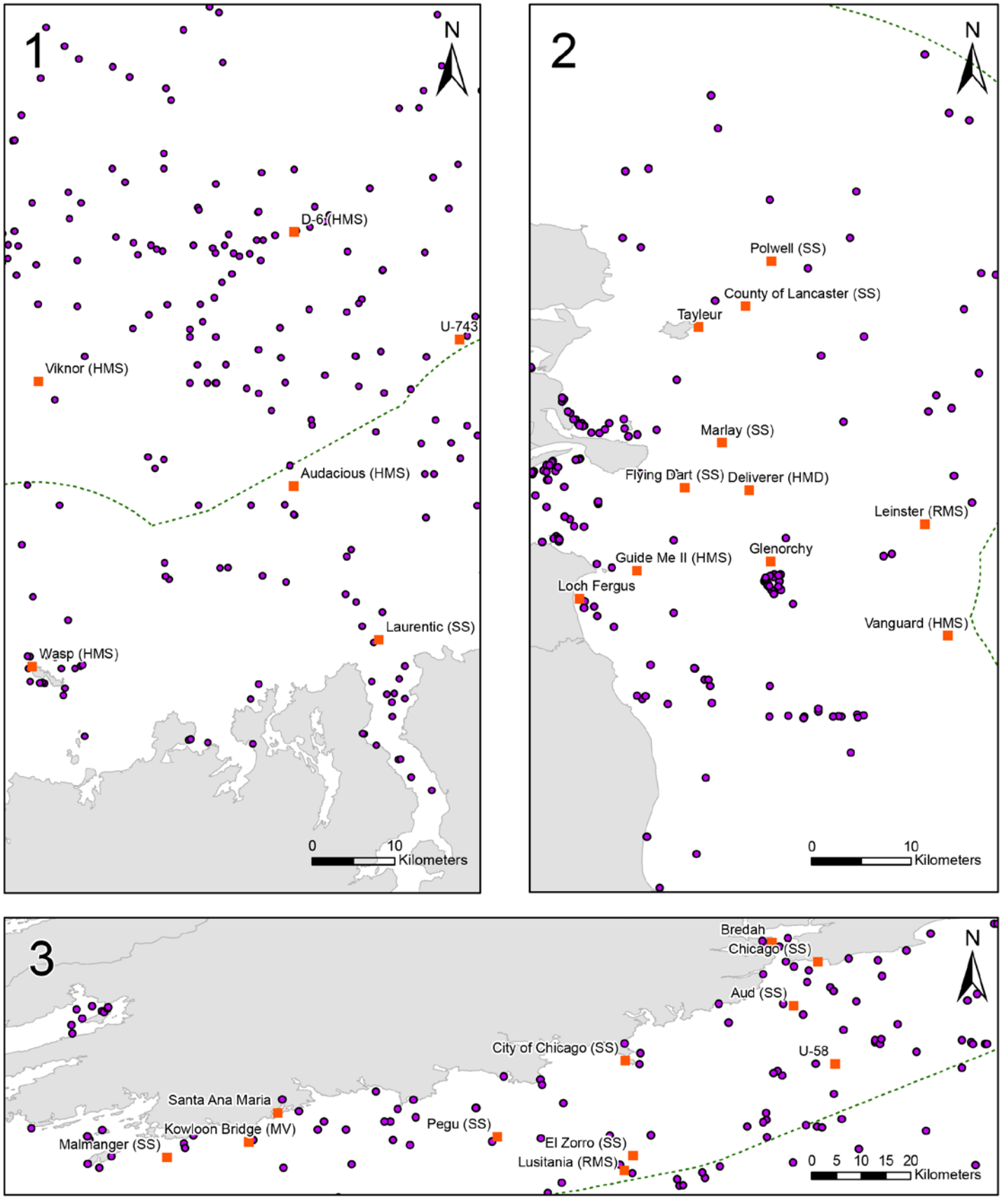
Credits: Failte Ireland, 2014



Ship Wrecks in Irish Waters

0 45 90 180 Kilometres

- Recorded Ship Wrecks
- Protected Wrecks



Ship Wrecks in Irish Waters

- Notable Wrecks
- Recorded Ship Wrecks

Rural Coastal and Island Communities

Planning Policies

- Proposals contributing to access, communications, energy self-sufficiency or sustainability of rural coastal and/or island communities should be supported.

Key References

- Marine Planning Policy Statement
- Ireland's Ocean Economy (June 2019)
- National Broadband Plan
- Oireachtas Joint Sub-Committee on Fisheries – Report on Promoting Sustainable Rural Coastal and Island Communities – Jan 2014

Background and Context

3.202 According to the latest update on Ireland's Ocean Economy (June 2019) from the Socio-Economic Marine Research Unit (SEMRU) at NUI Galway the coastal regions of Ireland can be classified according to a variety of different spatial scales, ranging from the shoreline inward:

- Coastal electoral districts (EDs) that are immediately adjacent to an ocean or sea, including transitional water bodies, include 710 of the 3409 electoral districts in Ireland and account for approximately 27% of Ireland's population;
- Coastal counties with a shoreline of any length adjacent to an ocean or a sea, including transitional water bodies, make up sixteen of the twenty-six counties in the Republic of Ireland and approximately 75% of Ireland's population lives in a coastal county;
- According to the European standard for classification of statistical regions, Ireland's coastal region includes approximately 94% of the Irish population.

3.203 Using coastal EDs and small area population statistics from the three most recent census of population the SEMRU reports the following characteristics of rural coastal EDs:

- approximately 17% of the population in rural coastal EDs have only a primary education;
- rural coastal EDs have a lower proportion of people with a third level education (31.10%) when compared to urban coastal EDs (43.29%);
- according to the Pobal Deprivation Index rural EDs at the coastal level tended to be worse off than urban, suggesting that coastal areas in Ireland have still not returned to pre-recession affluence levels.

Key Issues for Marine Planning

3.204 The analysis presented under the "Employment" policy above is equally applicable to, and should be read in conjunction with, this policy. In addition to that policy's support for employment-generating proposals, this policy supports proposals contributing to access, communications, energy self-sufficiency or sustainability of rural coastal and/or island communities.

3.205 Subject to compliance with all applicable environmental assessments and regulatory controls, proposals that might be supported by this policy include, but are not limited to:

- piers, harbours, slipways facilitating ferry links between rural coastal locations and islands;
- telecommunication links between rural coastal and island communities;
- renewable energy proposals facilitating greater energy self-sufficiency for rural coastal and island communities;
- proposals generally that would reduce deprivation, prevent depopulation and contribute to the sustainability of rural coastal and/or island communities.

Seascape and Landscape

Planning Policies

- Proposals should demonstrate how the impacts of a development on the seascape and landscape of an area have been considered. The proposal will only be supported if they demonstrate that they will, in order of preference:

  a) avoid,

  b) minimise, or

  c) mitigate

  significant adverse impacts on the seascape and landscape of the area.

- If it is not possible to mitigate significant adverse impacts, the public benefits for proceeding with the proposal that outweigh significant adverse impacts on the seascape and landscape of the area and its significance must be demonstrated.

Key References

- Marine Planning Policy Statement
- National Landscape Strategy for Ireland 2015 – 2025
- European Landscape Convention

Background and Context

3.206 The National Landscape Strategy and European Landscape Convention define landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”.

3.207 Seascape refers to landscapes with views of the coast or seas, and coastal areas and the adjacent marine environment with cultural, historical and archaeological links with each other. Seascape can be broken down into its constituent parts of visual resource and marine character. Visual resource refers to views of the coast and sea from land, views from the sea to land, and views from sea to sea. Character is the perception of an area, the combination of characteristics at the surface, within the water column and on the seabed.

3.208 The objectives of the National Landscape Strategy include:

- provide a policy framework, which will put in place measures at national, sectoral – including agriculture, tourism, energy, transport and marine – and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of our landscape;
- ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.

Key Issues for Marine Planning

3.209 Many areas of our coastline are distinctive for their natural beauty and their diverse range of activities. This policy aims to make sure that proposals consider their potential impacts on the seascape and landscape of an area. This is not only important for the protection of iconic views and character but also to aid in the process of enabling development where it is most appropriate.

3.210 The effects of development, such as through wind and tidal energy projects, port development, coastal defences, cable landings and pipelines, on an area's seascape and landscape should be considered. This is not only for individual areas, but also for the contributions they make to nationally designated sites and their setting. Increased footfall from tourism and recreation activities may raise the awareness of the area, but it can also change marine character and the visual resource.

3.211 Proposals that enhance or promote social benefits should be supported. Proposals unable to enhance or promote social benefits should demonstrate that they will, in order of preference:

a) minimise, or

b) mitigate

significant adverse impacts which result in the displacement of other existing or authorised (but yet to be implemented) activities that generate social benefits.

Social Benefits

Planning Policies

- Proposals that enhance or promote social benefits should be supported. Proposals unable to enhance or promote social benefits should demonstrate that they will, in order of preference:

  a) minimise, or

  b) mitigate

  significant adverse impacts which result in the displacement of other existing or authorised (but yet to be implemented) activities that generate social benefits.
- Proposals that increase the understanding and enjoyment of the marine environment (including its natural, historic and social value), or that promote conservation management and increased education and skills, should be supported.

Key References

- Marine Planning Policy Statement
- Ireland's Ocean Economy (June 2019)

Background and Context

3.212 Social benefits related to marine activities (and the natural and historic environment on which they are based) include, but are not limited to, improved health and well-being, enjoyment, cultural identity and a sense of place. In the first instance such benefits are gained directly by people in coastal communities immediately adjacent to the maritime area. This can be due to residing near the coast, with views of it, experiencing it in all weathers and seasons, and being able to regularly recreate in and adjacent to the maritime area. Some of these benefits can be gained by visitors to the area. People who may never visit the area may also gain social benefits through virtual experiences or just having confidence in its sustainable management. Social benefits are also derived indirectly from people gaining marine area-related employment and skills. Benefits are generally contingent on the natural and historic environment on which they are based. They may also require sector industries for their realisation (see for example related policies on Access, Tourism and Recreation, Fishing, Employment, Seascape and Landscape, Biodiversity, MPAs, Water Quality and Heritage Assets).

3.213 Displacement is when an activity is moved (in time or geographical space) because of the introduction or impact of another activity. It can mean that the activity may no longer be able to take place. There is a recognised need to better understand the potential social impacts (positive and negative, direct and indirect, permanent and temporary, as well as those resulting from cumulative effects) of displacement.

3.214 Many social benefits are derived all year round. Experiencing a sense of place, enjoyment of the seascape and health and well-being benefits are always available. Others such as personal satisfaction, indirectly obtained from employment and skills, may be seasonal if linked to patterns for fishing and the tourism sectors.

3.215 All residents of coastal communities and visitors gain social benefits from the maritime area over time, but to various degrees. Displacement of activities that produce social benefits, particularly ones that are important to coastal communities experiencing deprivation or other social challenges, is a concern. It is important to manage negative impacts on activities with social benefits. The need to encourage co-existence is essential in minimising or mitigating the negative impacts of displacement (OMPP on co-existence refers).

3.216 Sustainable development requires balanced assessment of environmental, social and economic cumulative impacts. Consideration of social impacts is especially necessary as they are particularly problematic to measure due to being more qualitative, indirect and diffuse.

3.217 Many social benefits are derived indirectly from employment (in many industries, but including fishing), having skills, access to and within the maritime area and recreation and tourism opportunities. Social benefits are also contingent on the natural and historic environment, seascape and landscape, good water quality and reduced marine litter.

Social benefits will be partly safeguarded as an indirect consequence of the effective implementation of relevant sectoral policies (see below). However, as social benefits are derived from such a wide range of sources, and are important to both residents and visitors who experience them in diverse ways, active intervention is required to ensure they continue to be provided.

Key Issues for Marine Planning

3.218 These policies aim to ensure that social benefits are explicitly addressed in proposals for new developments or activities. It encourages proposals that enhance or promote social benefits. If proposals are unable to demonstrate how they enhance or promote social benefits then they should demonstrate that they will, in order of preference minimise or mitigate impacts which result in the displacement of other existing or authorised (but yet to be implemented) activities that generate social benefits. Minimising requires impacts that displace activities to be reduced in size, frequency and extent. Mitigation means steps are taken at the same site of the proposal, or at a different site within or adjoining the area, to provide new social benefits that offset the loss of those displaced. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc. Proposals should include supporting information demonstrating how they will enhance or promote social benefits. Adverse impacts must be addressed in addition to describing any positive impacts. Evidence in support of social benefits is not a substitute for avoiding, mitigating or minimising adverse impacts.

3.219 Proposals should identify and evidence where possible:

- The activities already taking place in the area, and the resources on which they are based, that provide social benefits. Such activities and resources include, but are not limited to:
  - Access to and within the maritime area;
  - Recreation opportunities;
  - Tourism opportunities and businesses;
  - MPAs, Biodiversity and Geological features that support recreation, tourism and general awareness and appreciation;
  - Heritage assets;
  - Seascape/landscape character;
  - Fishing businesses and historical associations through past activity.
- The social benefits, that are derived from these activities, including, but not limited to:
  - Health and well-being;
  - Enjoyment;
  - Cultural identity;
  - A sense of place.
- The displacement of the above activities that would ensue from implementation/ operation of the proposal.

- Mechanisms to minimise and mitigate the reduction on social benefits due to the displacement of activities. These may include:
  - » Alternative access;
  - » New recreation and tourism opportunities (e.g. interpretation);
  - » Alternative businesses that can provide additional social benefits.

3.220 Proposals should identify adverse impacts in terms of both space (physical exclusion or removal from an area) and/or in time (preventing an activity taking place at certain times of day or year).

3.221 Proposals should include all significant adverse impacts which may be direct and/or indirect. Direct adverse impacts, for example, could include preventing the existing use of an area by recreational boating. Indirect impacts could include increased competition in another area created by fishing activity displaced from the proposal area, with consequential impacts on local ports, tourism, the environment, and recreational users obliged to use an area that was previously only used by shipping.

3.222 To reduce conflict and enhance compatibility, proposals should show how they will, in order of preference: minimise or mitigate social impacts of displacement. For example, impacts could be minimised through adjusting the:

- area used; or
- the times of the day or year when activities are operating.

3.223 Mitigation may include identification of alternative areas for the existing activity or support for new activities that generate similar social benefits to those displaced.

Transboundary

Planning Policies

- Proposals that have transboundary impacts beyond the maritime area, either on the terrestrial environment or neighbouring international jurisdictions, must show evidence of consultation with the relevant public authorities, including terrestrial planning authorities and other country authorities.

Key References

- Marine Planning Policy Statement

Background and Context

3.224 Ireland's maritime area has boundaries with other planning jurisdictions, both national and international. At high water mark at the coastline the maritime area adjoins the terrestrial planning jurisdiction. At sea, Ireland's maritime area forms part of the North-East Atlantic Region. Since it adjoins the neighbouring marine jurisdictions of Northern Ireland, Scotland, Wales and England there is the potential for direct transboundary impacts in those waters, and vice versa. Although Ireland's maritime area does not adjoin the marine jurisdictions of France, Spain and Portugal there is also the potential for indirect transboundary impacts in those waters, and vice versa.

Key Issues for Marine Planning

3.225 As outlined in Chapter 2 above, the NPF recognises the importance of integration between land and marine planning (Chapter 7) and the many shared aims and overlapping areas of co-ordination and activity across the two regimes. The NPF contains six national planning objectives that are specific to the marine sector. The Regional Spatial and Economic Strategies developed by Ireland's three regional assemblies also recognise the importance of the marine sector, as do many coastal local authority County and City Development Plans.

3.226 Similarly, the NMPF mutually recognises the importance of integration and co-ordination with the land planning regime at national, regional and local levels. Many activities and uses that take place on land or in the sea can have impacts on both the land and the maritime area. Both the MSP Directive and the Planning and Development Act 2018 (the national legislation transposing the directive) require that these land-sea interactions are considered. In future it will be equally important in turn that national, regional and local terrestrial plans are consistent with the NMPF when adopted – as they will be required to do under the Planning and Development Act 2018.

3.227 The MSP Directive and Planning and Development Act 2018 also oblige Ireland to consult and cooperate on a transboundary basis with neighbouring jurisdictions when developing marine plans. Transboundary consultation and cooperation is taking place on a mutual basis between Ireland and all of its neighbours in the North-East Atlantic Region: Northern Ireland, Scotland, Wales, England, France, Spain and Portugal.

3.228 This policy supports the objective of transboundary consultation and cooperation by requiring proposals that have transboundary impacts beyond the maritime area, either on the terrestrial environment or neighbouring international jurisdictions, to show evidence of consultation with the relevant public authorities, including terrestrial planning authorities and other country authorities.

4.0 Key Sectoral/Activity Policies

4.1 The following chapters present the Sectoral Marine Planning Policies for each individual marine sector or activity. Each chapter is structured in the same format under the following headings:

- Objectives
- Marine Planning Policies
- Key References
- Background and Context
- Key Issues for Marine Planning
- Interactions with Other Activities
- Issues for Sustainability

4.2 If maps are provided they appear at the end of the chapter.

4.3 The interdependent nature of activities in the maritime area mean that consideration of a policy relating to a particular sector in a decision may mean other policies are relevant to that process. The following table provides an indication of policy relationships, with a dot (●) indicating where consideration of a particular policy may mean other policies should be considered. This table is not definitive or exhaustive. The policies relevant to a given decision will be defined by the type and scale of proposal being put forward, the timing of phases of the proposal (including construction, operation, decommissioning), and the location. It will be for decision-makers and those making proposals to ensure proportionate, proposal-specific application of relevant plan policies to ensure compliance.

	Aquaculture 1	Aquaculture 2	Defence and Security 1	Defence and Security 2	Transmission 1	Transmission 2	Transmission 3	Transmission 4	Petroleum 1	Petroleum 2	Petroleum 3	ORE 1	ORE 2	ORE 3	ORE 4	ORE 5	ORE 6	ORE 7	ORE 8	ORE 9	ORE 10	ORE 11	Fisheries 1	Fisheries 2	Fisheries 3	Fisheries 4
Aquaculture 1			•	•		•	•			•	•		•	•	•	•						•	•			•
Aquaculture 2					•		•		•			•	•				•	•				•		•	•	
Defence and Security 1	•			•	•		•	•	•			•	•		•		•	•			•	•		•	•	
Defence and Security 2	•		•		•		•	•	•			•	•		•		•	•			•	•		•	•	
Transmission 1		•	•	•			•	•		•	•		•	•		•	•				•	•	•			•
Transmission 2	•						•		•			•	•		•		•	•	•		•	•		•	•	
Transmission 3	•	•	•	•	•	•				•	•		•	•					•		•	•	•			•
Transmission 4			•	•	•					•			•	•		•		•			•	•	•			•
Petroleum 1		•	•	•		•							•	•		•							•			•
Petroleum 2	•				•		•	•				•	•		•		•	•			•	•		•	•	
Petroleum 3	•				•		•			•		•	•		•		•							•	•	
ORE 1		•	•	•		•				•	•		•		•		•	•	•	•	•	•	•			•
ORE 2	•	•	•	•	•	•	•	•	•	•	•	•			•				•	•			•			•
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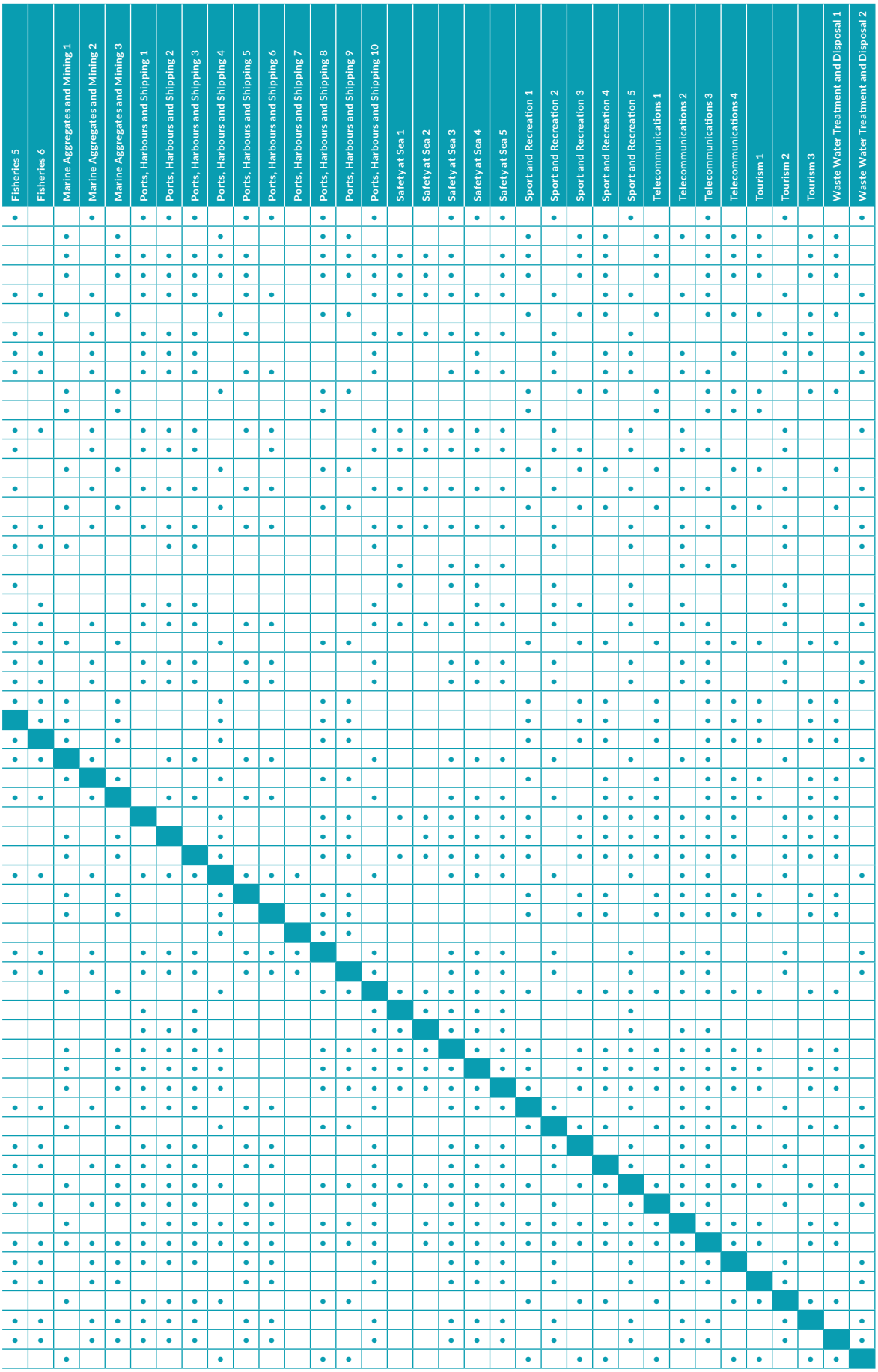
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Sport and Recreation 1
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Sport and Recreation 3
Sport and Recreation 4
Sport and Recreation 5
Telecommunications 1
Telecommunications 2
Telecommunications 3
Telecommunications 4
Tourism 1
Tourism 2
Tourism 3
Waste Water Treatment and Disposal 1
Waste Water Treatment and Disposal 2

5.0 Aquaculture

Objectives

- To support a diverse, compliant, growing aquaculture sector that operates in a modern licensing and enforcement system to produce high quality food, protects and enhances the social and economic fabric of rural coastal and island communities, and conserves biodiversity around our coasts.
- To maintain a best practice aquaculture licensing system that promotes the efficient use of space, protects water quality and supports the future potential of aquaculture.
- To further enhance the aquaculture licensing system so that it is characterised by the highest levels of legislative, administrative and scientific expertise and promotes the fullest possible trust in the regulatory system by aquaculture operators, environmental Non-Government Organisations (NGOs) and the general public.
- To develop enforcement strategies that deliver the best possible outcomes by achieving full compliance while keeping costs and administrative burdens to a minimum.
- To develop responsive regulation principles designed to enable a differential response to diverse operator behaviours in a proportionate manner.
- To ensure that the aquaculture licensing system has regard not only for the commercial value of the food provided under licence but, crucially, the social dividend for coastal communities arising from aquaculture activity.

Marine Planning Policies

Aquaculture Policy 1

Proposals for aquaculture development that demonstrate use of innovative approaches and/or contribute to diversification of species being grown in a given locality, particularly proposals applying a multi-trophic approach, should be supported.

Aquaculture Policy 2

Non-aquaculture proposals in aquaculture production areas must demonstrate consideration of and compatibility with aquaculture production. Where compatibility is not possible, proposals must demonstrate that they will, in order of preference:

a) avoid;

b) minimise;

c) mitigate significant adverse impacts on aquaculture.

If it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding

Key References

- Marine Planning Policy Statement
- National Strategic Plan for Sustainable Aquaculture Development
- National Strategic Plan for Sustainable Aquaculture Development – Mid-Term Assessment
- Review of the Aquaculture Licensing Process
- BIM Aquaculture Survey
- Sea Lice Control Strategy 2008
- Alien and Locally Absent Species in Aquaculture in Ireland
- Fisheries (Amendment) Act 1997
- Foreshore Act 1933
- Environmental Impact Assessment Directive 2011/92/EU, amended by Directive 2014/52/EU
- European Communities (Birds and Natural Habitats) Regulations 2011
- Marine Strategy Framework Directive
- Water Framework Directive

Background and Context

5.1 Aquaculture is an integral part of the coastal economy in Ireland and co-exists in various locations with other marine sectors such as ports, marine leisure and tourism. Aquaculture includes the culture or farming of fish, aquatic invertebrates, aquatic plants or any aquatic form of food suitable for the nutrition of fish. Land-based aquaculture may also require planning permission and a discharge permit from the local authority. Aquaculture licensing is administered through the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine. This Division also processes companion foreshore licences required for coastal aquaculture operations.

5.2 The Department considers all applications for aquaculture licences in accordance with the following legislation:

- Fisheries (Amendment) Act 1997;
- Foreshore Act 1933;
- EU Habitats Directive of 92/43/EEC;
- EU Birds Directive 79/409/EEC;
- Consolidated Environmental Impact Assessment Directive 2014/52/EU;
- Public Participation Directive (Aarhus Convention).

5.3 The licensing process takes account of issues such as hydrodynamic conditions, visual impact, impacts on Natura 2000 sites, other marine users and native fish stocks. The licensing process therefore involves consultation with a wide range of scientific and technical advisers as well as various Statutory Consultees. The legislation also provides for a period of public consultation. In addition to the above legislation the Department must adhere to a wide range of regulatory requirements and other legislation which impact on the licensing process.

5.4 Aquaculture is divided primarily between finfish, shellfish and seaweed species, and an aquaculture licence is required for this activity. Some aquaculture takes place on land but the vast majority of aquaculture activity takes place in the marine environment on the foreshore, with the main activity concentrated on the south, west and northwest coast. In Ireland almost all foreshore is in public ownership and aquaculture activity therefore requires both an aquaculture licence to conduct operations and a companion foreshore licence to lawfully occupy the area of foreshore in question. Even in the rare case of private foreshore an aquaculture licence is required to engage in aquaculture activity.

5.5 The latest Bord Iascaigh Mhara (BIM) Business of Seafood 2018 Report[10] indicates that Irish Aquaculture output in 2018 was 37,000 tonnes of farm-gate produce, worth €176 million across 288 aquaculture production units. Production declined in both overall volume (-21%), value (-15%) and unit value from 2017. While some areas such as rope mussel production have been relatively static since 2008, oyster production increased in volume from 2007 to 2016 by over 25%, with a value increase in the order of 128% over the ten year period. The salmon farming sector also experienced an increase in production in the order of 60% from 2007 to 2016, reaching 16,300 tonnes. However, the increase in value for salmon is quite striking with an increase of over 100%, reaching nearly €119 million in 2018. The industry employed 1,913 people directly on 288 primary production units in 2018.

Key Issues for Marine Planning

5.6 Planning for the strategic growth of the industry is a critical task in the period ahead. At a European level, while overall production has decreased over the last decade, it is generally anticipated that aquaculture production will increase to meet growing requirements for seafood, including strong demand for differentiated and quality assured seafood products within the EU — as well as the need to lower seafood imports and reduce pressures on fish stocks. Marine planning will play an important role in supporting a plan-led approach to the strategic development of the industry within Ireland and across the EU.

5.7 The Minister for Agriculture, Food and the Marine commissioned an Independent Review of Aquaculture Licensing in 2016 and the Report of the Group was submitted to the Minister in May 2017.

5.8 The Review Group carried out a detailed examination of the existing aquaculture licensing process, undertook comprehensive stakeholder consultation and looked at comparative national and international consent systems to determine best practice for managing a complex licensing process in a transparent, environmentally appropriate and legally robust manner. The Group's Report is published and available to view on the Department's website. A total of 30 separate recommendations are contained in the Report.

5.9 As all industry stakeholders and the EU Commission have, for different reasons, identified the elimination of the licensing backlog as the overriding priority in the reform of the licensing system, the Department's response has focused on this issue while continuing to have regard to the other recommendations in the Report. It should also be noted that the elimination of the licensing backlog will have an immediate beneficial effect on every individual aquaculture operator.

[10] http://www.bim.ie/media/bim/content/publications/corporate-other-publications/BIM-Business-of-Seafood-2018.pdf

5.10 Reflecting the key priority attached to the elimination of the licensing backlog by industry representatives, the Department immediately put in place a two-year programme to eliminate the backlog of shellfish licence applications. This two-year programme involves the achievement of 300 licence determinations in 2018 and again in 2019. A total of 305 licence determinations were achieved in 2018 and DAFM is on target to achieve the required further 300 licence determinations for 2019.

5.11 The Department has made over 900 licensing determinations since 2012 and this will increase to more than 1,200 by the end of 2019.

Interactions with Other Activities

5.12 Aquaculture has the potential to interact with a number of other sectors:

- **Wild salmon and migratory fish:** The extent and nature of the effects of interactions with wild salmonids is the subject of ongoing research in Ireland and other jurisdictions.
- **Inshore fisheries:** The location of fish farms potentially restricts access to existing fishing grounds by inshore fisheries vessels. There are also concerns about the potential for sea lice treatments to affect inshore shellfish stocks. These are among the issues addressed through consultation during the licensing process.
- **Recreation and Tourism:** The risk that fish farm cages and mussel lines pose as potential hazards to navigation is managed through consultation during the licensing process and mitigated by conditions attached to licences. While there can be competition for space with recreational boating and shipping, for instance in approaches to moorings and anchorages, the industry's own requirements for marine infrastructure such as harbours and slipways helps retain these facilities locally.

  While some tourism interests are concerned about the visual impact of aquaculture infrastructure on the landscape and seascape, there is also evidence that tourism businesses can benefit from the presence of a fish farm because it may provide a good point of interest for wildlife tours and supply local high quality produce.

- **Eutrophication:** Eutrophication can have adverse impacts on aquaculture in the form of toxic algal blooms and a resultant reduction of oxygen in the water. The main activities potentially contributing to eutrophication in Ireland's marine waters are land-based sources such as agriculture, wastewater treatment, and discharges from unsewered areas and industry.

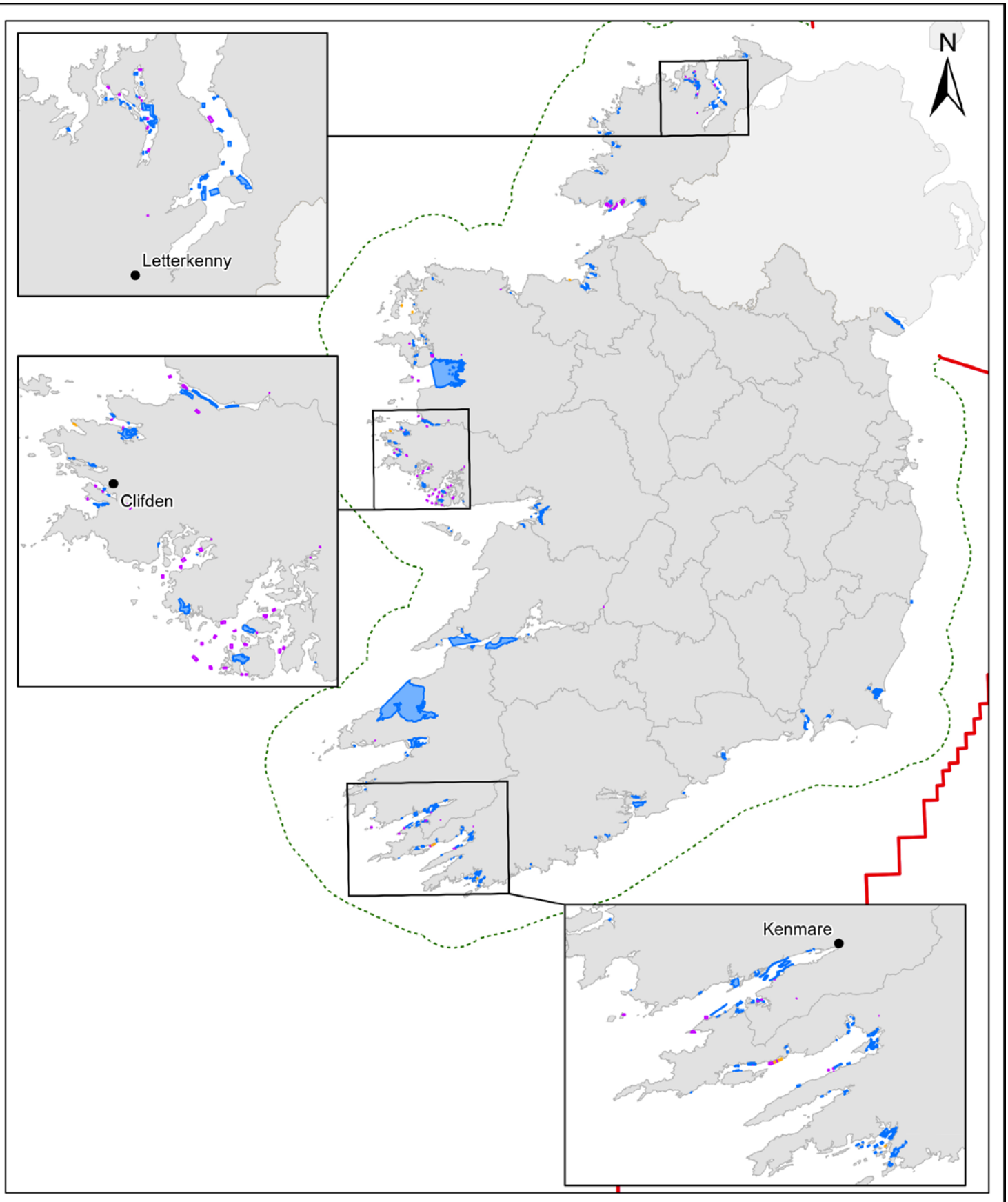
Issues for Sustainability

5.13 An increasing demand for aquaculture production can lead to increased pressure on a complex coastal environment. Appropriate Assessments (AAs) are carried out in respect of existing and proposed aquaculture activity pursuant to EU Birds and Habitats Directives. The potential impacts of aquaculture on designated maritime Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) are assessed. The Department of Agriculture, Food and the Marine prepares AA Conclusion Statements outlining how it is proposed to manage and license aquaculture activities in the SACs and SPAs in compliance with EU Natura 2000 Directives. Aquaculture projects in Natura 2000 sites are, if approved, licensed along with specific management actions and mitigation measures as appropriate so that the integrity of the relevant SACs and SPAs is maintained.

5.14 The carrying capacity of bays places limits on aquaculture in terms of adequate site selection and areas having sufficient nutrients to support the cultivation of shellfish, seaweed etc. Carrying Capacity studies can determine in a technical and scientific manner whether existing and proposed aquaculture activity is likely to have a detrimental effect on overall farmed fish growth due, for example, to a reduction in water flow or a reduction in plankton for the fish.

5.15 This draft NMPF, together with the National Strategic Plan for Sustainable Aquaculture Development and existing licensing and regulatory controls, aim to achieve the sustainable growth of the industry while minimising and mitigating environmental impacts through a range of measures, including:

- Screening and assessment of proposals in accordance with requirements of the Environmental Impact Assessment Directive and the Birds and Habitats Directives;
- Adopting an ecosystem-based approach to the assessment of proposals and taking into account carrying capacity of bays to ensure that appropriate siting, scaling, phasing and design of farms minimises impacts on ecosystems, protected sites, and protected species;
- Taking account of potential impacts for Good Environmental Status descriptors of the Marine Strategy Framework Directive;
- Considering wider biodiversity interests, heritage assets, seascape, landscape, and visual impacts;
- Employment of best industry management practices in relation to sea lice controls, disease management, prevention of escapes, and avoiding the introduction of non-native species.



Location of Licensed Aquaculture Sites

0 25 50 100 Kilometres

Aquaculture Sites

- Finfish
- Seaweed
- Shellfish

Credits: Department of Agriculture, Food and the Marine, 2019.

6.0 Defence and Security

Objective

- The Defence Organisation's[11] objective is to provide for the military defence of the State, contribute to national and international peace and security and to fulfil all other roles assigned by Government. The roles of the Defence Organisation in the maritime sphere include their contribution to maritime security encompassing the delivery of a fishery protection service and the operation of the State's Fishery Monitoring Centre. In co-operation with other agencies who have responsibilities in the marine domain, the Defence Organisation contributes to a shared common maritime operational picture. These responsibilities apply to the full extent of the State's sovereign territory, encompassing its landmass and maritime area. In fulfilment of these responsibilities the Naval Service and Air Corps maintain operational effectiveness to the greatest extent possible, which may require unimpeded access and the ability to deploy throughout the Irish maritime area at any time. They may also require the exclusive use of certain areas of sea at particular times. Military activities in the maritime area may involve operational, practice and training activities, routine patrolling, transporting equipment and personnel in and out of the country, and communications including using radar.

Planning Policies

Defence and Security Policy 1

Any proposal that has the potential to interfere with the performance by the Defence Forces of their security and non-security related tasks must be subject to consultation with the Defence Organisation.

This includes potential interference with:

- Safety of navigation and access to naval facilities;
- Firing, test or exercise areas;
- Communication, and surveillance systems;
- Fishery protection functions.

Defence and Security Policy 2

Proposals should only be supported where, having consulted with the Defence Organisation, they are satisfied that it will not result in unacceptable interference with the performance by the Defence Forces of their security and non-security related tasks. Proposals that have the potential to result in unacceptable interference with the performance by the Defence Forces of their security and non-security related tasks should be required to demonstrate, in order of preference, how they:

1. Avoid adverse impacts; and/or;
2. Minimise adverse impacts where they cannot be avoided; and/or;
3. Mitigate impacts where they cannot be minimised.

[11] Department of Defence and the Defence Forces (Army, Air Corps, Naval Service)

Key References

- Marine Planning Policy Statement
- White Paper on Defence 2015

Background and Context

6.1 The Defence Organisation provides a broad range of marine services in accordance with its primary security role, while it also undertakes a diverse range of non-security related tasks in Irish waters and beyond.

6.2 The Sea-Fisheries and Maritime Jurisdiction Act 2006 established the Sea-Fisheries Protection Authority (SFPA) as the competent Authority for securing efficient and effective enforcement of sea fisheries protection legislation and the sustainable exploitation of marine fish resources from the waters around Ireland.

6.3 The SFPA has a Service Level Agreement with the Department of Defence (DoD) to secure efficient enforcement of sea-fisheries law through support provided by the Irish Defence Forces.

6.4 An Annual Control Plan is agreed between the SFPA and the DoD. This plan sets out the strategy for achieving sea-fisheries control targets each year.

Naval Service

6.5 The Naval Service is the State's principal seagoing agency with a general responsibility to meet contingent and actual maritime defence requirements. It is tasked with a variety of defence and other roles. Defence roles include protecting and securing our marine waters, deterring intrusive or aggressive acts, conducting maritime surveillance, maintaining an armed naval presence, ensuring innocent right of passage and protecting marine assets.

6.6 The Naval Service flotilla is maintained at Haulbowline Naval Base in Cork. The primary day-to-day tasking of the Naval Service is to provide a fishery protection service in accordance with national legislation and the State's obligations as a member of the European Union. All the Naval Service ships are multi-tasked in the sense that, in addition to their fishery protection role, they also undertake maritime defence and security operations such as, but not limited to, general surveillance, security, pollution monitoring and marine search and rescue support, amongst other duties whilst on patrol.

6.7 Investment in a new ships programme since 2010 runs to over €250 million which has delivered four new Naval Service ships:

- LÉ Samuel Beckett was commissioned in May 2014,
- LÉ James Joyce was commissioned in September 2015,
- LÉ William Butler Yeats was commissioned into service in October 2016.
- LÉ George Bernard Shaw was commissioned into service in April 2019.

6.8 The Naval Service is also responsible for operating the State's Fishery Monitoring Centre (FMC). The day-to-day fishery protection outputs of the Naval Service and the Air Corps are co-ordinated by the FMC, which is based in the Naval Headquarters at Haulbowline.

Air Corps

6.9 The Air Corps operates from Casement Aerodrome, Baldonnel, County Dublin. Within the Air Corps, the primary mission of 101 Squadron is to support the Naval Service in the Maritime environment. 101 Squadron currently provides air surveillance capacity through two Airbus Military CN235-100 Maritime Patrol Aircraft. The Maritime Patrol Aircraft are primarily tasked and deployed on domestic fishery protection missions on the basis of target inputs and outputs as agreed with the SFPA.

6.10 In 2015, the Government published its White Paper on Defence which, inter alia, provides for the replacement of the existing Maritime Patrol Aircraft. It is envisaged that the replacement Maritime Patrol Aircraft will cost in the region of €100m. Work is underway on this replacement project.

6.11 The Naval Service and the Air Corps patrol the entire Irish Exclusive Economic Zone (EEZ) and, periodically, as agreed in the annual control plan, patrol beyond these limits to protect specific fisheries in accordance with international commitments in the areas of the mid-Atlantic governed by the North East Atlantic Fisheries Commission (NEAFC).

Key Issues for Marine Planning

6.12 Haulbowline Naval Base is of strategic importance to the Naval Service and Ireland given its geographic location. In line with the ongoing investment programme in new ships, there will be a need for future expansion of the Naval Base with the requirement for additional berthage and the development of a dry-dock. Future development in Cork Harbour will need to take cognisance of the unique requirements of the Naval Service.

6.13 It is vitally important to safeguard existing Naval Gunnery Ranges to ensure the Naval Service maintains its operational readiness to react to requests for assistance. These ranges include:

- D1 Gormanstown, Co. Meath;
- D13 Galley Head, Co. Cork; and
- D14 West of Castletownbere, Co. Cork.

6.14 While it remains difficult at this stage to anticipate the full impact on fishery protection requirements arising from the United Kingdom's decision to leave the European Union there may be an impact on the Naval Service and Air Corps in the context of maritime security and fishery protection. The potential implications for fisheries protection and monitoring of Irish waters will emerge during the course of ongoing negotiations.

Fastnet Lighthouse, Mizen Head, Co. Cork

Interactions with Other Activities

6.15 The Naval Service and Air Corps role in protecting Ireland's interests at sea is of strategic importance to the State. These interests include, but are not limited to, the following:

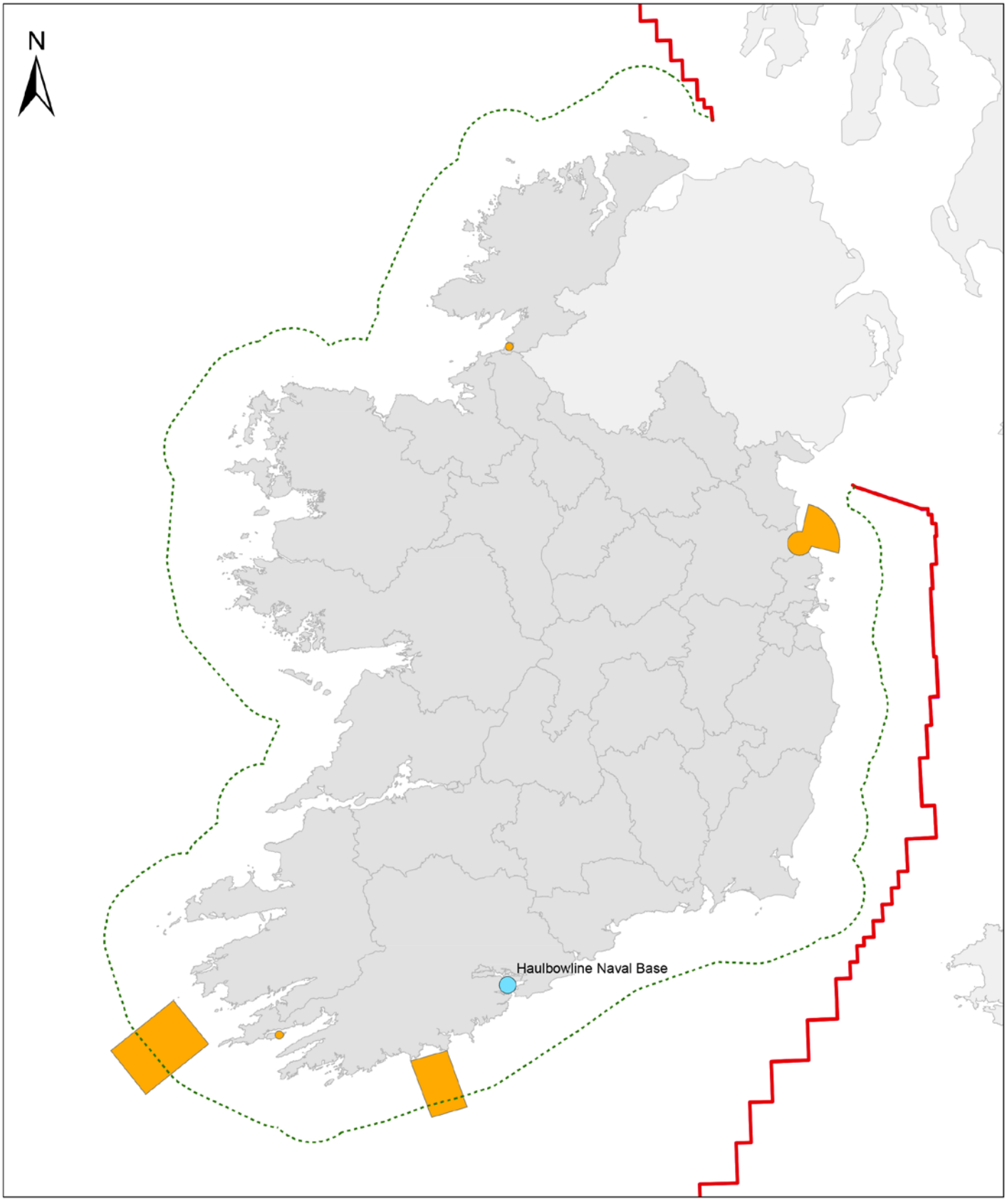
- Fisheries protection;
- Combatting illegal, unreported and unregulated fishing;
- National conservation sites;
- Installations for the production of renewable energy;
- Petroleum infrastructure;
- Maritime transport routes; and
- Submarine cables and pipeline routes.

6.16 The development of offshore renewable energy technology will lead to an increased focus on maritime-based energy systems in the coming years. The future development of infrastructure, necessary to produce gas or harvest renewable energy from wind, wave and tidal sources, needs to be monitored. Whilst the current threat to existing infrastructure is assessed as low, the security challenges that could be posed in the event of a change in the threat assessment will also need to be continuously reviewed.

6.17 Having a permanent capability to remain close to an area of operation for extended periods of time, while also enjoying a capability to refuel and resupply, would enhance the existing maritime operational capabilities of the Naval Service. In the context of future development of existing ports, or development of new port facilities, consideration could be given to allocating designated and safeguarded berthage for use by the Naval Service/Naval Service Reserve, if possible and appropriate having regard to the commercial constraints under which port companies operate as independent commercial companies.

Issues for Sustainability

6.18 Future development in Cork Harbour will need to take cognisance of the unique requirements of the Naval Service. The Naval Service should also strive to develop a sustainability policy in line with the Lower Cork Harbour.



Location of Marine Danger and Restricted Areas

0 25 50 100 Kilometres

Haulbowline Naval Base

Danger and Restricted Area

Credits: Irish Aviation Authority: ENR 5.1 Prohibited, Restricted and Danger Areas (2015).

7.0 Energy – Carbon Capture and Storage

Objectives

- To further examine the feasibility of the safe and cost effective utilisation of Carbon Capture and Storage (CCS) in Ireland, either in suitable geological formations such as depleted gas fields or for export to assist Ireland in meeting its CO_2 emissions reduction targets.
- If ultimately considered feasible, to develop CCS as a safe, viable technology to support the decarbonisation of electricity generation, energy intensive industry and CO_2-producing industrial processes, while Ireland continues to transition to low carbon electricity generation and industrial activity.
- If ultimately considered feasible, utilise CCS to decarbonise gas fired electricity generation in order to ensure the availability of dispatchable low-carbon generation to balance intermittent renewable generation, and thus to ensure Ireland's electricity security of supply.
- Where appropriate, to facilitate the use of existing infrastructure in the development of cost effective CCS in Ireland.
- To ensure consideration of all safety, health and environmental issues relating to the deployment of CCS.

Key References

- Marine Planning Policy Statement
- Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Government White Paper on Energy)
- National Mitigation Plan
- Climate Action Plan to Tackle Climate Breakdown

Background and Context

7.1 Carbon Capture Storage (CCS) is recognised as having the potential to assist Ireland in meeting its emissions reduction targets by supporting the transition to low carbon electricity generation and industrial activity. It is an emerging technology aimed at capturing CO_2 emissions from point sources such as fossil-fuel electricity generation and energy intensive industry. CCS has the potential to contribute to Ireland's climate action targets and involves the following:

- The capture of CO_2 at source from electricity generation or industrial activity.
- The transport of the captured CO_2 either by pipeline to a geological formation, such as a depleted gas or oil field for storage, or alternatively by ship to a remote storage location.
- The injection of the CO_2 into the geological reservoir for permanent storage.

7.2 Directive 2009/31/EC on the geological storage of CO_2 established a legal framework for CCS to contribute to the fight against climate change within the European Union. In Ireland, using geological formations for the capture and storage of carbon is currently prohibited under S.I. No. 575/2011 – European Communities (Geological Storage of CO_2) Regulations 2011. If necessary, further statutory provision enactment would be necessary to provide a legal framework for the utilisation of CCS in Ireland.

7.3 The Government's Energy Policy (White) Paper, *Ireland's Transition to a Low Carbon Energy Future 2015-2030*, states that CCS is recognised as a potential bridging technology that could support the transition to a low carbon economy. The National Mitigation Plan, published in July 2017, recognised that "Subject to commercial and technical considerations, CCS could facilitate decarbonisation of our electricity sector while allowing an appropriate level of gas fired generation to balance intermittent renewable generation". It also went on to commit the Department of Communications, Climate Action and Environment to exploring the feasibility of utilising depleted gas fields for the storage of CO_2. Both the (draft) National Energy and Climate Plan and the Government's Action Plan to Tackle Climate Breakdown identify the need to support further research into the feasibility of CCS deployment in Ireland.

7.4 As outlined in the Action Plan, the Department of Communications, Climate Action and Environment (DCCAE) has established a Steering Group to examine and oversee the feasibility of the utilisation of CCS in Ireland and report to the Standing Committee on Climate Action as appropriate.

Key Issues for Marine Planning

7.5 CCS is considered to be a technology with the potential to assist Ireland in its transition to low carbon electricity generation, in the context of the forecast increased demand for electricity. CCS, in allowing for the decarbonisation of electricity generation, has the capacity to support electricity security of supply by allowing the deployment of low-carbon, dispatchable electricity generation to support increased intermittent renewables in electricity generation. CCS may also provide an opportunity to substantially reduce CO_2 emissions from heavy industry, particularly where industrial activity is clustered close to gas fired power generation or CO_2 transport infrastructure.

7.6 Research into the potential to commercially deploy CCS in Ireland is currently being conducted by Ervia[12], who are examining the feasibility of using the Kinsale Head gas field. The company are exploring ways in which Ireland can safely, securely, economically and in an environmentally acceptable manner, store CO_2, and/or the potential to export CO_2 for storage abroad. This study has identified the potential to capture CO_2 from the two gas fired power plants in Cork, and from other energy intensive industry currently clustered in the area, and store it in the depleted Kinsale Head gas field. The potential for the reuse of existing infrastructure is also being considered, including the use of the pipeline, previously used to bring gas onshore, to transport CO_2 for injection into the gas field.

7.7 It is likely that further research into the potential deployment of commercial CCS in Ireland will continue, conducted by both the State and, potentially, the private sector. This research work will feed into the policy group established by DCCAE.

7.8 Specific marine planning policy development for the commercial deployment of CCS will be considered in the context of the outcomes of the above feasibility studies.

Interactions with Other Activities

7.9 Energy intensive industry can be maintained or further developed, where clustered with CCS storage or transport facilities. The co-location of CCS activities with other activities such as Petroleum may provide opportunities for the reuse or sharing of infrastructure, such as pipelines or platforms.

7.10 The construction of CCS infrastructure, either storage or transport facilities, would provide for employment opportunities in both the construction phase and in their subsequent operation.

Issues for Sustainability

7.11 CCS has the potential to aid Ireland in meeting CO_2 reduction targets, while at the same time, if used to significantly reduce CO_2 emissions from power generation, ensure that the State maintains the level of energy security needed to provide for economic growth. Other sustainability and environmental considerations will be considered in the context of the ongoing feasibility studies and future development of a regulatory framework.

[12] https://www.ervia.ie/business-development/carbon-capture-storage/

8.0 Energy – Offshore Gas Storage

Objectives

- Analysis of options for increased gas storage, taking into account the interdependent nature of gas and electricity systems, interconnections with other jurisdictions where storage exists, and Liquefied Natural Gas (LNG) potential.

Key References

- Marine Planning Policy Statement
- Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Government White Paper on Energy)
- Climate Action Plan to Tackle Climate Breakdown

Background and Context

8.1 Gas Storage is an activity that allows for the storing of gas during periods of low demand (e.g. summer months) in large-scale storage reservoirs, then accessing that gas when demand increases (i.e. in winter). Gas storage in depleted fields is achieved by injecting gas into the reservoir. To maintain pressure within the reservoir a certain amount of gas ('cushion gas') is left. This gas maintains the pressure within the fields and enables deliverability of gas from the field during the winter when the gas is withdrawn to meet winter demand. As natural gas can be stored for an indefinite period it is largely a commercial decision for a storage operator as to when gas is injected and withdrawn. There is limited gas storage capacity in Ireland despite the role it may play in enhancing security of supply and in electricity generation flexibility. The commercial viability of gas storage is dependent on the price differentials between summer and winter gas.

8.2 There are a number of factors that influence this, including-

- The nature of Europe's integrated gas pipeline network which reduces the need for storage capacity;
- Greater flexibility in pipeline import contracts, including contracts with Russia, Norway and Algeria, which has enabled buyers to rely on contractual flexibility rather than book storage capacity;
- Increased European LNG imports resulting in surplus regasification capacity.

8.3 Kinsale Energy operated the first and, to-date, the only offshore natural gas storage facility utilising the depleted Southwest Kinsale gas field. The Southwest Kinsale gas field was converted to an offshore storage facility with a storage capacity of 230 million cubic meters. However, in 2016 Kinsale Energy decided to close the storage facility and the last of the gas reserve was withdrawn from the reservoir in March 2017.

8.4 Shannon LNG (SNLG) project is a commercial proposal to construct a Liquefied Natural Gas (LNG) terminal near Ballylongford, County Kerry, including connection to the gas transmission system. An LNG facility would provide additional security of supply to Ireland, in that it would bring diversity to Ireland's gas supply sources and would bring connectivity to the global LNG market.

8.5 The SNLG is on the current EU list of Projects of Common Interest (PCI). The project is a private commercial project which has been designated PCI status since the first list was established in 2013. Ireland has supported the inclusion of the project on the European list of Projects of Common Interest as it would enhance Ireland's security of supply. However, the development of the Shannon LNG project is reliant on future investment decisions by the project promoter.

Key issues for marine planning

8.6 Ireland does not currently have a regulatory framework to license stand-alone natural gas storage facilities. The Department of Communications, Climate Action and Environment is in the process of developing legislation to provide for offshore natural gas storage as a stand-alone activity. This is required to provide certainty to prospective infrastructure providers and to ensure that the market is able to provide the infrastructure facilities that can make a significant contribution to Ireland's security of gas supplies.

8.7 The legislative framework will take account of the Marine Planning Policy statement in relation to, for example, the need for a robust, stable and effective regulatory regime to attract investment, demonstrate stability and ensure protection of the marine environment.

8.8 The framework will also need to comply with the United Nations Convention on the Law of the Sea (UNCLOS) and take account of the different rights permitted by articles 56 and 77 of UNCLOS in respect of the Exclusive Economic Zone (EEZ) and the continental shelf.

8.9 As set out under the 2015 Energy Whitepaper, the Department of Communications, Climate Action and Environment is conducting an analysis of options for increased gas storage, which will take into account the interdependent nature of gas and electricity systems, interconnections with other jurisdictions where storage exists and LNG potential. Pending the completion of that work, the NMPF does not propose specific Petroleum Services-related marine planning policies but the situation will be kept under review in light of broader policy development.

Interactions with Other Sectors

8.10 There are a wide range of potential synergies and operational interactions between gas storage and other sectors. Synergies include the continuous use of ports and harbours in supply and transfer operations, possible colocation with wind energy installations, supply chain services, and the potential for installations to act as artificial reefs providing new protections for biodiversity.

8.11 Potential adverse interactions include displacement or exclusion of other activities such as fishing, shipping or recreational activities, disturbance to marine life, particularly during seismic activities (during exploration phases rather than storage), and general competition for space.

Issues for Sustainability

8.12 Future sustainability and energy security are intrinsically linked. Security of energy supply is a key imperative for Ireland and the European Union. One possible option for enhancing security of supply, if it is deemed necessary, is commercial gas storage as a measure to mitigate potential security of supply disruptions.

8.13 Gas Network Ireland and EirGrid, with oversight by the Commission for the Regulation of Utilities (CRU) and DCCAE, are conducting a study into Ireland's resilience to a long-term gas disruption, which includes the possible need for gas storage and LNG. This study will inform the formulation of future policy measures to maintain the resilience of Ireland's gas and electricity supply.

8.14 As set out above, gas storage installations and activities have potential adverse ecological impacts which must be identified, analysed and mitigated against as part of the forward planning and development management stages of marine planning.

9.0 Energy – Transmission

Objectives

- Support Ireland's decarbonisation journey through diversification of supply options increased.
- Strengthen the policy framework to incentivise interconnection.
- Provide enhanced security of energy supply for Ireland in the short and medium term, in accordance with the Government White Paper on Energy and Government Action Plan to Tackle Climate Disruption.
- Ensure good regulatory practices in the provision of gas and electricity transmission infrastructure, according to international best practice.

Planning Policies

Transmission Policy 1

Gas or electricity transmission proposals that maintain or improve the security and diversity of Ireland's energy supply, including interconnectors, should be supported.

Transmission Policy 2

Proposals for activities that are in or could affect energy transmission proposals in sites held under a permission or that are subject to an ongoing permitting or consenting process for energy transmission proposals should demonstrate that they will in order of preference:
a) avoid,

b) minimise,

c) mitigate adverse impacts,

d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Transmission Policy 3

Decisions on transmission developments should be informed by consideration of space required for other activities of national importance described in the NMPF.

Transmission Policy 4

Where possible, opportunities for land-based, coastal infrastructure that is critical to and supports energy transmission should be prioritised in plans and policies.

Key References

- Marine Planning Policy Statement
- Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Government White Paper on Energy)
- Climate Action Plan to Tackle Climate Breakdown
- 2018 National Policy Statement on Electricity Interconnection
- Energy Union Strategy

Background and Context

9.1 Ireland's peripheral location at the edge of mainland Europe means that it is naturally isolated from the wider European electricity grid. This fact, combined with the small size of the market, leads to risks to security of supply and reduced competition.

9.2 Steps have been taken to address this isolation by building interconnection infrastructure that links Ireland to larger cross border markets and brings direct benefits to Irish consumers through lower energy costs. Ireland currently has trans-marine electricity interconnection with the UK (the East West Interconnector linking Ireland to Wales) and EirGrid is currently engaged with French partners in developing the Celtic Interconnector project to provide an electricity link between Ireland and France. A further trans-marine interconnection with the UK is also proposed.

9.3 Increased levels of storage and interconnection will also be critical to absorbing high levels of renewable generation onto the system, as renewables require back-up which will have to be provided by quick response plant, storage or interconnection

The 2018 National Policy Statement on Electricity Interconnection[13] sets out Government policy on the development of electricity interconnection between Ireland and neighbouring countries. This policy statement builds on various commentary and commitments in the Government's Energy White Paper. One of the key needs identified by the White Paper is the necessity for appropriate energy infrastructure, including energy networks and interconnection with other countries' energy systems.

9.4 Interconnection is viewed as critical infrastructure by the European Union. The second pillar of the EU's Energy Union Strategy[14] is the delivery of a fully-integrated Internal Energy Market using interconnectors to allow energy to flow freely across the EU. European policy is therefore explicit in its support of electricity interconnection between Member States, and interconnection projects are facilitated under the EU Projects of Common Interest (PCI)[15] process. PCIs are key infrastructure projects that link the energy systems of EU countries. They are intended to help the EU achieve its energy policy and climate objectives: affordable, secure and sustainable energy for all citizens, and the long-term decarbonisation of the economy in accordance with the Paris Agreement[16]. The EU approach to interconnection also derives from a lasting focus on solidarity between Member States.

9.5 In its 2014 European Energy Security Strategy[17] the European Commission committed to working with Member States to ensure speedy implementation of PCIs and other measures to meet the target of achieving interconnection of at least 10% of installed electricity production capacity for all Member States by 2020 and 15% by 2030. Ireland's interconnection level is currently at 7.4% as reported by the European Commission[18] .

[13] https://www.dccae.gov.ie/en-ie/energy/publications/Documents/19/National%20Policy%20Statement%20on%20Electricity%20Interconnection.pdf
[14] https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/building-energy-union
[15] https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest
[16] https://ec.europa.eu/clima/policies/international/negotiations/paris_en
[17] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0330&from=EN
[18] https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-ireland_en.pdf

Gas

9.6 Natural gas remains an important component in Ireland's energy mix. It is the dominant fuel for electricity generation (48% in 2016). Ireland's natural gas comes from both indigenous production and imports. The indigenous resources include gas fields at Kinsale and Corrib. The balance of our natural gas requirement is imported from the UK. Ireland, Northern Ireland and Great Britain are physically interconnected by two interconnector pipelines under the Irish Sea, which are owned and operated by Gas Networks Ireland (GNI) and its subsidiary GNI (UK), and there is a continued mutual interest in ensuring the on-going operation of arrangements to deliver safe, secure and competitive energy supplies for consumers.

9.7 Natural gas imported from the UK is a significant percentage of Ireland's overall gas supply. In 2015, prior to the Corrib gas field, gas imported from GB accounted for 97% of total demand. In 2016, indigenous gas production met over 55% of Ireland's gas demand, with the balance of our natural gas imported from the UK via the interconnectors. Supplies from Corrib will decline in the coming years with 84% of Ireland's natural gas peak day demands forecast to be met by imports from the UK in 2024/2025. This demonstrates continued reliance on imported natural gas from the UK in the medium term. The two undersea interconnectors will therefore remain as a vital part of Ireland's energy transmission infrastructure for the foreseeable future.

Key Issues for Marine Planning

Electricity

9.8 With Ireland's national policy position on electricity interconnection now in place, the Commission for Regulation of Utilities (CRU) is separately developing an approach to the regulatory treatment of interconnector applications. Across a series of papers and consultations launched in 2016, the CRU has most recently launched a consultation on its planned assessment criteria for electricity interconnection applications. Interconnector projects will need appropriate regulatory treatment to be decided before the final investment decision will be taken.

9.9 Where a trans-marine interconnector project moves into the construction phase then it must comply with all national, EU and international obligations regarding the protection of the marine environment. Electricity transmission lines must be sited and erected in a manner that fits within the wider planning framework and in line with appropriate planning guidelines and principles.

9.10 Two existing electricity interconnector project proposals – Celtic linking Ireland with France, and Greenlink linking Ireland with Wales – will, if constructed, deliver important electricity connectedness with neighbouring countries. Such connectivity has a range of benefits not least its positive impact on Ireland's security of electricity supply. It is important that key infrastructure projects such as electricity interconnectors are delivered and the associated public interest benefits are achieved.

Gas

9.11 It is not envisaged that any further international interconnector pipelines will be constructed. The undersea upstream pipelines connecting production facilities to downstream shore terminals such as Corrib – Bellanaboy and Kinsale Area – Inch (which will cease production in early 2020) are not "interconnectors" as they do not connect separate national systems. Upstream pipelines from any further offshore sources that may be found will be developed in accordance with relevant legislative and regulatory regimes, including the Marine Spatial Plan.

Interactions with Other Sectors

9.12 A secure, efficient and robust system is a critical component underpinning economic development. The presence of trans-marine interconnectors will provide reinforcement of the national electricity grid, facilitating quick and efficient flows between energy markets and across the grid. Interconnectors provide additional transmission capacity that can cater for all levels of anticipated growth in consumption for many years.

9.13 In the construction of transmission lines offshore, care must be taken to limit potential disturbances to marine life, shipping routes and other activities including fishing.

Issues for Sustainability

Electricity

9.14 If the proposed interconnectors proceed, they have the potential to provide reliable high-capacity electricity links between Ireland and France, and Ireland and the UK that would have significant benefits for the people of Ireland. Access to the EU and UK electricity markets would lead to expected increased competition and lower prices in Ireland, and also to improved security of electricity supply. Market access would also facilitate increased capacity for renewable energy here in Ireland via export access to these markets.

9.15 The proposed projects are undergoing stringent social impact assessments so that any adverse social impacts that may arise from a project's development may be pre-empted and prevented. A high-level social impact assessment baseline report has already been prepared for the Celtic project, which examines issues such as the geographical setting, the environment, plus the communities and amenities of proposed landing points for the transmission line. Both projects have published details of marine route investigations undertaken within associated feasibility studies.

Gas

9.16 Natural gas is a clean fuel from an air quality perspective, as it has almost no particulate matter emissions, which are estimated to cause over 1,500 premature mortalities in Ireland annually. Natural gas has a much lower CO_2 content per unit of energy than coal or oil.

9.17 Long-term Irish energy policy is focussed on achieving the transition to a low carbon energy system in a secure and cost effective manner, with the most recent statement of this in the 2015 energy policy White Paper. This envisages that in the short-to-medium term the non-renewable part of the energy mix will shift away from more carbon-intensive fuels to lower-carbon energy sources, like natural gas, and to renewables. The paper states that providing natural gas network infrastructure is essential for the proper functioning of the markets. In this context, developing, maintaining and upgrading the gas networks is crucial, to ensure that the energy system remains safe, secure and ready to meet increased demand as economic conditions improve. It is acknowledged that infrastructure will be required to support this energy transition across the transport, heat and electricity sectors, with the need for this new energy infrastructure to be assessed through robust analysis. As stated above, any future undersea upstream pipelines that may be constructed will also be subject to relevant legislative and regulatory regimes, including the Marine Spatial Plan.

10.0 Energy – Petroleum

Objectives

- Explore and develop Ireland's indigenous petroleum resources in order to deliver significant and sustained benefits, such as import substitution, fiscal return, national and local economic development and technology learning.
- Provide enhanced security of supply for Ireland in the short and medium term, in accordance with the Government White Paper on Energy, while Ireland transitions to more decarbonised sources of energy.
- Ensure good regulatory practices in exploration and production, including decommissioning of existing production facilities when resources are exhausted, according to international best practice.

Planning Policies

Petroleum Policy 1

Proposals that maximise the long-term supply of petroleum should be supported, provided they fully meet the environmental safeguards contained within licensing processes.

Petroleum Policy 2

Proposals in areas where petroleum activities or petroleum production infrastructure have been approved, or where applications are under consideration, should only be authorised where compatibility with the existing, authorised or proposed activity can be satisfactorily demonstrated or there are exceptional circumstances.

Compatibility should be achieved, in order of preference, through:

a) avoiding, or

b) minimising, or

c) mitigating

adverse impacts.

If it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Petroleum Policy 3

Proposals potentially affecting future potential activity in areas (blocks) subject to petroleum licensing should avoid sterilisation of that area for future petroleum extraction and demonstrate how they, in order of preference:
a) avoid, or

b) minimise, or

c) mitigate

potential adverse impacts on those activities.

If it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Key References

- Marine Planning Policy Statement
- Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Government White Paper on Energy)
- Climate Action Plan to Tackle Climate Breakdown
- Licensing Terms for Offshore Oil & Gas Exploration, Development & Production
- Method for Assessment of indemnity/insurance of Petroleum Authorisation Holders
- Financial Capability Assessments – Offshore Oil & Gas Exploration
- Oil and Gas Tax Terms
- Exploration Database (IPAS)
- Licences and Maps
- ObSERVE Programme
- Irish Offshore Strategic Environmental Assessments
- Petroleum and Other Minerals Development Act 1960 as amended by
  - Energy (Miscellaneous Provisions) Act 1995
  - Gas (Interim) (Regulation) Act 2002
- Continental Shelf Act 1968 as amended by
  - Energy (Miscellaneous Provisions) Act 1995
  - Sea Pollution Act 1991
- Gas Act 1976 as amended by
  - Gas (Amendment) Act 1993
  - Energy (Miscellaneous Provisions) Act 1995
  - Gas (Amendment) Act 1998
  - Gas (Amendment) Act 2000
  - Gas (Interim) (Regulation) Act 2002
- Petroleum (Exploration and Extraction) Safety Act 2010
- Petroleum (Exploration and Extraction) Safety Act 2015
- Finance Act 2015
- European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013
- European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019

Background and Context

10.1 Since exploration began in the Irish offshore, four commercial gas discoveries have been made: Kinsale Head, Ballycotton, Seven Heads and Corrib. All gas production from these fields has been delivered to the Irish market. There have been no commercial discoveries of oil to date.

10.2 Early exploration efforts viewed the petroleum geology of the Irish offshore as being comparable to that of the North Sea. A lack of success from drilling efforts in the 1970s and 1980s led to a decline in interest. However, industry perspectives as to the potential of the Irish offshore have been transformed in recent years. While the North Sea comparison retains potential, new possibilities have emerged.

10.3 Successful exploration off the Atlantic coasts of Africa, South America and Canada, along with new data, analysis and targets have stimulated new interest in the potential of the Irish Atlantic Margin. Exploration interest is now focusing on the scope for Ireland to replicate the petroleum successes of Newfoundland-Labrador.

10.4 The Corrib gas field demonstrated the impact indigenous supplies can have, where Ireland went from importing almost 90% of our overall energy needs in 2015, to 70% of our energy needs in 2016 — a significant improvement in our security of supply. Ireland is now in a position where almost 60% of its natural gas need is met by indigenous production.

10.5 However, the Kinsale fields (Kinsale Head, Ballycotton, and Seven Heads) are expected to cease production by 2021, while by 2025/26 Corrib gas supplies will have declined to less than 40% of initial peak production levels. The anticipated reduction in Corrib and Inch gas supplies will re-establish the Moffat Entry Point interconnector from the UK as the dominant supply point from 2019.

10.6 Post-Brexit, Ireland's – and the European Union's – import dependency will be exacerbated by becoming increasingly reliant on non-EU sources of energy. Imports may come from, inter alia, the UK, Norway, Russia, and the Middle-East. The EU28's import dependency for petroleum and its products (oil and derivatives) increased from 74% in 1995 to 89% in 2015. In respect of natural gas, import dependency increased from 43% to 69% over the same period.

Key Issues for Marine Planning

10.7 The Department of Communications, Climate Action and Environment (DCCAE) develops and maintains an appropriate policy and regulatory framework to underpin petroleum exploration and production activities. This involves engaging at national, EU, OSPAR and wider international level, together with the development of legislation focused on safety, protection of the environment and fiscal terms.

10.8 Ireland operates a concession system whereby petroleum exploration companies are given an exclusive right to explore for petroleum within defined acreage offshore, through a licensing system which progresses from a licensing option to exploration licence and lease, in the event of a commercial find. Progression from licensing option to exploration licence and between the individual phases of an exploration licence is dependent upon fulfilment by the authorisation holder of work programme obligations.

10.9 Industry carries the financial risk associated with such exploration, and fiscal terms have been designed to strike the necessary balance between attracting the high-risk exploration investment necessary to prove the potential of the Irish offshore and maximising the return to the State from Ireland's natural resources. The most recent tax terms deliver a higher share for the State from the most profitable fields. A minimum payment (which functions comparably with a royalty fee) would result in the State receiving a share of revenue for every year that a field is selling production.

10.10 Open areas such as the Irish and Celtic Seas allow applications for exploration licences and licensing options to be made at any time.

10.11 In frontier areas a different approach is taken to licensing. These areas are open for "bids" through licensing rounds which are held periodically. This has proven the most effective way to encourage industry to focus on new exploration opportunities in Ireland's Atlantic basins. Between rounds, exploration authorisations cannot be granted in these areas. Licensing rounds create a competitive environment that encourages the sector to devote manpower to investigate exploration opportunities offshore Ireland, and then to bid strong work programmes in return for being awarded exploration acreage.

10.12 DCCAE evaluates proposed work programmes for all authorisation holders to optimise data acquisition. Reporting requirements ensure that delivery of these work programme commitments are continually monitored by the Department's technical experts and that the Department is in receipt of all data.

Interactions with Other Activities

10.13 Petroleum exploration and production activities may potentially interact with a range of other marine activities. There are obvious benefits to existing interactions such as those with shipping, and ports and harbours. Closer working and diversification between the petroleum sector and the emerging renewables sector is encouraged. There is also potential for other activities to be negatively impacted by the infrastructure requirements of the sector, both during construction and ongoing operation.

10.14 Key interactions of relevance for marine planning include:

- **Shipping, Ports and Harbours:** Petroleum sector use of shipping, ports and harbours in supply and transfer operations, supply chain services and provision of engineering and specialist expertise generates beneficial impacts for this sector. Potential adverse impacts on shipping and navigation needs to be considered during construction of petroleum infrastructure.
- **Renewables:** The petroleum sector can play a role in helping to reduce costs of developing offshore renewable projects through the application of skills and knowhow of marine operations. There are also potentially beneficial synergies between decommissioning activity and the emerging offshore wind sector.

  To date renewables infrastructure and petroleum infrastructure have not been developed in the same areas so their spatial compatibility has not been tested. As deployment of renewables increases this will need to be kept under review.

- **Fishing:** For safety reasons petroleum infrastructure is located within an exclusion buffer zone, with the result that fishing activity may be displaced. Pipelines can interfere with certain fishing practices. Construction of petroleum infrastructure may also temporarily disrupt fishing activity. However, with effective cooperation between the sectors adverse impacts can be mitigated by, for example, the appointment of Fisheries Liaison Officers. Also, some elements of the fishing community may benefit from employment by the petroleum sector as marker boats or for marine mammal observation during construction operations.

Issues for Sustainability

10.15 The Government is committed to a process of decarbonisation and ending our use of fossil fuels. The transition will be implemented in an energy-secure and efficient manner.

10.16 Ireland's Transition to a Low Carbon Energy Future 2015-2030, the Government's White Paper on Energy, published in 2015 sets out a roadmap for the energy sector to 2030. It focuses on how Ireland can ensure secure supplies of competitive affordable energy to our citizens and businesses taking into account European and International climate change objectives. The White Paper acknowledges that petroleum will remain significant elements of Ireland's energy supply in the evolution to a low carbon energy system. In the short to medium-term, the mix of non-renewables will shift away from more carbon-intensive fuels, like peat and coal, to lower-carbon fuels like natural gas. Natural gas would continue to play an important role in the energy transition; firstly, to ensure system flexibility and inertia with more renewables in the power sector and, secondly, to substitute for fuels with higher carbon emissions for heating purposes and in transport. The use of oil would fall as it is replaced by less carbon-intensive sources, but its substitution is challenging in several sectors, such as aviation, marine transport and petrochemicals. In the longer-term, fossil fuels will be largely replaced by renewable energy sources.

10.17 In addition, the Government has published the *Action Plan to Tackle Climate Disruption* to give Irish people a cleaner, safer and more sustainable future. This Plan sets out the actions we need to take in every Department and every sector to achieve our targets. It identifies how Ireland will achieve its 2030 targets for carbon emissions, and puts us on a trajectory to achieve net zero carbon emissions by 2050. Ultimately this is about securing a better, healthier, more resilient future for the country.

10.18 Petroleum production may result in a range of environmental pressures, the impact of which depends on the location, longevity, intensity and timing of activities. The main risks are:

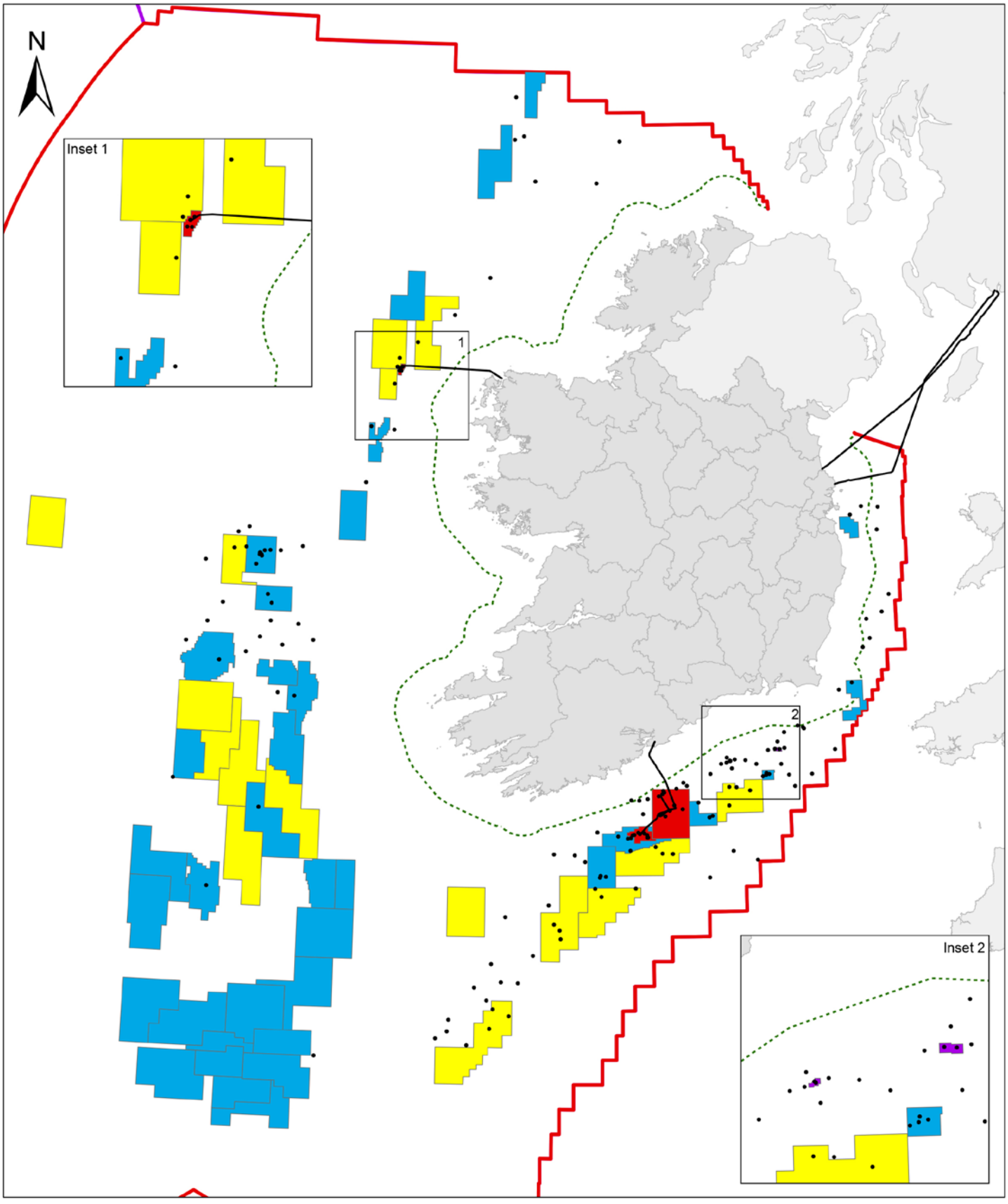
- **Noise:** Generated from seismic exploration activity, drilling, production facilities or vessels, burial of pipelines, with some noise sources (e.g. seismic surveys) having the potential to cause injury and disturbance to noise-sensitive species such as cetaceans.
- **Chemical or oil contamination:** Potentially causing contamination of water, sediments and fauna.
- **Habitat changes:** Construction, decommissioning and protection of infrastructure can result in the local loss of species and habitats. However, infrastructure can also provide substrate for colonisation and shelter for fish.

10.19 The ObSERVE Programme was undertaken by the Department in partnership with the National Parks and Wildlife Service of the Department of Culture, Heritage and the Gaeltacht (DCHG) between 2015 and 2018. It is a significant data acquisition programme designed to acquire new environmental baseline data, with the aim of filling existing data gaps relating to protected marine species and sites in key offshore basins. The ObSERVE Programme is unique to Ireland in terms of its proactive approach to ensuring a clear understanding of animal occurrence, distribution, and density within a defined offshore area, based on the data acquired. The core purpose of these surveys is to collect data on the occurrence, distribution, density and abundance of protected species within the prescribed offshore area. The data will serve to better inform both regulators and industry that in maximising the return of Ireland's natural resources the protection of rare and threatened species may be ensured. The final reports and data were published in 2018 and may be accessed at the link at the start of this Chapter.

10.20 All proposals to carry out exploration or production activities are screened or assessed as required by the Environmental Impact Assessment Directive, the Habitats Directive and the Birds Directive.

10.21 The cessation of production from offshore fields will lead to the decommissioning of facilities. Decommissioning, and other legacy issues, are areas that need careful management, especially from an environmental perspective.

10.22 Some elements of petroleum infrastructure, such as depleted reservoirs, may be re-usable for purposes of storing gas or CO_2. In this regard, matters such as degradation and ongoing liability for monitoring, maintenance and navigational issues need to be carefully considered.



Petroleum Activity and Authorisations

0 50 100 200 Kilometres

- Exploration Well
- Offshore Gas Pipelines

Current Authorisations
- Exploration Licence
- Lease Undertaking
- Licensing Option
- Petroleum Lease

Credits: EMODnet: Oil and Gas Pipeline (2017); DCCAE: Current Authorisations (2018), Exploration Wells (2017).

11.0 Energy – Offshore Renewable Energy

Objectives

- Support the establishment of Ireland as a world leader in ORE deployment.
- Support Ireland's decarbonisation journey through increased use of ORE while delivering significant and sustained benefits, import substitution, fiscal return, national and local economic development and technology learning.
- Provide enhanced security of supply for Ireland in the short and medium term, in accordance with the Government White Paper on Energy.
- Ensure good regulatory practices in ORE installation and generation, including decommissioning of existing facilities, at end of life, according to international best practice.

Planning Policies

ORE Policy 1

Proposals that assist the State in meeting the Government's target of generating at least 3.5GW of offshore renewable electricity by 2030 and proposals that maximise the long-term shift from use of fossil fuels to renewable electricity, in line with decarbonisation targets should be supported.

ORE Policy 2

Preference will be given to proposals for offshore wind farms, including relevant enabling projects and infrastructure, in areas identified as designated zones for offshore wind, under the zoning process set out in the Marine Planning and Development Management Act. **(Note – see Appendix D on Spatial Designation Process).**

ORE Policy 3

Any non-ORE proposals that are in or could affect sites held under a permission or that are subject to an ongoing permitting or consenting process for renewable energy generation (wind, wave or tidal should demonstrate that they will in order of preference: a) avoid, b) minimise, c) mitigate adverse impacts, d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

ORE Policy 4

Decisions on ORE developments should be informed by consideration of space required for other activities of national importance described in the NMPF.

ORE Policy 5

Proposals for activity that may adversely impact ORE test projects by virtue of being within or adjacent to ORE test sites, or between site and landfall of ORE test projects that may adversely impact ORE test site projects, should demonstrate that they will in order of preference: a) avoid, b) minimise, c) mitigate adverse impacts.

ORE Policy 6

Proposals for infrastructure enabling local use of excess electricity generated from emerging marine technologies (wave, tidal, floating wind) should be supported.

ORE Policy 7

Where potential for ports to contribute to ORE is identified, plans and policies related to this port must encourage development in such a way as to facilitate ORE and related supply chain activity.

ORE Policy 8

Proposals for ORE must demonstrate consideration of existing cables passing through or adjacent to areas for development, making sure ability to repair and carry out cable-related remedial work is not compromised.

ORE Policy 9

A permission for ORE must be informed by inclusion of a visualisation assessment that supports conditions on any development in relation to design and layout. Where a development consent is applied for in an area already subject to permission, proposals must include a visualisation assessment to inform design and layout. Visualisation assessments must demonstrate consultation with communities that may be able to view any future ORE development at a given site with the aim of minimising impact. Visualisation assessments will be informed by specific emerging guidance but in absence of this should include elements identified in related policy and good practice.

ORE Policy 10

Opportunities for land-based, coastal infrastructure that is critical to and supports development of ORE should be prioritised in plans and policies, where possible.

ORE Policy 11

Where appropriate, proposals that enable the provision of emerging renewable energy technologies and associated supply chains, will be supported.

Key References

- Marine Planning Policy Statement
- Ireland's Transition to a Low Carbon Energy Future 2015-2030 (Government White Paper on Energy)
- Climate Action Plan to Tackle Climate Breakdown
- Offshore Renewable Energy Development Plan (OREDP) 2014 and Interim Review

Background and Context

11.1 A secure, sustainable and affordable supply of energy is of central importance to the economic and social wellbeing of Ireland. Ireland has some of the best offshore renewable energy resources in the world. The term offshore renewable energy covers a number of technology types and includes wind (fixed and floating), wave and tidal, all of which rely on harnessing the motion of wind or water to generate energy. Of these technology types fixed offshore wind has reached the commercial stage, while floating wind, wave and tidal technology are still at the experimental stage globally.

11.2 Our Offshore Renewable Energy Development Plan (OREDP) has identified Ireland's coast as one of the most energy productive in Europe, with a long-term potential of 70 GW of ocean energy opportunity (wind, wave and tidal) within 100 km of the Irish coastline.

11.3 The Government's Action Plan to Tackle Climate Breakdown contains new and ambitious targets for the generation of electricity from renewable energy sources. The Plan sets out that in order for us to meet the required level of emissions reduction, by 2030 we will:

- Reduce CO_2 eq. emissions from the sector by 50–55% relative to 2030 Pre-NDP
- projections;
- Deliver an early and complete phase-out of coal- and peat-fired electricity generation;
- Increase electricity generated from renewable sources to 70%, indicatively comprised of:
  - at least 3.5 GW of offshore renewable energy,
  - up to 1.5 GW of grid-scale solar energy,
  - up to 8.2 GW total of increased onshore wind capacity.

11.4 The delivery of the offshore renewables targets will be plan-led in the context of this National Marine Planning Framework, underpinned by the new development management system to be contained in the Marine Planning and Development Bill.

Current position

11.5 Offshore renewable energy generation is relatively well developed across Western Europe with 90% of worldwide deployment happening primarily in the North Sea, and is becoming increasingly attractive for investment as technologies evolve and financial viability improves. Some 5% of the UK's annual demand is now met by offshore wind development. Furthermore, in 2017 zero subsidy auctions were awarded for the first time for offshore projects in Germany and the Netherlands, developing 900MW and 700MW projects respectively.

11.6 To date, Ireland has only one offshore fixed wind farm generating electricity in Irish waters. That installation consists of 6 bottom-fixed turbines located on the Arklow Bank, around 10 kilometres off the coast of Wicklow. Bottom fixed wind turbines are limited to relatively shallow waters.

11.7 Floating offshore wind is still at the pre-commercial stage. It involves a wind turbine supported by a floating structure which is anchored to the seabed by one or more mooring cables. Floating wind has the potential to be deployed in deeper waters and as such could have potential for development off the south and west coasts of Ireland. A number of pilot projects are underway across Europe.

11.8 Between 2014 and 2018, capital funding of €22.5m was allocated by the Department of Communications, Climate Action and Environment under the OREDP for research and development of offshore renewable energy technology, with a further €3m allocated in 2019. Government funding supports Ireland's commitment to world class test facilities and infrastructure. These include the Lir National Ocean Test Facility in Cork, the quarter scale Galway Bay Marine Renewable Energy test site and the full-scale Atlantic Marine Energy Test Site (AMETS), off the coast of Mayo. It also supports the Prototype Development Fund, operated by the SEAI, and provides grant aid to support developers in bringing their ocean energy devices from prototype to full-scale commercial viability.

Key issues for marine planning

11.9 The development of the offshore renewable energy sector in Ireland cuts across a wide range of sectors from consenting, licensing and infrastructure, to energy markets and international cooperation on renewable energy. A range of State bodies and activities will interact with the sustainable development of offshore renewables. Account must also be taken of legitimate public interest in, and EU and international obligations regarding, the protection of the marine environment.

11.10 Ten policy actions and enablers that are key to the development of this sector have been identified in the OREDP remain valid and are being progressed by the Offshore Renewable Energy Steering Group (ORESG). These are:

- Put in place a robust governance structure for the OREDP;
- Increase Exchequer support for ocean research development and demonstration;
- Introduce an initial market support tariff for ocean energy;
- Develop renewable electricity export markets;
- Develop the supply chain for the offshore renewable energy industry in Ireland;
- Communicate that Ireland is open for business;
- Explore the potential for international collaboration;
- Introduce a new planning and consent architecture for development in the marine area;
- Environmental monitoring; and
- Ensure appropriate infrastructure development.

11.11 The long-term vision, set out in the Government's Action Plan to Tackle Climate Breakdown, is to transform our fossil fuel-based energy sector into a clean, low carbon system. Offshore renewable energy has a key role in that transformation. However, a key objective will be to ensure an inclusive process of engagement and consensus building across society and with local communities, learning from the experiences of the consenting processes for existing ORE developments.

11.12 Government recognises that to realise the enormous potential of the offshore energy sector will require fully coordinated support across government, from research and development, through supply chain development, to commercial deployment. The environmental and other impacts of offshore renewables must be managed in line with international obligations and best practice to support maximum social acceptance. In that context, the Department of Housing, Planning and Local Government, working with the Department of Communications, Climate Action and Environment and other stakeholders, will develop statutory marine planning guidelines to support best practice throughout the planning process for ORE, including the development of a specific visualisation assessment in relation to design and layout of proposed developments. These guidelines will, inter alia, provide that where a development consent is applied for in an area already subject to permission, proposals must include a visualisation assessment to inform design and layout. Visualisation assessments must demonstrate consultation with communities that may be able to view any future ORE development at a given site with the aim of minimising impact. In absence of statutory marine planning guidelines to inform visualisation assessments, related policy and good practice include local landscape character assessments in coastal areas (for example Cork and Galway). The National Planning Framework (National Policy Objective 61) sets out an ambition to develop a National Landscape Character Map and this should be referred to when available.

11.13 The guidelines will support the operation of the new development management system to be introduced under the Marine Planning and Development Management Bill. This Bill will provide a modern, up-to-date regulatory and marine planning framework for offshore renewable energy developments beyond the limits of the foreshore (12 nautical miles). This will be an important foundation for investment in the offshore renewable energy sector as well as providing a more transparent, participative system for all marine stakeholders.

11.14 The Bill will also provide for the introduction of a new system of spatial designation of marine zones for specific activities including ORE. More detail on this zoning system is set out in Appendix D but it is important to note that legislation is intended to provide that any such designations, once made by Government, will automatically become part of the National Marine Planning Framework.

11.15 Investment in the electricity grid will be required to reinforce the onshore grid, ensuring that the overall power system is capable of handling potentially large volumes of variable renewable offshore generation.

Interactions with Other Sectors

11.16 In addition to mitigating the impacts of climate change, and to security of supply benefits, offshore renewable energy can bring substantial socio-economic benefits to peripheral coastal communities. These include employment and income opportunities, transferable technology and skills development.

11.17 Offshore renewable energy projects can have a wide range of positive and adverse impacts for other activities or marine sectors. For example, off shore wind developments may be competing for space with traditional sea users, such as fisheries, navigational routes or leisure sailing. However, many synergies also exist including, for example, the colocation of aquaculture activities with off shore wind; potential for multi-use offshore wind and petroleum platforms; reliance on ports in facilitating the necessary development of both offshore renewable generation and grid infrastructure; potential protections for biodiversity through offshore wind developments serving as de-facto no-take zones.

11.18 To ensure sustainable development, it is important that the development opportunity should be managed efficiently and effectively and in a coordinated fashion through the marine planning process.

11.19 Our ports will also play a crucial role in facilitating the necessary development of both offshore renewable generation and grid infrastructure, requiring investment to handle plant, equipment and cabling, and the associated shipping during the construction, operation and maintenance phases of future projects.

Issues for Sustainability

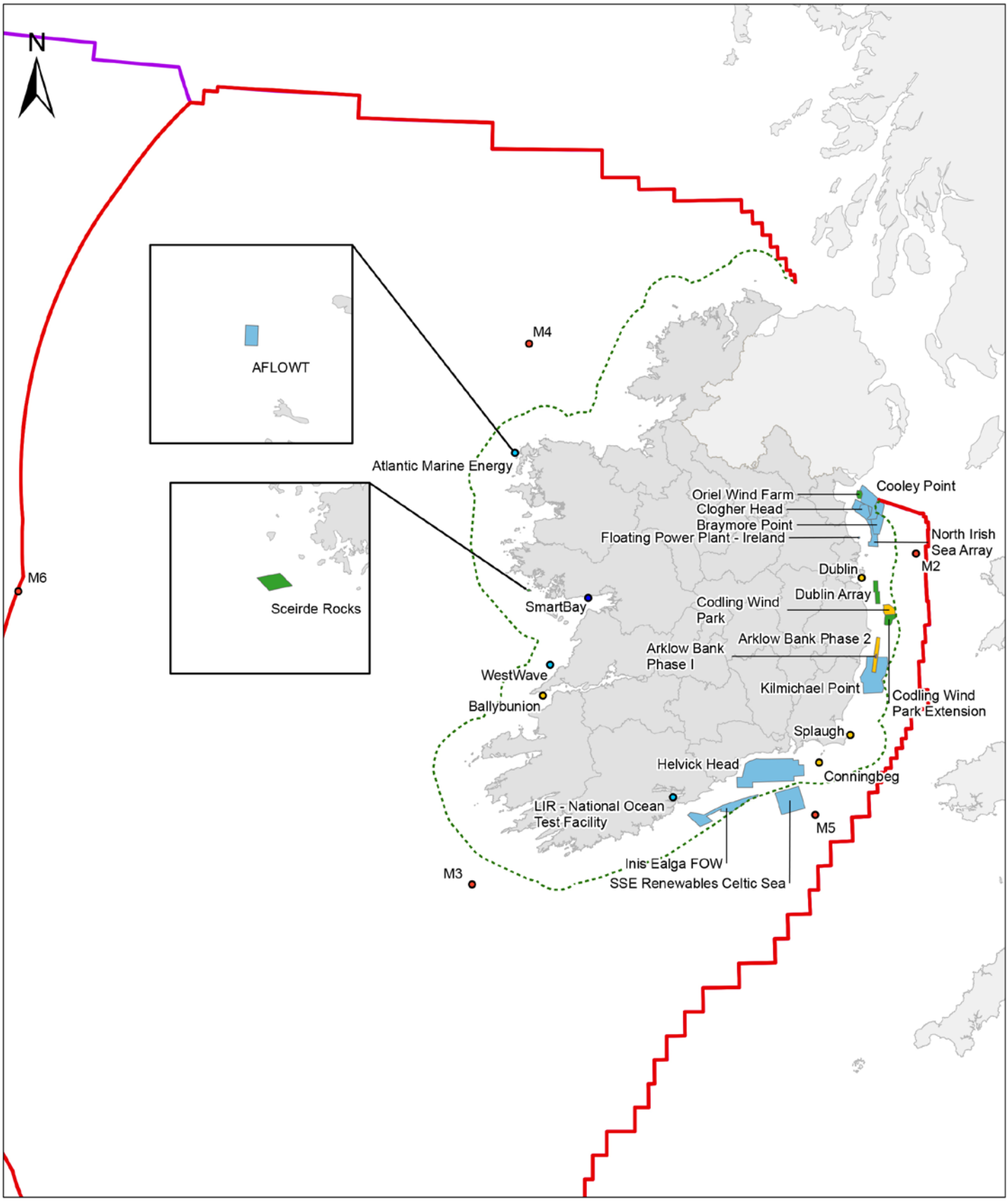
11.20 Offshore renewable energy offers the potential for significant environmental benefits through mitigating greenhouse gas emissions from energy production. By displacing fossil fuel generation, offshore technologies have positive impacts on air quality by reducing the discharge of harmful or toxic emissions into the environment.

11.21 The potential benefits and effects of renewable energy development will vary depending on factors such as technology type, size, structure and geographical location. Renewable energy developments can potentially have adverse impacts on fish and mammals, primarily through construction noise and may displace fishing activity and have direct or indirect impacts on other users of the marine area. Certain bird species may be displaced by wind turbines which also have the potential to form barriers to migration or present a collision risk for birds.

11.22 As tidal and wave technologies are at an early stage of development, the level of risk and ecological significance is largely unknown, but will continue to be monitored at test site locations.

11.23 The ORESG has developed a series of guidance documents to assist developers in the preparation of Environmental Impact Assessments (EIAs) and Appropriate Assessments (AAs). Guidance documents have also been produced to aid developers on ecological data required for development of EIAs and AAs. These documents can be viewed on the DCCAE website[19].

[19] https://www.dccae.gov.ie/en-ie/energy/topics/Renewable-Energy/electricity/offshore/offshore-renewable-energy-development-plan-/Pages/Guidance-Documents-for-Developers0517-9406.aspx



Marine Renewable Energy and Infrastructure

0 25 50 100 150 Kilometres

Wind Farms
- Concept/Early Planning
- Consent Application Submitted
- Consent Authorised
- Fully Commissioned

Wave Energy and Buoy Infrastructure
- Marine and Renewable Energy Test Site
- Wave Energy Test Site
- Wave Buoy
- Weather Buoy

Credits: Eirwind Project, MaREI/ERI/UCC: Offshore Windfarms; Marine Institute, Commissioners of Irish Lights, Ireland's Digital Ocean (digitalocean.ie): Wave Buoys (2019).

12.0 Fisheries

Objectives

- Deliver a sustainable, growth driven seafood sector focused on competitiveness and innovation driven by a skilled workforce delivering value added products in line with market demands.
- Promote a sustainable, profitable and self-reliant industry that protects and enhances the social and economic fabric of rural coastal communities, dependent on the seafood sector.
- Manage utilisation of sea-fisheries resources in consultation with stakeholders to promote environmental sustainability and the development of the sector's economic and social contribution to rural and coastal communities.

Planning Policies

Fisheries Policy 1

Proposals that may have significant adverse impacts on access for existing fishing activities, must demonstrate that they will, in order of preference:

a) avoid,

b) minimise, or

c) mitigate

such impacts.

If it is not possible to mitigate significant adverse impacts on fishing activity, the public benefits for proceeding with the proposal that outweigh the significant adverse impacts on existing activities must be demonstrated.

Fisheries Policy 2

Proposals supporting a sustainable fishing industry, including the industry's diversification and or enhanced resilience to the effects of climate change, should be supported.

Fisheries Policy 3

Infrastructural proposals that enhance access to fishing activities, should be supported, provided they fully meet the environmental safeguards contained within licensing processes.

Fisheries Policy 4

Proposals, regardless of the type of activity they relate to, enhancing essential fish habitat, including spawning, nursery and feeding grounds, and migratory routes should be supported. If proposals cannot enhance essential fish habitat, they must demonstrate that they will, in order of preference:

a) avoid,

b) minimise,

c) mitigate

significant adverse impact on essential fish habitat, including spawning, nursery and feeding grounds, and migration routes.

Fisheries Policy 5

Where significant impact upon fishing activity is identified, a Fisheries Management and Mitigation Strategy should be prepared by the proposer of development or use, in consultation with local fishing interests (and other interests as appropriate) in the development of the Strategy. All efforts should be made to agree the Strategy with those interests. Those interests should also undertake to engage with the proposer and provide best available, transparent and accurate information and data in a timely manner to help complete the Strategy. The Strategy should be drawn up as part of the discharge of conditions of permissions granted.

The content of the Strategy should be relevant to the particular circumstances and could include:

- An assessment of the potential impact of the development or use on the affected fishery or fisheries, both in socio-economic terms and in terms of environmental sustainability. This assessment should include consideration of any impact upon cultural identity within fishing communities.
- A recognition that the disruption to existing fishing opportunities/activity should be minimised as far as possible.
  Demonstration of the public benefit(s) that outweigh the significant impacts identified.
- Reasonable measures to mitigate any constraints which the proposed development or use may place on existing or proposed fishing activity.
- Reasonable measures to mitigate any potential impacts on sustainability of fish stocks (e.g. impacts on spawning grounds or areas of fish or shellfish abundance) and any socio-economic impacts.

Where it does not prove possible to agree the Strategy with all interests:

- divergent views and the reasons for any divergence of views between the parties should be fully explained in the Strategy and dissenting views should be given a platform within the Strategy to make their case.
- where divergent views are identified, relevant public authorities should be engaged to identify informal and formal steps designed to enable proposal(s) to progress.

Fisheries Policy 6

Ports and harbours should seek to engage with fishing and other relevant stakeholders at an early stage to discuss any changes in infrastructure that may affect them.

Any port or harbour developments should take account of the needs of the dependent fishing fleets with a view to avoiding commercial harm where possible.

Where a port or harbour has reached a minimum level of infrastructure required to support a viable fishing fleet, there should be a presumption in favour of maintaining this infrastructure, provided there is an ongoing requirement for it to remain in place and that it continues to be fit for purpose.

Key References

- Marine Planning Policy Statement
- The Business of Seafood 2018
- Bord Iascagh Mhara (BIM) The Business of Seafood 2018
- Inshore Fisheries Sector Strategy 2019 -2023
- Harnessing Our Ocean Wealth
- Foodwise 2025
- European Maritimes and Fisheries Fund 2014-2020
- Common Fisheries Policy
- Sea Fisheries in Natura Areas
- European Communities (Birds and Natural Habitats) Regulations 2011
- Marine Strategy Framework Directive

Background and Context

Seafood Sector

12.1 As an Island nation fishing has always been economically and socially important to Ireland. Ireland's proximity to the rich productive seas of the North East Atlantic provides an ideal resource on which to continue to develop the seafood sector. Ireland's coastline, inshore and offshore waters contain some of the largest and most valuable sea fisheries resources in Europe.

12.2 Ireland's seafood sector contributed €1.25 billion to the Irish economy in 2018 and follows growth in recent years. The total value of seafood landed into Ireland's main fishing ports was €370 million, the aquaculture sector was valued at €176 million and Irish seafood exports were worth €653m.

12.3 The 2019 fishing opportunities or TACs (Total Allowable Catches) secured for Ireland at the December Agriculture and Fisheries Council amounts to 193,619 tonnes of quotas worth €260 million. The most important stocks for Ireland by value include mackerel and *Nephrops* (prawns). With seafood landings to our main fishing ports amounting to €370m in 2018, our seafood industry is a key natural resource and an important contributor to the Irish economy, particularly in coastal areas.

12.4 The seafood sector provides an important source of economic activity, particularly in our remote coastal regions, with 14,359 people employed either directly or indirectly in 2018, many of them working and living in rural coastal communities. The industry has also made a significant contribution to Ireland's social and cultural history.

12.5 The value of seafood landed and cultivated in Ireland in 2018 decreased by 10% to €546m (including aquaculture), while the volume decreased by 5% to 343,000 tonnes. This performance was largely attributable to a reduction in the production of Organic Salmon, though production is expected to return to previous levels in 2019.

	Value of Landings €M				Volume of Landings Tonnes			
Port	Irish	Non -Irish	Total	Share of Non-Irish	Irish	Non-Irish	Total	Share of Non-Irish
KILLYBEGS	91	23	114	20%	130,000	69,700	199,700	35%
CASTLETOWNBERE	34	59	93	64%	9,400	18,100	27,500	66%
DINGLE	7	10	17	59%	3,900	3,300	7,200	46%
ROS A MHIL	15	2	17	12%	3,300	200	3,500	6%
DUNMORE EAST	12	0.4	12.4	4%	5,500	200	5,700	2%
KILMORE QUAY	11	0	11	0%	3,700	0	3,700	3%
HOWTH	9	0.3	9.3	3%	3,400	100	3,500	0%
UNION HALL	8	1	9	7%	1,900	200	2,100	11%
GREENCASTLE	7	0.3	7.3	2%	2,900	100	3,000	2%
CLOGHERHEAD	7	0	7	0%	1,300	0	1,300	0%
OTHER PORTS	69	4	73	5%	47,700	1,100	48,800	2%
TOTAL	270	100	370	27%	213,000	93,000	306,000	30%

Table 4: All Landings in Irish Ports by Irish and non-Irish Vessels 2018 (Source: BIM Business of Seafood 2018)

12.6 The Department of Agriculture, Food and the Marine owns and directly manages six Fishery Harbour Centres. The centres, located at Castletownbere, Dunmore East, Howth, Killybegs, Rossaveel and Dingle, are managed and operated in accordance with the provisions of the Fishery Harbour Centres Act 1968 which requires the Minister to manage, control, operate and develop each of the Harbours. It also places specific responsibility on the Minister in relation to maintenance, repair, improvement, extension and modification of the harbours including buildings and road access.

12.7 Ireland's European Maritime and Fisheries Fund Operational Programme 2014-2020 was adopted by the European Commission in December 2015 and launched in January 2016 by the Minister for Agriculture Food and the Marine. The Programme provides €240m in funding to the seafood sector and targets the development of Ireland's seafood industry which in turn supports the coastal communities reliant on the seafood industry. The Programme supports diversification, environmental sustainability and the reduction of the impacts of fishing on the environment, amongst other work, thus increasing resilience of ecosystems and fish stocks.

12.8 Food Wise 2025, the successor to the Food Harvest 2020 strategy, sets out a ten year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further. The plan identifies over 400 recommendations to achieve sustainable growth, which require a concerted and coordinated approach by primary producers, industry, Departments and State agencies. Seafood is one of the areas identified for growth in this Strategy.

12.9 Commercial fisheries activities are categorised as either (1) inshore fisheries or (2) offshore fisheries.

Inshore Fisheries

12.10 While there is no consistent international definition of 'inshore fisheries' or 'small scale coastal fisheries' the EU rule-of-thumb applies to vessels less than 12m in length using non-towed gear. In an Irish context, this measure excludes small trawlers and shellfish dredgers which are an important component of the inshore fleet. Inshore boats primarily operate within 6 nautical miles of the coast. The composition and regional dispersal of Ireland's inshore fisheries fleet is set out in the table below.

Vessel size	Number	Region	Number of vessels
<10m	1,398	North (Donegal)	300
10-12m	225	North West (Sligo, Mayo)	212
Total <12m	**1,623**	West (Galway, Clare)	322
Total Irish Fishing Fleet	**1,991**	South West (Kerry, Cork)	478
		South East (Wicklow, Wexford, Waterford)	190
		North East (Dublin, Louth, Meath)	121
		Total	**1,623**

Table 5: Composition of the Inshore Fleet – April 2018/Geographic Spread of <12m Inshore Vessels

12.11 There are currently a further 77 vessels of between 12-15m length which also fish in inshore waters. It is estimated that the inshore sector supports 2,500 – 3,000 jobs, many of these in rural areas with limited alternative employment opportunities.

12.12 Key target stocks for the inshore sector include shellfish caught by pots (lobster, crab) or by dredges (cockle, clam), turbot or bait fish, some crawfish (by nets) and limited access to some quota stocks (e.g. mackerel and herring). Fishing methods include both mobile (e.g. nets or dredges towed by the fishing boat) and static gears (e.g. nets or pots set from the fishing boat at sea for a period of time and retrieved later).

12.13 In recognition of the importance of the Inshore Fisheries Sector, the National Inshore Fisheries Forum and Regional Inshore Fisheries Forums were established to develop and facilitate implementation of policies and initiatives relating to the sustainable management of inshore fisheries. The Regional Forum members include inshore fishermen, environmental interests, marine leisure, marine tourism and other marine stakeholders. The Inshore Fisheries Forums are financed under the Inshore Fisheries Conservation Scheme through Ireland's EU Structural and Investment Funds Programme 2014-2020 and part financed by the European Maritime and Fisheries Fund. The Inshore Fisheries Forums are facilitated by the statutory bodies responsible for marine fisheries in Ireland, namely Department of Agriculture, Food and the Marine, Bord Iascaigh Mhara, Sea Fisheries Protection Authority and the Marine Institute.

12.14 In February 2019, the Minister for Agriculture, Food and the Marine launched the first industry-led strategy for Ireland's inshore fisheries sector. The "Strategy for the Irish Inshore Fisheries Sector 2019-2023" sets out a vision for the future of the inshore sector, that it "will have a prosperous and sustainable future delivered through a united industry with a strong and influential voice". Key issues to be addressed through the Strategy include enhancing business skills across the sector, sustainable management of key fish stocks as well as attracting and retaining talent, all with a view to maximising the potential of the inshore sector to support Ireland's coastal communities.

Offshore Fisheries

12.15 The seas around Ireland contain some of the most productive in EU waters. Most of the fisheries stocks within these areas come under the remit of the Common Fisheries Policy (CFP). The Common Fisheries Policy (CFP) established certain principles such as shared access, which created the concept of 'Union waters', and the principle of relative stability whereby each Member States' share of each EU quota remains constant over time. This policy aims to ensure that fishing and aquaculture are environmentally, economically and socially sustainable and that they provide a source of healthy food for EU Citizens.

Key Issues for Marine Planning

12.16 Space required by fishing is also in demand for other activities such as aquaculture, shipping, marine leisure and, more recently, renewable energy. The increased level and diversity of activity in the maritime area requires efficient and co-ordinated management to avoid conflict and to identify, where possible, synergies both within and between activities. Closest to shore, the competition for space for inshore fisheries is greater than ever. The potential for spatial conflicts can be mitigated through early, persistent and meaningful engagement. To support consideration of and engagement with fisheries interests, maps of inshore and offshore activity are included in this section with maps of spawning and nursery areas for fisheries target species included in Appendix E. Marine planning seeks to balance the spatial requirements of both existing and future activities through, for example, the Overarching Marine Planning Policy on co-existence above.

12.17 The decision by the United Kingdom to withdraw from the European Union poses many challenges for the seafood sector. Future access to fishing grounds and quota allocation are potential issues, unique to fisheries. Any change to the status quo has the potential to unsettle the stability provided by the Common Fisheries Policy which has allowed the catching sector operate with a degree of certainty for almost forty years. In addition, other challenges shared with the wider economy include how Brexit will impact future trade, our route to market, supply chains, and transport logistics. The Department of Agriculture, Food and the Marine is working closely with the marine agencies and stakeholders across the seafood sector to ensure that as the situation evolves, the sector remains informed, advised, and positioned to respond to new scenarios.

12.18 Conservation measures that might in future be adopted by Ireland under the Common Fisheries Policy, Birds and Habitats Directives, or Marine Strategy Framework Directive, that would potentially have an impact on the fishing rights of other Member States in Irish waters would, under the Common Fisheries Policy Regulations, be subject to the agreement of the relevant Member State(s). In the absence of agreement being reached with the Member State(s) concerned such measures would be required to be determined under the co-decision process of the EU Council and the EU Parliament on the basis of an EU Commission proposal.

12.19 Maintaining a high standard of water quality in inshore areas remains critical to a thriving industry. Discharges from land-based sources such as agriculture, wastewater treatment, unsewered areas and industry can have adverse impacts on biodiversity, fish stocks and seafood safety through eutrophication or microbiological contamination. In recognition of these threats and to prevent negative impacts on local ecosystems relevant water quality standards are established by a number of directives including the Water Framework Directive, Shellfish Waters Directive, Nitrates Directive and the Urban Waste Water Treatment Directive.

Interactions with Other Activities

12.20 The fisheries sector is very diverse and has a wide spatial reach. As such, it is a sector that has multiple interactions with many other marine activities or sectors. Examples include ports and harbours which form a key part of the value and supply chain, marine leisure and recreation which are often co-located with fishing activities, or shipping lanes which may pass through fishing grounds.

12.21 The access needs of inshore fisheries are varied due to the diverse nature of stocks which are fished, varying from year-round to seasonal to intermittent. Developments in other sectors should be cognisant of the ongoing access requirements for these vessels. The inshore sector makes up more than 80% of the fishing fleet and are predominately active within six nautical miles of the shore. In spatial terms, this means that the vast majority of the fishing fleet is active in the areas closest to shore and therefore most likely to experience spatial conflicts with other potential marine users.

12.22 While stock management/sustainability is a key ongoing issue which the industry is engaged with in terms of managing outtake from certain fisheries, any changes in behaviour/ developments by other stakeholders which have capacity to impact on stocks should consider the potential impact on the optimum conditions for sustaining healthy fish stocks.

Issues for Sustainability

12.23 Potential adverse impacts of fishing activities could include ecological disruption, stock depletion, marine litter or other marine pollution, and bycatch.

12.24 Some types of fishing can negatively affect both pelagic and seabed communities, particularly those that support species with low growth rates, soft substrates or cold water coral reefs, and some areas have been heavily impacted by fishing activity. There are also concerns about the level of by-catch of birds, sharks and marine mammals in certain fisheries.

12.25 However, there is a general recognition in the Irish fisheries sector that a more sustainable use of natural resources creates a more resilient seafood sector. Fish populations are generally improving since reform of the Common Fisheries Policy and more sustainable management of fish populations with the setting of Maximum Sustainable Yield (MSY) for commercial species.

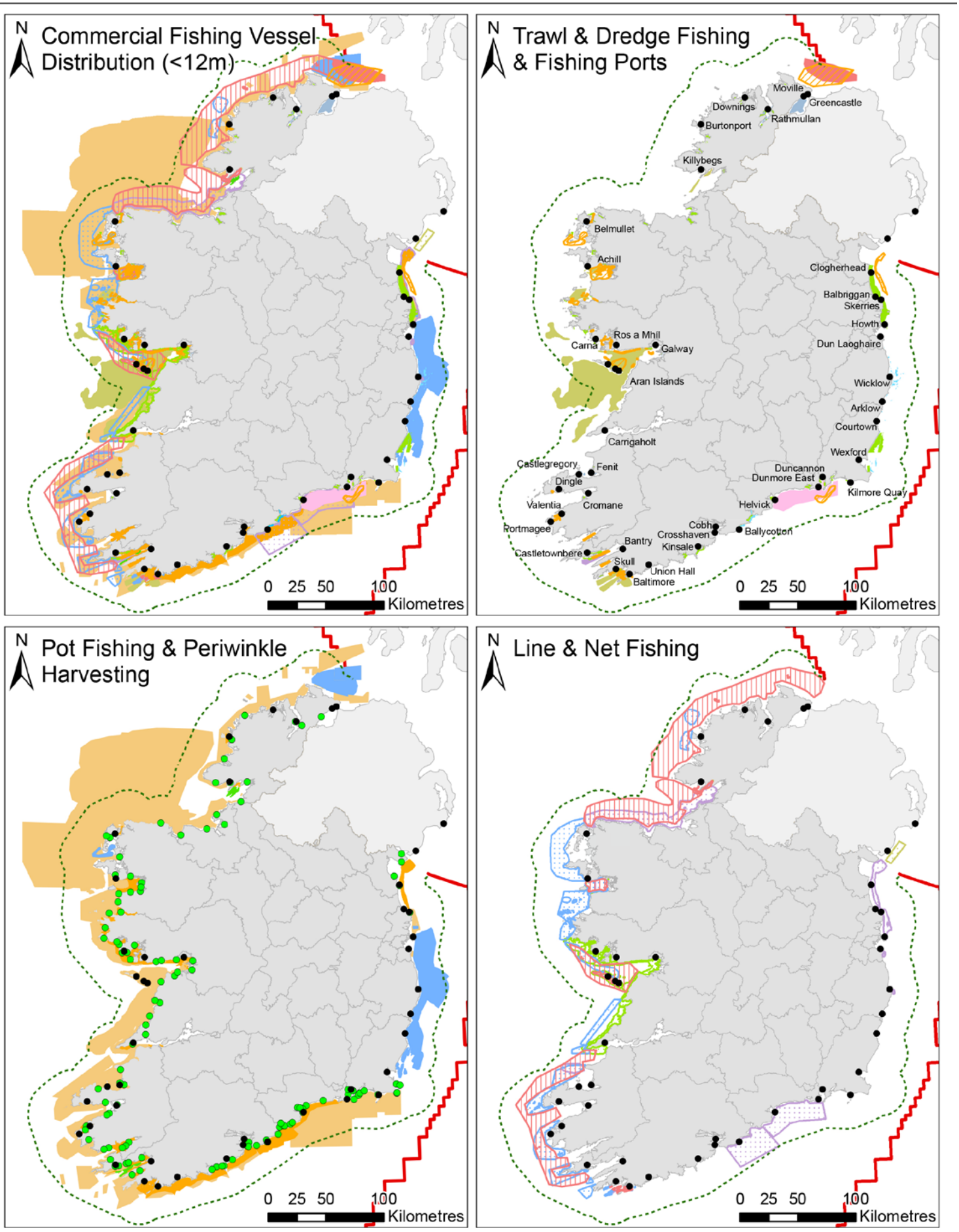
12.26 Over the past decade, Ireland's Seafood Development Agency, Bord Iascaigh Mhara (BIM) has undertaken a considerable amount of work to ensure a sustainable future for the country's fisheries, aquaculture and processing businesses. The high rate of Origin Green membership within the Irish seafood sector demonstrates a commitment to sustainability throughout the entire seafood value chain. BIM's sustainability initiatives target the entire seafood value chain, from vessels and fish farms to food production and retail.

12.27 Ireland has launched a Government-backed programme of Fishery Improvement Projects (FIPs) to demonstrate Ireland's commitment to sustainable fisheries to complement the sustainability elements of the Responsibly Sourced Seafood Standard (RSS). Fishery Improvement Projects are a globally recognised means of assessing fisheries and identifying actions to improve the management and sustainability of these fisheries.

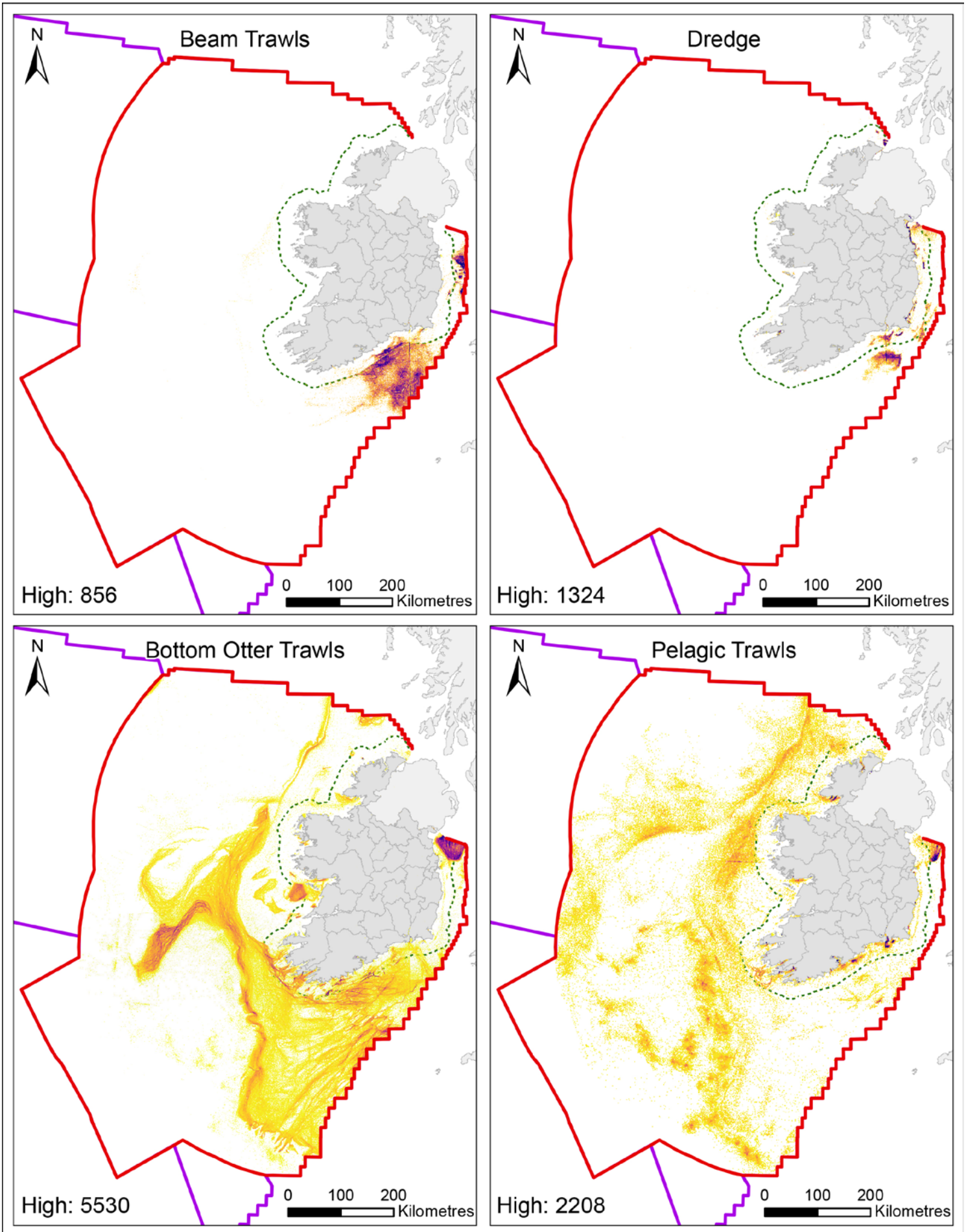
12.28 The Marine Strategy Framework Directive requires European Member States, including Ireland, to reach good environmental status (GES) in the marine environment by 2020. For commercial fish stocks this requires that populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

12.29 As referenced previously, maintaining water quality is a pre-requisite for the ongoing protection of a diverse and thriving ecosystem.

12.30 There has been a dramatic escalation in the fishing of some stocks (e.g. razor clams) in recent years, while others are under long-term pressure. The aim is to manage fisheries in a way that is sustainable both economically and environmentally.



Credits: Marine Irish Digital Atlas: Fishing Ports (2014), Periwinkle Harvesting (2014); Marine Institute: All Other Datasets (2013); BIM: Business of Seafood Report (2018).

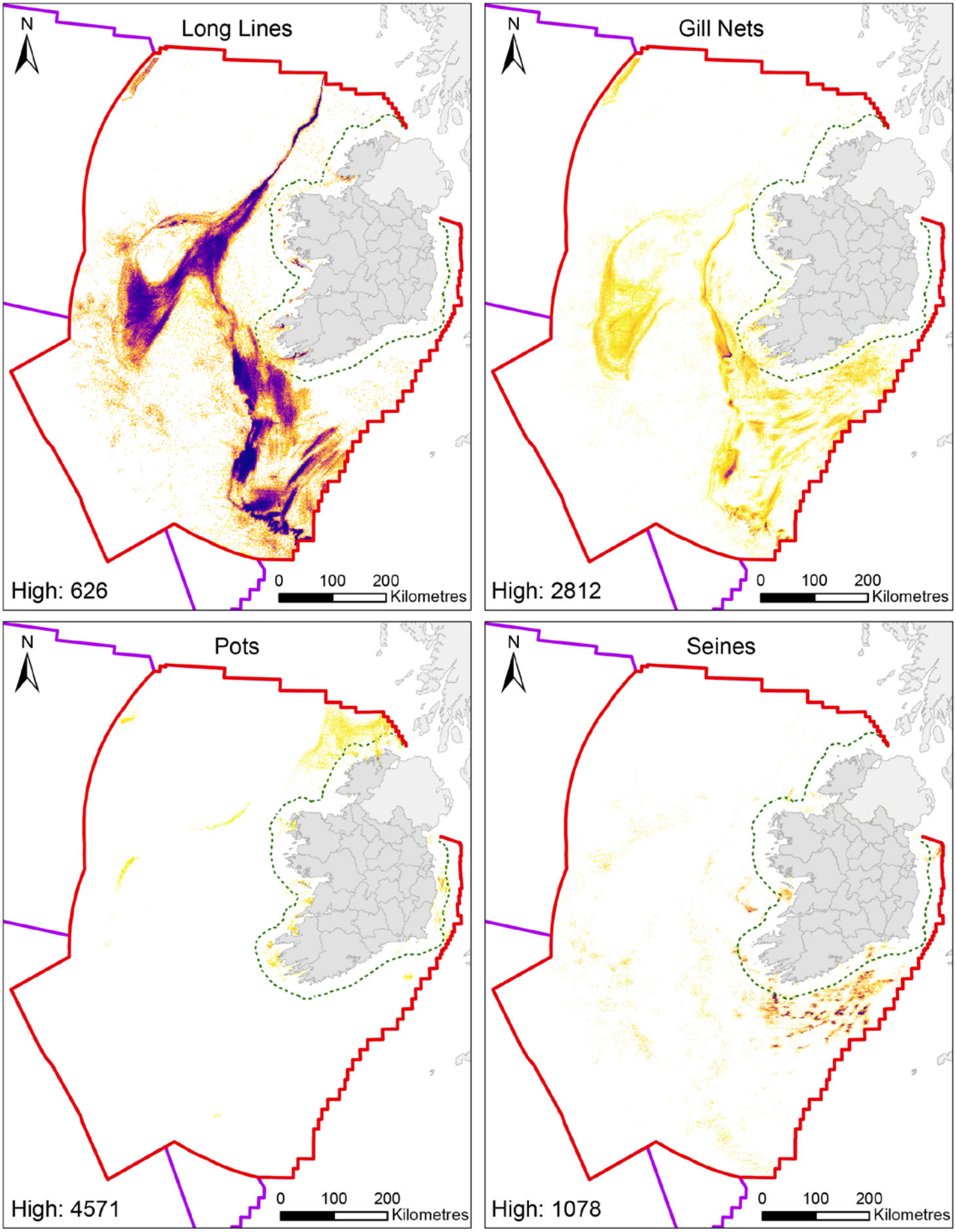


Distribution of Commercial Offshore Fishing Effort, All Nationalities (>12m)

h/km2/yr

High Low

Credits: Marine Institute: International Fishing Effort (2014 - 2018)



Distribution of Commercial Offshore Fishing Effort, All Nationalities (>12m)

h/km2/yr

High — Low

Credits: Marine Institute: International Fishing Effort (2014 - 2018)

13.0 Marine Aggregates and Mining

Objectives

- Support sustainable mineral exploration to enable the discovery and development of economic deposits.
- Maximise the contribution of the mining sector to the economy, having regard to its social and environmental impact.
- Promoting Ireland's marine mineral potential, to meet medium to long-term future market demands.
- Support Ireland's decarbonisation journey through the sustainable extraction and processing of minerals and metals to secure supply for clean energy technologies.

Planning Policies

Marine Aggregates and Mining Policy 1

Proposals that enhance the economic benefits of the aggregates industry to skilled, stable employment and the generation of income through the construction industry supply chain should be supported, provided they fully meet the environmental safeguards contained within licensing processes.

Marine Aggregates and Mining Policy 2

Proposals in areas where high potential aggregate resource (see Map) occurs should demonstrate that they will, in order of preference:

a) avoid;

b) minimise;

c) mitigate significant adverse impacts on aggregate extraction.

d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Marine Aggregates and Mining Policy 3

Proposals that maximise the long-term and sustainable extraction and processing supply of minerals and metals, including supply of materials for clean energy technologies should be supported, provided they fully meet the environmental safeguards contained within licensing processes. The decarbonisation drive by use of wind, solar and battery technologies is dependent on the supply of minerals.

Key References

- Marine Planning Policy Statement
- 2013 Indecon report on Assessment of Economic Contribution of Mineral Exploration and Mining in Ireland
- IMAGIN research study – joint publication by the UCC Coastal and Marine Resources Centre and the Marine Institute in 2008

Background and Context

13.1 Marine aggregates are sedimentary sand or gravel materials located on the seabed. Extraction of marine aggregates typically involves dredging of the deposit to remove it from the seabed. Sands and gravels sourced from the seabed may be used in the construction of infrastructure such as buildings, roads and bridges.

13.2 To date all aggregate used commercially in the Irish market is extracted from terrestrial sources. To the limited extent that marine aggregate extraction has taken place it has been permitted only for beneficial purposes such as beach nourishment, coastal protection, reclamation and backfill. While there is little short-term demand for marine mineral resources, medium to long-term anticipated future growth in construction activity and associated demand for aggregates may lead to a greater level of marine aggregates extraction in the future while technological advances will influence their viability.

13.3 The IMAGIN research study concluded that a number of areas with potential to support marine aggregate extraction exist in the Irish Sea and that marine aggregates can contribute to the sustainable management of demand and future use of aggregates in Ireland. In the area covered by the study the available resource was estimated to be 5 to 7 billion m^3.

13.4 Mining is central to our modern-day society which could not function without the materials provided by mining: from phosphate for agriculture; aggregates for construction; and metals for the Smart Economy. In a recent study by the World Bank it was indicated that the low carbon future will be dependent on the raw materials produced by mining. It is very beneficial to society as a whole that mining is carried out in countries with strong legal and environmental frameworks such as Ireland.

13.5 In terms of overall economic benefit, the 2013 Indecon report on Assessment of Economic Contribution of Mineral Exploration and Mining in Ireland, highlighted that the mining industry employed over 3,300 people directly and indirectly. Most of this employment is regionally-based and contributes over €50 million annually to the Exchequer. To date all mining operations in Ireland have extracted from terrestrial sources.

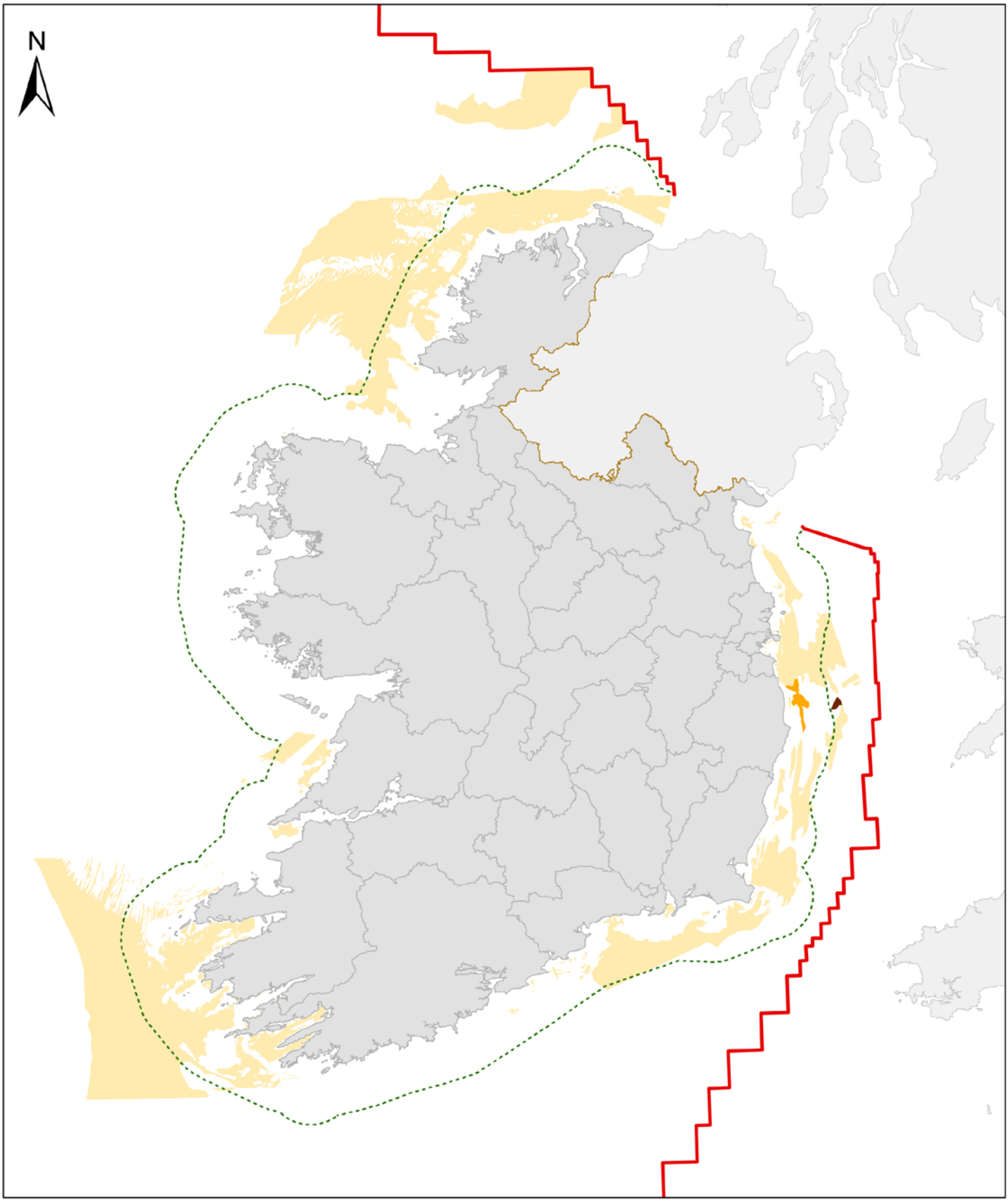
Key issues for Marine Planning

13.6 The IMAGIN project developed recommendations for a strategic policy framework for an administrative and regulatory process under which dredging for aggregates in the Irish Sea could be sustainably managed. The project recommended that:

- A clear national policy should be developed to promote and facilitate the sustainable development and use of Irish marine aggregates;
- A unified database of identified aggregate resources should be generated to quantify the resource and, where appropriate, to protect resources for extraction; and
- National policy and a statutory framework for the sector should be consistent with the principles of marine spatial planning.

13.7 Impacts on lifeline ferry services and shipping would need careful consideration, as would dredging or dumping in the vicinity of activities which require high water quality.

13.8 Historically, almost all of the minerals prospecting and development undertaken in the State has been on land. There is limited data on the marine minerals resource potential in terms of distribution, quality and quantity.



High Potential Marine Aggregate Resource

0 25 50 100 Kilometres

Marine Aggregate Type

- Gravel
- Sand
- Sand and Gravel

Credits: Information contained here has been derived from data that is made available under the European Marine Observation Data Network (EMODnet),2019.INFOMAR Project, a joint seabed mapping program between the Geological Survey Ireland and the Marine Institute, 2019. IMAGIN project,2007.

14.0 Ports, Harbours and Shipping

Objectives

- Safeguard the operation of ports as key actors in the economic wellbeing of the State through the provision of safe and sustainable maritime transport.
- Facilitate a competitive and effective market for maritime transport services.
- Sustainable development of the ports sector and full realisation of the National Ports Policy with a view to providing adequate capacity to meet present and future demand, and to adapt to the consequences of climate change.

Planning Policies

Ports, Harbours and Shipping Policy 1

To provide for shipping activity and freedom of navigation the following factors will be taken into account when reaching decisions regarding development and use:

- The extent to which the locational decision interferes with existing or planned routes used by shipping, access to ports and harbours and navigational safety. This includes commercial anchorages and approaches to ports as well as key littoral and offshore routes;
- A mandatory Navigation Risk Assessment;
- Where interference is likely, whether reasonable alternatives can be identified.
- Where there are no reasonable alternatives, whether mitigation through measures adopted in accordance with the principles and procedures established by the International Maritime Organization can be achieved at no significant cost to the shipping or ports sector.

Ports, Harbours and Shipping Policy 2

Proposals that may have a significant impact upon current activity and future opportunity for expansion of port and harbour activities should demonstrate that they will, in order of preference: a) avoid, b) minimise, c) mitigate significant adverse impacts, d) if it is not possible to mitigate significant adverse impacts on current activity and future opportunity for expansion of port and harbour activities, proposals should state the case for proceeding.

Ports, Harbours and Shipping Policy 3

Proposals that may have a significant impact upon current activity and future opportunity for expansion of port and harbour activities must demonstrate consideration of the National Ports Policy[20]

[20] http://www.dttas.ie/maritime/english/national-ports-policy-0

Ports, Harbours and Shipping Policy 4

Proposals for maintenance dredging activity will be supported where:

- necessary compliance assessments associated with authorisations necessary have been carried out and accepted by the relevant authority;
- there will be no unacceptable adverse impact on marine activities, uses and/or the marine area with any potential adverse impact is, in order of preference, avoided, minimised and/or mitigated;
- dredged waste is managed in accordance with internationally agreed hierarchy of waste management options for sea disposal; and
- if disposing of dredged material at sea, existing registered disposal sites are used, in preference to new disposal sites.

Ports, Harbours and Shipping Policy 5

In areas of authorised dredging activity, including those subject to navigational dredging, proposals for other activities will not be supported unless they are compatible with the dredging activity.

Ports, Harbours and Shipping Policy 6

Proposals that cause significant adverse impacts on licensed disposal areas should not be supported. Proposals that cannot avoid such impact must, in order of preference (a) minimise, (b) mitigate or (c) if it is not possible to mitigate the significant adverse impacts, proposal must state the case for proceeding.

Ports, Harbours and Shipping Policy 7

Proposals for the disposal of dredged material must demonstrate that they have been assessed against the waste hierarchy (see Glossary).

Ports, Harbours and Shipping Policy 8

Proposals identifying new dredge disposal sites which are subject to best practice and guidance from previous studies should be supported. Proposals will include an adequate characterisation study, be assessed against the waste hierarchy and must be informed by consultation with all relevant stakeholders.

Ports, Harbours and Shipping Policy 9

Proposals for capital dredging will be supported where it is essential to safeguard national port capacity and Ireland's international connectivity.

Ports, Harbours and Shipping Policy 10

Proposals within ports limits, beside or in the vicinity of ports and/or that impact upon the main routes of significance to a port must demonstrate within applications that they have:

- been informed by consultation at pre-application stage or earlier with the relevant port authority, and;
- have carried out a navigational risk assessment including an analysis of maritime traffic in the area, and;
- have consulted DTTAS, MSO and Commissioners of Irish Lights.

Applicants must continue to engage parties identified in pre-application processes as appropriate during the decision-making process.

Key References

- Marine Planning Policy Statement
- National Ports Policy
- Dublin Port Company Masterplan
- International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA)
- Port of Cork Masterplan
- Port of Waterford Masterplan
- Shannon Foynes Port Company Masterplan
- Irish Ports Capacity Study (when published the Irish Ports Capacity Study will be a key determinant of future port development)
- Trans-European Transport Network (TEN-T)
- Harbours Act 1996 as amended by
  - » Harbours (Amendment) Act 2000
  - » Maritime Safety Act 2005
  - » Sea Pollution (Miscellaneous Provisions) Act 2006
  - » Harbours (Amendment) Act 2009
  - » Merchant Shipping Act 2010
  - » Harbours Act 2015

Background and Context

14.1 As an island nation, Ireland's ports play a crucial role in facilitating Irish economic growth and prosperity and the Competition and Consumer Protection Commission has estimated that the ports handle 84% of Ireland's merchandise trade in volume and 62% in value terms.

14.2 The National Ports Policy, published in March 2013, provides the framework for the provision of port services. The policy contains a number of legislative and non-legislative measures which are designed not just to address the issues facing the sector today but also to equip all State commercial port companies with governance structures appropriate to their particular circumstances, role and function.

14.3 National Ports Policy (NPP) categorises the State commercial ports sector into –

- Ports of National Significance Tier 1 (Dublin, Cork and Shannon Foynes);
- Ports of National Significance Tier 2 (Rosslare and Waterford);
- Ports of Regional Significance (Dún Laoghaire under the control of Dún Laoghaire Rathdown County Council, Galway, New Ross under the control of Wexford County Council, Drogheda under the control of Louth County Council, and Wicklow now part of Wicklow County Council).

14.4 The Harbours Act 1996 to 2015 provides the necessary primary legislative framework for the operation of Irish Ports.

14.5 Ports are key facilitators and enablers of economic development in general. As such, their strategic development is supported as a key objective in both National Ports Policy and the Government's National Development Plan. The National Development Plan recognises that Ireland must be capable of delivering additional ports capacity in a timely and predictable manner and the importance of ports in connecting Ireland to the rest of the world in terms of trade and transport. This builds on the core objective of National Ports Policy to facilitate a competitive and effective market for maritime transport services.

14.6 The development of Ireland's ports is addressed in the National Planning Framework by National Policy Objective 40:

> "Ensure that the strategic development requirements of Tier 1 and Tier 2 Ports, ports of regional significance and smaller harbours are addressed as part of Regional Spatial and Economic Strategies, metropolitan area and city/county development plans, to ensure the effective growth and sustainable development of the city regions and regional and rural areas".

14.7 In addition to international connectivity, the National Development Plan commits to improving Ireland's overall national, regional and local road infrastructure. The NDP also states that strengthening access routes to Ireland's ports through investment to upgrade and enhance the road transport network to improve journey times is and remains a Government priority.

14.8 In a European context, Regulation (EU) No 1315/2013 of the European Parliament and of the Council sets out a common framework for the creation of state-of-the-art, interoperable networks for the development of the internal market. The trans-European transport networks (TEN-T) have a dual layer structure: the comprehensive network ensures connectivity of all regions of the Union, whereas the core network consists of those elements of the comprehensive network which are of the highest strategic importance for the Union. Regulation (EU) No 1315/2013 defines binding completion targets for implementation, with the core network to be completed by 2030 and the comprehensive network by 2050.

14.9 Dublin, Cork and Shannon Foynes are recognised as core ports and Waterford and Rosslare are recognised as comprehensive ports under the Regulation. Dublin, Cork and Shannon Foynes Ports are also included on both the North Sea Mediterranean Corridor and Atlantic Corridor.

14.10 The North Sea-Mediterranean Corridor is one of the nine priority axes of the Trans-European Transport Network. It stretches from Ireland and the north of the UK, through the Netherlands, Belgium and Luxembourg to the Mediterranean Sea in the south of France.

14.11 The Atlantic Corridor stretches from the ports of the Iberian Peninsula to the port of Le Havre in Northern France, and cities of Strasbourg and Mannheim on the French/German border, and is now directly linked to the ports of Dublin, Cork and Shannon Foynes in Ireland.

14.12 Because of Brexit there is now a need for an increased focus on direct Ireland–Europe connections, while previously the Ireland connection has been through the UK.

14.13 The ports engage in long-term planning and produce a Master or Strategic Plan, usually spanning a 40 year period. These plans identify the infrastructure required in the port to meet not only their own future commercial needs but that of the economy as a whole.

14.14 There are major development projects taking place currently, with our Tier 1 ports, which are also 'Core European Ports', leading the way in the provision of national port capacity. The redevelopment of Alexander Basin and associated infrastructure will ensure that Dublin Port continues to play a vitally important role in facilitating trade and tourism in our capital city, the wider hinterland, and across our national economy. The Port of Cork is on its way to becoming one of the finest ports in Europe by providing deep-water berths and state of the art infrastructure at its new Ringaskiddy facility. On the west coast, Shannon Foynes Port Company continues to build its future around its unique deep-water resources and the availability of shore side facilities that can meet the requirements of their port users and future-proof the investments they may make in the port.

14.15 Recognition as European TEN-T ports provides funding opportunities through the EU Connecting Europe Facility (CEF) Regulation and all three Tier 1 ports have already successfully obtained CEF grant funding towards their developments which in turn has facilitated further financing from the European Investment Bank and National Banks.

14.16 In relation to the Tier 2 Ports, a long-term masterplan to guide the future development at the port in Waterford is now complete. The infrastructure plan will form one of the main pillars of the masterplan and will evolve through study and evaluation of market demand, facilities and capacity needs and river management requirements. Rosslare Europort is unique among the State-owned ports, as it is not a commercial company operating under the Harbours Acts, but is instead operated as a division of Iarnród Éireann. Iarnród Éireann has recently completed a commercial review of Rosslare Europort and has announced a detailed plan for investment in development over the next five years at the port. It is important to note that other commercial ports are also currently in the development stage of their plans.

14.17 The ports of Regional Significance play important regional roles as a facilitator of the regional economy. National Ports Policy recognises the importance of these ports in serving their hinterlands and in supporting balanced regional development. These ports can also play a more significant role in supporting Ireland's national economic development, for example, through facilitating offshore energy servicing, maritime tourism or oil/petroleum import.

14.18 Given Ireland's unavoidable reliance on maritime transport and inability to switch to alternative transport modes, protecting port development and capacity is a key priority of marine planning. In conjunction with the Irish Maritime Development Office the Department of Transport, Tourism and Sport has commissioned a Ports Capacity Study which commenced in 2018 and is due for completion in 2019. The purpose of the study is to assess capacity within the Irish port system to meet present and future demand. The study will also assess likely response times in meeting demand increases and differentiate between capacity increases that can be delivered through operational efficiencies and those that require significant new infrastructure investment by the port. The study will also take into account international best practice in the ports sector. In assessing future demand, the study will evaluate capacity under different scenarios.

14.19 Handling approximately 90% of all tonnage, our commercial ports are vital to our national competitiveness. Their future development plans will allow our ports to cater for increases in the number of ship arrivals each day and greatly enhance port capacity in Ireland to meet the future trading needs of the economy.

	'000 tonnes		
Category of goods	2017	2018	change
Liquid bulk	12,211	12,171	-0.3%
Dry bulk	16,805	17,754	+5.6%
Lift-on/lift-off	7,346	7,629	+3.9%
Roll-on/roll-off	15,497	16,037	+3.5%
Break bulk & other goods	1,486	1,496	+0.7%
Total	**53,346**	**55,086**	**+3.3%**

Table 6: Tonnage of Goods Handled in Irish Ports 2017-2018 (Source: CSO Ireland)

14.20 Irish ports handled 55.1 million tonnes of goods in 2018, an increase of 3.3% over the previous year. The number of vessels arriving annually in Irish ports increased by 3.4% to 13,264 in 2018, while the gross tonnage of these vessels rose by 8.8% to 264.4 million tonnes. The routes between Dublin and three UK ports – Holyhead, Liverpool and Milford Haven – were the busiest routes for inward movement of goods in 2018. The Dublin-Holyhead and Dublin-Liverpool routes were also the busiest routes in terms of goods forwarded.

14.21 The total number of passengers embarking/disembarking through Irish ports in 2018 was 2.7m, with Dublin handling 1.8m, Rosslare 0.8m and Cork 0.1m.

14.22 Cruise ship traffic through Irish ports in 2018 involved 300 ships carrying 398,505 passengers. By comparison with 2017 this was a 28% increase in the number of ships (234 in 2017) and a 50% increase in the number of passengers (264,763 in 2017).

Ports	Number of cruise ships	Number of passengers
Bantry Bay	9	5,472
Castletownbere	0	0
Cork	93	157,669
Dublin[1]	150	196,899
Dún Laoghaire	3	476
Galway	9	6,059
Killybegs	15	13,070
Rosslare	0	0
Shannon Foynes	3	1,333
Waterford	18	17,527
Total	**300**	**398,505**

[1] Includes passengers embarking in Dublin port

Table 7: Number of Cruise Ships and Passengers Arriving in Irish Ports 2018 (Source: CSO Ireland)

Key Issues for Marine Planning

14.23 Ports and shipping are the country's trading life line. Safeguarding access to ports, harbours and navigation channels is vital to the national economy. The safety and security of shipping and ports must be taken into consideration when considering all other applications for activity or development in the vicinity of ports or shipping channels. Consideration within proposals of features of importance in areas of shipping as well as within port and harbour jurisdictions can be enhanced through reference to the most up to date nautical charts.

14.24 Brexit has brought into renewed focus the importance of Ireland's ports as nodes in the logistics chain and in keeping Ireland connected internationally. As the economy grows the ability of our ports to respond by adding capacity and adjusting to new environmental and technological demands is imperative to ensure the sustainability of our economic success.

14.25 Marine development should not be permitted where it would restrict access to, or future expansion of, commercial ports or the development of new ports which may be needed in the future. Additionally, ports should be designated consultees for any proposed developments in the maritime area to ensure early engagement.

14.26 Each of the three Tier 1 ports is currently engaged in significant phased infrastructure investment in relation to key elements of their masterplans. Supporting the existing and future development of ports in line with their approved master/strategic plans is essential to ensure the continued economic prosperity of the country. Other commercial ports are also currently in the development stage of their plans.

14.27 Dredging is essential to maintain channels and deepen berths especially as the sector is moving to ever larger ships with greater capacity. Dredged material may be disposed of at marine sites licensed by the EPA or, if possible, used for alternative purposes such as land reclamation or beach nourishment to minimise disposal at sea. Locations of disposal sites may change over time for a variety of reasons – exhaustion of site capacity, monitoring requirements, need for new sites in additional locations. Designated areas are required to dispose dredged material to ensure that ports subject to silting can be kept operational and maintain their depths, in particular when urgent dredging is required after storm activity.

14.28 Freight volumes are expected to continue to increase over the coming decades, while vessel sizes are also predicted to grow and vessel types set to further diversify. In this context accessibility, capacity and navigational safety will be significant challenges for all players and port development will trend seawards. Allocation of sufficient space for future growth, the strategic identification of long-term port locations and development of existing ports all need to be factored into long-term economic and spatial planning (terrestrial and marine).

14.29 Experience throughout Europe has shown that many investments aiming to complete the TEN-T are confronted with complex and lengthy planning, procurement, permit and consent granting procedures. The European Commission recognises that this situation jeopardises the on time implementation of projects and in many cases results in significant delays, increased costs and loss of grant funding. To rectify the situation a recent proposal has been published for a Regulation on streamlining measures for advancing the realisation of the trans-European transport Network. This proposes mandatory prioritisation of TEN-T projects and sets a maximum period of 4 years for all planning, environmental and other permits and consents to be finalised.

Interactions with Other Activities

14.30 All marine sectors rely on ports and shipping activities. Similarly, all other sectors will impact to some extent on the sea space available for safe and efficient navigation. The primary interactions are likely to be from aquaculture, renewable energy and protected areas. Consultation and effective communication across sectors and agencies will be critical to beneficial coexistence. Activity related to fishing and sailing vessels is set out in maps and accompanying text in the sections of this draft NMPF dealing with Fisheries and Sport and Recreation.

14.31 Investment by ports in infrastructural development will have a positive impact on the tourism sector by providing the additional berth capacity to grow cruise ship calls and larger Roll on Roll Off (Ro-Ro) vessels. This can benefit in particular the local and regional economy.

14.32 The ability to provide extra capacity at Irish ports will have a direct correlation on the ability for all sectors of the economy to grow.

14.33 Ports can support the growth of other marine activities such as offshore renewable energy through the provision of facilities for import and export of equipment and facilities for vessels supporting the industry.

14.34 Integration and alignment is needed between terrestrial and marine planning processes to ensure that ports link with public transport to encourage sustainable travel. Terrestrial planning should coordinate with and support ports with the necessary transport links and suitable road networks.

14.35 Dredging and disposal of the dredged material may impact on other uses and activities on a temporary basis. Dredging activity and disposal sites may not be compatible with other specific uses.

14.36 Scope is needed for facilities to safely handle the expansion of cruise ship activity in areas without large ports.

Issues for Sustainability

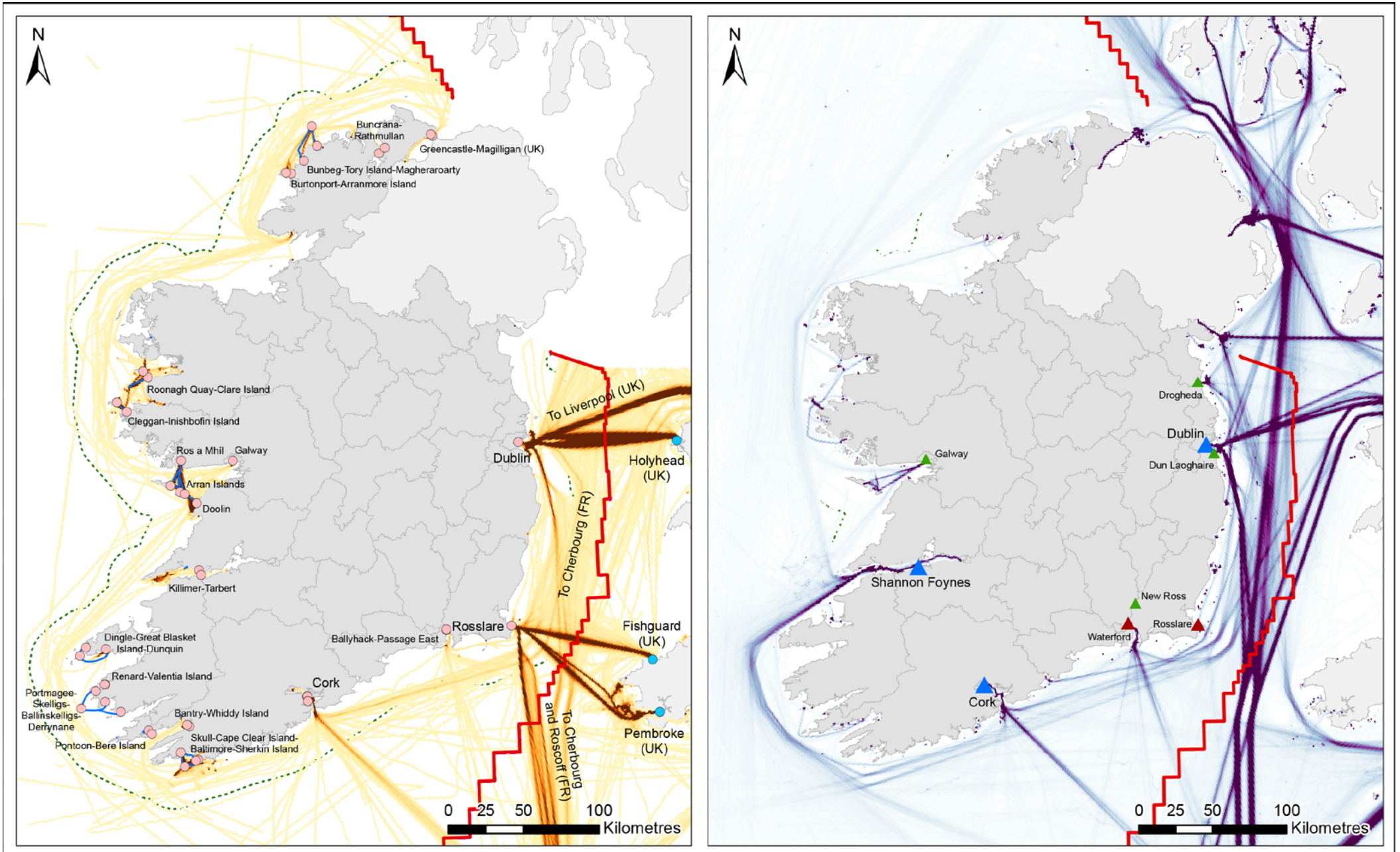
14.37 Port construction and operational activities can have adverse impacts on air quality, noise and marine biodiversity. Post construction, however, ports can act as safe havens or sheltered areas for particular marine species.

14.38 While shipping can lead to the introduction of non-native species into an area, safe and efficient shipping delivers very significant environmental benefits overall. Conversely, unnecessary diversion of sea traffic increases environmental impacts and constriction of routes and sea space can increase risk of maritime incidents.

14.39 Irish Lights Risk Assessment processes can identify any increase in navigational risk and potential mitigation measures. Issues include:

- The protection of the use of the shortest routes to ports thus the most economic route with the least carbon footprint.
- Development of facilities to allow ships to connect to the national grid when in port would reduce the need for ships to produce their own power in port and would result in cleaner air in port areas.
- Supporting the tourist sector, promoting safety at sea, and encouraging safe development of coastal infrastructure and commercial activity, such as offshore exploration and renewable energy.

14.40 Dredging and disposal are licensed activities and their environmental impacts are assessed by DHPLG/EPA during licensing procedures (see relevant policies).



Passenger Ferry and Cargo Vessel Ports, Routes and Activity

Tier 1 National Port
Tier 2 National Port
Regional Port
Popular Destination
Ferry Port
National Ferry Route

2017 Cargo Vessel Density (h/sq.km/month)
High = 8400 Low = 0

2017 Passenger Vessel Density (h/sq.km/month)
High = 2200 Low = 0

Credits: EMODnet: Cargo Vessel Density (2017), Passenger Vessel Density (2017); Marine Irish Digital Atlas: Ports (2014), Ferry Ports (2014), Ferry Routes (2014).

15.0 Safety at Sea

Objectives

- Ensure that safety at sea and navigational safety are key considerations in the assessment of proposals for the development or expansion of port facilities, or development of infrastructure in or adjacent to the maritime area.
- Safeguard the maritime search and rescue capacity of the State.

Planning Policies

Safety at Sea Policy 1

Proposals for installation, operation, and decommissioning of Offshore Wind Farms must demonstrate how they will:

- Minimise navigational risk between commercial vessels arising from an increase in the density of vessels in maritime space as a result of wind farm layout;
- Allow for recreational vessels within the Offshore Wind Farm (including consideration of turbine height) or redirect recreational vessels, minimising navigational risk arising between recreational and commercial vessels.

Safety at Sea Policy 2

Proposals for offshore renewable energy infrastructure that have the potential to significantly reduce under-keel clearance must demonstrate how they will, in order of preference:

(a) avoid,

(b) minimise,

(c) mitigate adverse impacts, or

(d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Safety at Sea Policy 3

All proposals for temporary or permanent fixed infrastructure in the maritime area must ensure navigational marking in accordance with appropriate international standards and ensure inclusion in relevant charts where applicable.

Safety at Sea Policy 4

Aids to Navigation (AtoN) must be sanctioned in advance of construction/deployment by the Commissioners of Irish Lights.

Safety at Sea Policy 5

Proposals must identify their potential impact, if any, on maritime search and rescue (SAR) operations. Where a proposal may have a significant impact on maritime SAR it must demonstrate how it will, in order of preference:

(a) avoid,

(b) minimise,

(c) mitigate adverse impacts, or

(d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Key References

- Marine Planning Policy Statement
- Water Safety Ireland
- Irish Coast Guard
- Marine Survey Office
- International Maritime Organization
- International Convention for the Safety of Life at Sea
- International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC)
- National Search and Rescue Plan
- Marine Safety Working Group

Background and Context

15.1 The International Convention for the Safety of Life at Sea (SOLAS Convention) requires the provision of such Aids to Navigation as the volume of traffic justifies and the degree of risk requires. Similar data will inform the navigation safety requirements of marine planning. Irish Lights is the statutory body established in Irish law for i) the provision of all general aids to navigation, ii) the supervision of all aids to navigation including approval to establish, alter or remove, and iii) the response to dangerous wrecks outside harbour limits. Through Automatic Identification System (AIS) monitoring Irish Lights holds data on existing traffic volumes, and tracks and data for non-AIS vessels can be estimated. Recreational vessels are not obliged to carry Automatic Identification Systems (AIS) and their traffic density should be measured by other means. The Irish Coast Guard, which is a division of the Department of Transport, Tourism and Sport, is the competent authority for the provision and management of a National AIS and associated services. Marine planning will take into account traffic volume, vessel routing, ship types and sizes, fishing areas and access routes, renewable energy, offshore petroleum, aquaculture, protected areas and heritage sites. All of these activities impact on the sea area available for vessel activity and impact on navigation safety. Through use of the International Association of Lighthouse Authorities (IALA) Risk Management Tool Kit, Irish Lights can contribute to the objective assessment of these issues.

15.2 DTTAS, through the Irish Coast Guard, provides a maritime search and rescue service (SAR) as party to the International Maritime Organisation Search and Rescue Convention. The Coast Guard maintains a network of marine very high frequency (VHF) and high frequency (HF) stations and is the national coordinating authority for processing electronic alerts generated by personal locator beacons (PLBs), emergency position-indicating radio beacons (EPIRBs), and emergency locator transmitters (ELTs).

15.3 SAR services are coordinated by three 24/7 Rescue Co-ordination Centres and dedicated search and rescue units. The Irish Coast Guard maintains distress listening watch and maintains four Search and Rescue helicopter bases under contract. The Coast Guard maintains 44 volunteer Coast Guard units with cliff, boat and coastal search capabilities. The RNLI declares its lifeboat service to the Coast Guard as assets for search and rescue. The Coast Guard responds to on average 2,500 SAR incidents per annum. Coast Guard helicopters provide day and night aeromedical services to Ireland's offshore island communities. The Coast Guard via an existing Service Level Agreement assists the National Ambulance Service in providing Helicopter Emergency Medical Services and inter hospital transfers. It also has the ability if required to transport the National Ambulance Service Maritime Response Team to offshore vessels in the event of incidents that would require paramedic assistance.

15.4 In addition to the above the Coast Guard is responsible for coordination of response to marine pollution incidents and ship casualty incidents, and is the empowered decision-maker on place of safety for marine emergencies. Place of safety is a location where rescue operations are considered to terminate, where the survivors' safety of life is no longer threatened, and where their basic human needs (such as food, shelter and medical needs) can be met, and a place from which transportation arrangements can be made for the survivors' next or final destination. A place of safety may be on land, or it may be on board a rescue unit or other suitable vessel or facility at sea that can serve as a place of safety until the survivors are disembarked at their next destination.

15.5 The Coast Guard is responsible for managing the State's responsibilities under the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) Convention, to which the State is a party. Coast Guard resources may also be employed to assist other State agencies in their response to community-based emergencies.

15.6 In accordance with international SAR arrangements, the Coast Guard maintains close liaison with the UK Maritime and Coastguard Agency and other near European neighbours in order to ensure timely and effective collaboration and mutual support in responding to incidents in neighbouring waters.

15.7 The Marine Safety Working Group aims to create and communicate marine safety information and messages to endeavour to reduce accidents and to prevent the loss of life in Irish waters. A sub-group of the Marine Safety Working Group, known as the Marine Publications Communications Working Group, is chaired by the Coast Guard and is made up of representatives of the RNLI, Irish Sailing Association, Water Safety Ireland, and BIM.

Key Issues for Marine Planning

15.8 Irish Water Safety promotes the erection of the ISO sign for wearing lifejackets at all slipways, harbours and piers in Ireland to help advise the public to wear them when going afloat.

15.9 The International Association of Lighthouse Authorities (IALA) Risk Management Toolbox approach can quantify forward planning risks for safety of navigation and incorporate these into the planning process. Facilitation of monitoring and data services to support marine planning may be possible using the Irish Lights coastal network.

15.10 Assessment of development proposals should consider the protection and safety of key shipping routes as a priority. In accordance with the regulations for prevention of collisions, key considerations include: allowing for sufficient sea room for safe vessel manoeuvring and collision avoidance, avoiding choke points, and not restricting availability of deep water for deep draft vessels. The potential for proposals to interfere with ship radar detection systems should also be assessed. The location of fishing devices such as pots is also a consideration for the safe navigation of small craft.

15.11 Key main marine planning issues for the Coast Guard are Search and Rescue (SAR), and pollution and ship casualty response. Ongoing risk assessments are performed to ensure the SAR organisation, response facilities and deployment of resources is adequate to meet demands. Changes in maritime traffic are monitored and ongoing risk assessment performed to ensure the State has adequate capacity for response to maritime casualties. National plans, risk assessments and Local Authority and port oil spill contingency plans, training and exercises should be maintained and updated on a regular basis.

Interactions with Other Activities

15.12 Maintaining the State's SAR emergency service involves close interactions between the Irish Coast Guard, the Irish Aviation Authority, Defence Forces, An Garda Síochána, the Fire Service, Irish Lights, the National Ambulance Service, the Health Service Executive, the RNLI, and other voluntary rescue organisations. These interactions and relationships are set out in detail in the National Search and Rescue Plan published in July 2019.

Issues for Sustainability

15.13 The greater frequency and severity of extreme weather events caused by climate change is likely to make the challenge of maintaining safety at sea and navigational safety more difficult.

16.0 Seaweed Harvesting

Objectives

- Support the sustainable harvesting of seaweed having regard to the important economic and social contribution it makes to coastal communities.
- Develop and maintain a fit for purpose regulatory framework that supports sustainable harvesting and respects existing formal and informal rights to harvest.
- Support ongoing research to build on available data to support sustainable seaweed harvesting.

Key References

- Marine Planning Policy Statement
- Report of the Joint Oireachtas Committee on Environment, Culture and the Gaeltacht – Developing the Seaweed Industry in Ireland – 2015.
- An Economic Analysis of the Seaweed Industry in Ireland – Socio-Economic Marine Research Unit (SEMRU) of NUIG publication – 2014.
- National Seaweed Forum Report – 2004.

Background and context

16.1 The harvesting of wild seaweed by hand is an integral part of rural marine communities and as an activity can be traced back for hundreds of years. It is especially prevalent along the western seaboard where it has been a source of animal feed and fertiliser and, since the development of commercial uses for seaweed, a source of income through the sale of seaweed to commercial processors. In the last 15 years, there are increasing uses for seaweed in the nutritional, pharmalogical, biochemical sectors and in applications to human health.

16.2 The main species of wild seaweed which is harvested is *Ascophyllum Nodosum* (Asco), although small amounts of other seaweeds are harvested by hand. Asco grows on rocky surfaces near the sea shore and is harvested by hand at low tide.

16.3 Companies who are developing these high value products purchase seaweed either directly from harvesters or from processors such as *Arramara Teoranta*. *Arramara Teoranta* has been working with harvesters buying wild seaweed for processing since 1947. There are an increasing number of indigenous companies who are working in the seaweed sector supplying high value products into international markets.

16.4 In Ireland, some 25,000 – 40,000 tonnes of wild seaweed are harvested and sold every year by seaweed harvesters with over 95% naturally grown. Estimates vary of the number of harvesters who are engaged in seaweed harvesting and it is estimated to be somewhere in the region of 150 – 300.

Key Issues for Marine Planning

16.5 Under Section 3 of the Foreshore Act 1933, the Minister for Housing, Planning and Local Government may, if it is deemed to be in the public interest, grant a licence for the removal of or disturbance of beach material on the Foreshore. Beach material is defined in the Foreshore Act and includes in its definition "seaweed whether growing or rooted on the seashore or deposited or washed up thereon by the action of tides, winds, and waves or any of them".

16.6 In the context of dealing with new applications to harvest seaweed under the Foreshore Act, the Department of Housing, Planning and Local Government identified existing rights to harvest. The Property Registration Authority of Ireland (PRAI) has confirmed that certain rights exist relating to seaweed, particularly along the western seaboard, and certain of these rights are recognised on property folios.

16.7 Legal advice from the Office of the Attorney General has confirmed that where an individual right to harvest seaweed exists a licence under the 1933 Foreshore Act is not required by the holder of that right in order to harvest seaweed nor can any other entity be licenced under the Foreshore Act to harvest seaweed in an area where existing formal or informal right harvest seaweed already exist.

16.8 However, anyone harvesting wild seaweed, even where they have a right to harvest must still comply with environmental legislation including the provisions relating to the Birds and Habitats Directive. This is especially important as seaweed is often found in or near Special Areas of Conservation.

16.9 A right to harvest seaweed may be related to a property (folio or appurtenant right) or built up through harvesting from the same area over a period of time (profit-a-prendre). The process of registering seaweed harvesting rights on a property folio is matter for the PRAI. Those who wish to verify that their right is registered, believe that they hold a folio-related right or who wish to obtain information on registering a right built up over time (profit-a-prendre) should contact the PRAI.

16.10 A number of applications made under the Foreshore Act for the commercial harvesting of wild seaweed are on hands in the Department of Housing, Planning and Local Government. These applications are now being considered in the context of the advice received from the Attorney General. The applicants have been informed of this advice. Work with these companies and with representatives of harvesters is on-going.

16.11 It is important to maintain a security of supply for those companies involved in the production of high value products derived from the processing of seaweed while also ensuring that the rights of those who can harvest seaweed are respected.

16.12 Ensuring continued growth in an industry that provides high value employment and a positive economic contribution to coastal communities in rural Ireland must be balanced against the need to ensure that the level of seaweed harvesting is sustainable and is capable of ensuring the continuing replenishment and availability of this natural resource.

16.13 On behalf of the Department of Housing, Planning and Local Government, the Marine Institute is overseeing a research project under the EU EMFF fund aimed at developing a better understanding of the Irish seaweed resource around the Irish coastline. This study will:

- Conduct a biomass assessment for certain types of seaweed
- Improve the knowledge on the current and future spatial distribution and intensity of harvesting activity and resource usage;
- Improve the knowledge on the value of seaweed harvesting activity;
- Provide a better understanding of the true potential value of seaweed harvesting.
- Address gaps in governance knowledge.

16.14 The project is therefore expected to support the future development of specific marine planning policies to guide decision-makers to inform licencing decisions for seaweed extraction and monitoring of future harvesting.

Interactions with Other Sectors

16.15 Under the 1933 Foreshore Act, the Minister for Housing, Planning and Local Government only holds responsibility for the harvesting of wild seaweed. Responsibility for seaweed aquaculture or harvesting of seaweed within the five Fishery Harbour Centres lies with the Minister for Agriculture, Food and the Marine.

16.16 Other sectors should be aware that seaweed-related rights, both of a formal and informal nature, exist in many counties along the western seaboard.

16.17 Information relating to the formal existing rights or the registration of rights involving seaweed in any particular area may be obtained from the PRAI.

16.18 Any sector engaged in or planning to engage in activity that could affect seaweed harvesting rights in an area should engage in prior consultation with the rights holders in advance of any works taking place. The most effective means of doing so, for both formal and informal seaweed harvesting rights, is to have early, informed and detailed public consultation.

Issues for Sustainability

16.19 The Government is committed to ensuring that sustainability of seaweed natural resources underpins the licensing regime for seaweed harvesting. In this regard, options are currently being explored in relation to an updated biomass assessment for certain types of seaweed.

17.0 Sport and Recreation

Objectives

- Increased participation in a range of water-based sports and recreation activities for the benefit of public health and wellbeing, as well as developing our tourism offering.
- Protection and enhancement of the unique, natural resources which attract visitors and which are relied upon for recreational activities.
- Increased provision of physical activity and recreation amenities in our coastal and marine environment, including coastal trails and greenways, blueways and other outdoor recreation facilities.
- Continued and improved access to marine and coastal resources for tourism activities and sport and recreation.
- Sustainable development of outdoor recreation facilities, promoting access for people of all abilities and encouraging the sharing of facilities where appropriate

Planning Policies

Sport and Recreation Policy 1

Proposals that promote sustainable development of water-based sports and marine recreation should be supported.

Sport and Recreation Policy 2

Proposals should demonstrate the following in relation to potential impact on recreation and tourism:

- The extent to which the proposal is likely to adversely impact sports clubs and other recreational users, including the extent to which proposals may interfere with facilities or other physical infrastructure.
- The extent to which any proposal interferes with access to and along the shore, to the water, use of the resource for recreation or tourism purposes and existing navigational routes or navigational safety.

Sport and Recreation Policy 3

Opportunities to promote inclusive development of water-based sports and marine recreation should be supported, where appropriate and at the applicable scale, with a focus on facilities for people with disabilities.

Sport and Recreation Policy 4

Proposals that improve access to marine and coastal resources for tourism activities and sport and recreation should be supported, where appropriate, at the applicable scale and aligned with existing development plans.

Sport and Recreation Policy 5

Proposals should seek to enhance water safety through provision of appropriate International Organization for Standardization (ISO) and European Committee for Standardization (CEN) compliant safety signage. In general the safety of persons should be a key consideration for planners and due consideration should be given to best practice guidance for marine and coastal recreation areas endorsed by the Visitor Safety in the Countryside Group.

Key References

- Marine Planning Policy Statement
- National Sports Policy 2018–2027
- Get Ireland Active – The National Physical Activity Plan
- Visitor Safety in the Countryside Group (VSCG)

Background and Context

17.1 Marine sports and leisure clubs and activities occupy a very important position in Irish coastal communities, offering opportunities for physical activity, facilitating social cohesion and integration through volunteering and social participation, and indeed maintaining links to our maritime heritage. Our waters host a huge range of marine sport, leisure and adventure activities, many of them enjoyed on a year-round basis. These include:

- sailing;
- canoeing;
- dinghy sailing;
- jet skiing;
- paddle-surfing/SUP'ing;
- kite surfing;
- powerboating;
- sea kayaking,
- surfing,
- snorkelling,
- diving,
- wakeboarding,
- water skiing,
- windsurfing,
- rowing;
- coasteering,
- sea swimming.

17.2 Water Safety Ireland strives to reduce the number of fatalities from drowning by increasing water safety awareness and by changing attitudes and behaviours so that our aquatic environments can be enjoyed with confidence and safety. They promote the erection of the ISO sign for wearing lifejackets at all slipways, harbours and piers in Ireland to help advise the public to wear them when going afloat.

17.3 In general the safety of persons should be a key consideration for planners and due consideration should be given to best practice guidance for marine and coastal recreation areas endorsed by the Visitor Safety in the Countryside Group. The Visitor Safety in the Countryside Group is a network of organisations in Ireland and the UK that share and develop best practice in the provision of safe and sustainable recreational experiences for people in outdoor settings. Sport Ireland and the Department of Agriculture, Food and the Marine among others are members of the VSCG.

17.4 The most popular in terms of membership numbers and affiliated clubs is sailing with over 19,000 club members in 60 clubs and Ireland is a world class sailing destination with potential to enhance this reputation over the period ahead. In 2016 Irish Sailing and its affiliated clubs and centres organised 134 formal, large-scale races and regattas involving an average of 100 sailors per event, equating to approx. 13,500 sailors competing annually. Nearly 6,000 people tried sailing for the first time in 2017.

17.5 Ireland is also a world leading destination for other marine activities such as surfing, particularly along the west coast at locations such as Lahinch, Strandhill, and Mullaghmore where big wave surfers from around the globe gather to take on the famous “prowlers” wave. Our situation as an island perched on the edge of the continental shelf also makes Irish waters suitable for scuba diving and snorkelling. Diving in Ireland is a year round sport with over 80 clubs nationally.

17.6 While the diversity of marine sports activities is increasing, considerable further growth potential exists. Marine sport, leisure and recreation activities have an important role to play in increasing regular participation by people in Ireland in sporting activity with all the associated health and social benefits this entails

17.7 The National Sports Policy 2018-2027 recognises that in Ireland we are fortunate to have high quality outdoor spaces available for people to take part in a variety of outdoor recreational sporting activities, including water-based sports such as sailing, canoeing, kayaking. These are increasingly attractive pursuits for greater numbers of our population. Sport Ireland has played a key role in supporting the development of outdoor recreation in Ireland, including setting standards for walking trails and blueways. Sport Ireland also maintains a National Trails Register, which is available to the public and will continue to fulfil this important supporting role for outdoor recreation over the coming years, expanding the national register to include other outdoor activity amenities. This will require close collaboration with Government Departments which fund the development of trails and outdoor recreation infrastructure in order to promote an excellent user experience for these facilities.

Key Issues for Marine Planning

17.8 National Policy Objective 26 of the NPF recognises the need to support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan, though integrating such policies, where appropriate and at the applicable scale, with planning policy. There is potential to develop a more integrated network of greenways and blueways to support the diversification of rural and regional economies and promote more sustainable forms of travel and activity-based recreation. A number of existing and planned greenway developments are in coastal areas or run through coastal cities and towns and there would be opportunities to link marine sports and recreational facilities with these developments, to support physical activity and sport as well as further developing our tourism offering.

17.9 The Irish Sports Monitor 2017 found that 43% of the Irish population participate in sport at least once a week. Some 66% of Irish people regularly engage in recreational walking, the most popular form of physical activity measured. Swimming is the second most popular form of sport in Ireland, with 8.5% of Irish people swimming at least once a week. The Irish Sports Monitor 2017 also found that 45% of Irish people have regular social involvement in sport, and over 34% of Irish people are members of a sports club. Bord Fáilte data (2013) indicates that 496,000 or 11% of the total population are potential future watersports participants.

17.10 Ireland's National Sports Policy 2018-2027, recognises the positive impacts of social participation for social cohesion and integration, and it has particularly benefits for older people, people with disabilities as well as minority and migrant communities. It also recognises the vital role played by sports clubs at the heart of communities throughout the country. The Policy emphasises in this regard that sporting bodies and clubs are delivery agents for the rollout of many essential programmes, and affirms that they will remain at the forefront in the Government's policy and practice in sport and physical activity.

17.11 Multiple social, environmental and economic benefits are derived from marine recreational activities. While the reach and diversity of marine activities is increasing, considerable further growth potential exists. Marine sport, leisure and recreation activities have an important role to play in increasing regular participation by Irish people in a sporting activity.

17.12 At national, regional and local level, planners should consider existing sport and recreational facilities, which will be captured in a national database to be developed by Sport Ireland to identify appropriate locations for further development of facilities, opportunities for shared facilities, as well as links to existing resources, such as coastal trails and greenways.

17.13 Get Ireland Active – The National Physical Activity Plan recognised that promoting the use of the natural and built environment and promoting active transport are the most practical and sustainable ways to increase physical activity as part of everyday routine. The way the built environment is designed, planned and built can act as a barrier to being active and can reinforce sedentary behaviour and car dependence.

17.14 Public Sector Organisations, with a responsibility for local area planning and development, often highlight the encouragement of tourists into an area when planning infrastructure such as greenways and blueways. They should be mindful that local communities benefit enormously from these developments year-round, often leading to a broader and long-lasting positive impact on the local community.

Interactions with Other Sectors

17.15 Marine sport, leisure and recreational activities have many positive interactions with other sectors. They generate direct and indirect economic benefits and employment opportunities in coastal communities in areas such as sales, equipment, training, certification, repair and rental.

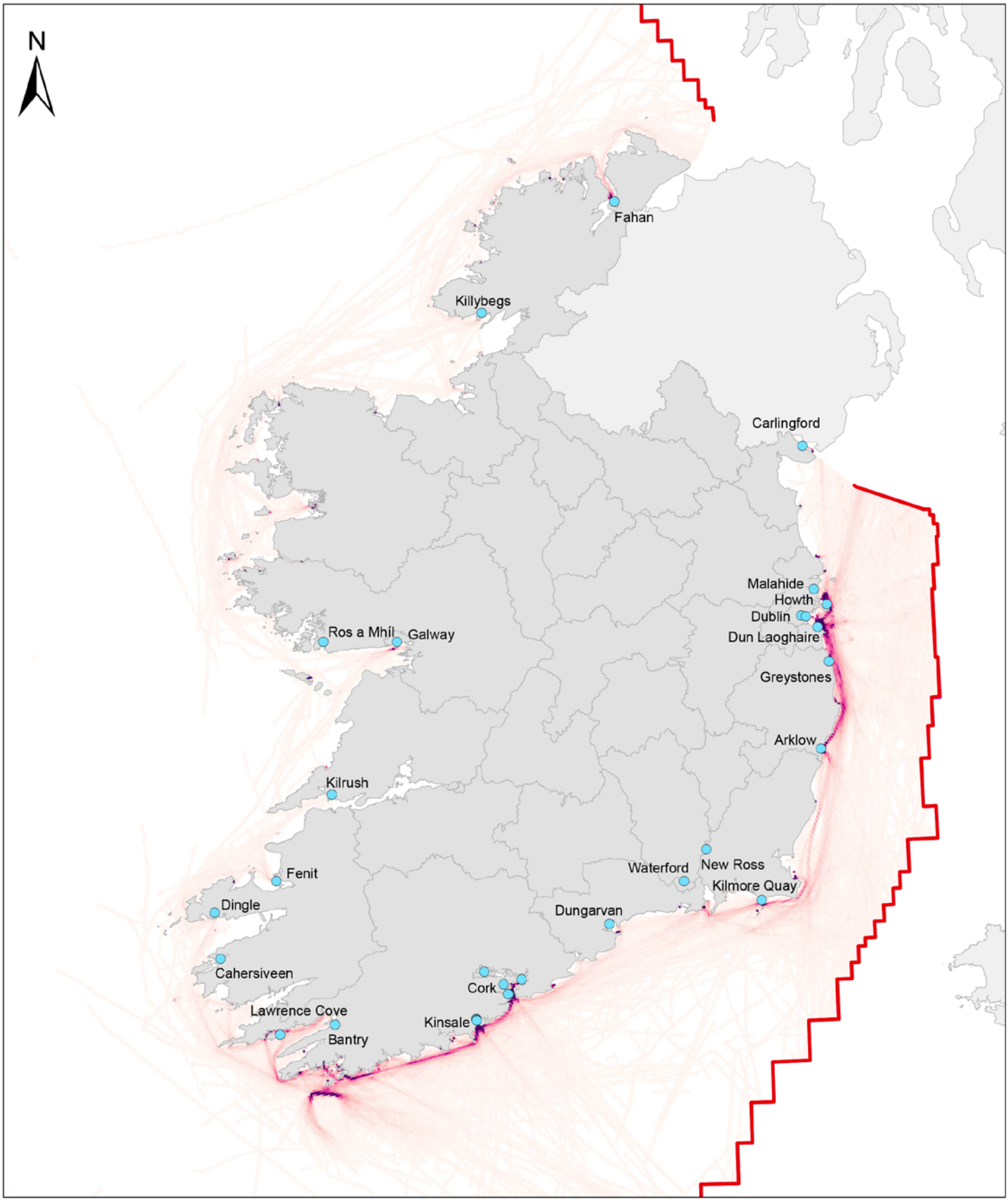
17.16 The range and popularity of specifically marine sport, leisure and recreational activities are increasing in Ireland. Marine leisure users are some of the most vulnerable marine users and often compete for marine space with other sectors. Recreational marine activities can and do successfully coexist with other marine activities and sectors but effective communication, information sharing and cooperation are vital for this. A strategic planning framework which provides for structured dialogue between all marine users will be an important mechanism for achieving synergies in the future.

Issues for Sustainability

17.17 A healthy marine environment is one of the major draws for people participating in marine sport and leisure activities. There are generally, therefore, strong synergies between marine leisure activities and marine biodiversity and wider marine life and considerable overlap between those who enjoy marine leisure activities such as diving and those who are passionate about protecting marine ecology.

17.18 However, in addition to other activities such as commercial shipping, in certain instances human leisure activities can have potentially adverse impacts for the marine environment through, for example:

- negative impacts on or disturbances to marine flora or fauna;
- instances of waste water discharge, litter, and noise pollution (for example, from power boats or jet skis). It should be noted in this context that recreational and personal watercraft are also subject to the EU Directive 2013/53/which lays down requirements for the design and construction, exhaust emissions and noise emissions of the following products, and also establishes rules regarding their free movement in the European Union;
- pressures from increased visitor numbers in environmentally sensitive areas (though this is more typically an issue on land);
- introduction of non-native species into an area on recreational boats and crafts.



Sport and Recreation Trends and Features

0 25 50 100 Kilometres

Marinas

Intensity of Sailing Activity Throughout 2017 (h/sq.km/month)

High Low

Credits: EMODnet: Sailing Vessel Density (2017); Marine Irish Digital Atlas: Marinas (2014).

18.0 Telecommunications

Objectives

- Facilitate international high-speed connectivity between Ireland and other countries.
- Ensure that our island communities can avail of the opportunities that high-speed communications networks can bring; and
- Protect existing telecommunications cables and to facilitate future growth in the sector.

Planning Policies

Telecommunications Policy 1

Proposals that guarantee existing and future international telecommunications connectivity which is critically important to support the future needs of society and enterprise in Ireland, should be supported.

Telecommunications Policy 2

Preference should be given to proposals where evidence is provided of an approach to development and activity that integrates the needs of cables and pipelines.

An integrated approach should ensure compatibility through, in order of preference:

a) avoiding, or

b) minimising, or

c) mitigating adverse impacts.

If it is not possible to mitigate adverse impacts, proposals should state the case for proceeding.

Telecommunications Policy 3

Preference should be given to proposals which protect submarine cables whilst achieving successful seabed user coexistence, such as bundling of cables (electricity and communications) as well as pipelines for multiple activities. In the case of removing redundant submarine cables, a risk-based approach should be applied with consideration given to cables being left in situ where this would minimise significant impacts on the physical, natural, societal, historic, and economic value of the area.

Telecommunications Policy 4

Proposals that ensure and enhance connectivity of Ireland's rural and island communities to high quality telecommunications networks should be supported,

Key References

- Marine Planning Policy Statement
- National Broadband Plan

Background and Context

18.1 Ireland's international and national digital connectivity is critically important to maintaining and enhancing Ireland's competitiveness in global markets and in the knowledge and information economy.

18.2 The provision of electronic communications services in Ireland occurs within a fully liberalised market, offered by competing services providers. These providers offer a wide range of services to customers over infrastructure which includes: fixed and mobile networks, voice, data and Internet services, cable television, developments in next generation networks and broadcast networks for radio and television. The sector employs 25,000 people in Ireland and has invested approximately €2.75 billion in its networks over the past 5 years.

18.3 While most telecommunications infrastructure is based on-land, island communities require connection to telecommunications networks on the mainland, and this can be achieved in several ways, including via wireless solutions and submarine cables.

18.4 Ensuring that island communities are connected to high-speed broadband will allow all citizens to avail of the vast benefits that such connectivity brings, and contributes to building vibrant island communities. Such benefits include the ability to effectively e-work, to trade online, to access eHealth and eGovernment services, to make use of IT advances in farming, and to access additional educational opportunities. This assists in supporting coastal communities, rural Ireland, and promoting more balanced regional development.

18.5 It is important that key infrastructure projects such as the National Broadband Plan are delivered and the associated public interest benefits are achieved.

- The *National Broadband Plan* aims to deliver access to high speed broadband to every premises in Ireland, regardless of location. This is being achieved through a combination of commercial investment, underpinned by regulation and policy, and a State Intervention into areas where it has been shown the commercial sector will not invest.
- The *Mobile Phone and Broadband Taskforce* works to identify and overcome barriers to telecoms connectivity. Since its establishment in 2016, the Taskforce has addressed over 60 targeted actions designed to accelerate and facilitate the delivery of telecoms infrastructure, particularly in rural areas. The Taskforce publishes quarterly reports on progress made, and all progress reports and Implementation Review reports are available on www.dccae.gov.ie.
- A new *National Digital Strategy* is in preparation. The new Strategy aims to map out how Ireland can positively embrace digital advances for the benefit of our society and economy. It is an important opportunity to articulate a vision and level of ambition for how Ireland can grasp the opportunities offered by digitalisation and respond to its challenges.

- The forthcoming *Connectivity Strategy for Ireland* will involve exploration of the key relevant infrastructural and regulation opportunities and challenges that exist in terms of meeting Ireland's connectivity needs, in terms of both wireless and fixed technology. It will also provide the Government's policy guidance in respect of timely and coordinated release of spectrum and in managing spectrum.

Key issues for marine planning

18.6 Guaranteeing existing and future international telecommunications connectivity is critically important to support the future needs of society and enterprise in Ireland. The value of the digital economy is estimated at €12.3bn or 6% of GDP and is expected to grow significantly. A robust and coherent marine and foreshore planning system will encourage and support future investment in high-speed submarine telecommunication infrastructure.

18.7 Ireland's international and national digital connectivity is critically important to maintaining and enhancing Ireland's competitiveness in global markets and in the knowledge and information economy. While it is impossible to predict accurately the direction which digital transformation will take in areas like health, education, and communications; or in forms of travel and working, what is certain is that widespread access to connectivity, underpinned by an agile, responsive and resilient digital infrastructure, will allow us to embrace digital transformation to innovate, be creative and thrive, resulting in sustainable economic growth and positive social dividends.

18.8 A fully connected digital economy and society presents a myriad of opportunities, including the potential for smaller Irish businesses, regardless of location, to trade in a global market, while enhancing Ireland's attraction as a locus for international investment within the EU. Enterprises, individuals and the public sector will, enabled by world class communication services, realise significant productivity growth, improved global competitiveness, increased innovation and exports, more and higher quality jobs, and better and more efficient public services. The creation of a gigabit and fully connected digital society, that safeguards the citizen in their use of digital services and applications will promote the use of digital services to meet societal needs, foster innovation and enhance the quality of citizens' lives.

18.9 High quality access to international telecommunications networks is a key driver in social, economic and industrial growth and development of the regions and of State as a whole. Such connections can lead to increased attractiveness for foreign direct investment and create favourable conditions for SMEs. In that regard, it is important that there is sufficient capacity into the future to cater to the demand for services. It is also important to note that as well as capacity, diversity is important – multiple routes providing network resilience in the event of a route failure.

18.10 An area for potential development in the future is increased direct capacity between Ireland and continental Europe, without the need to traverse the UK. The benefits of such direct connectivity have come more into focus recently, in the context of the UK leaving the European Union.

Interactions with Other Sectors

18.11 Telecommunications services increasingly underpin economic and social activity across a whole range of sectors. The industry supports jobs in digital, with the value of digital economy estimated at €12.3bn/6% of GDP. This includes telecommunications companies, as well as the jobs that the connectivity enables.

18.12 As telecommunications services increasingly underpin economic and social activity across a whole range of sectors, connectivity through domestic and international cables can indirectly impact upon many of the sectors in the plan.

18.13 Cables in situ may conflict/interact unintentionally with other sectors that make contact with the ocean floor – such as fishing/dredging, laying of electricity transmission cables, oil exploration. It is our understanding, however, that considerable care is taken in planning new cable routes to ensure that other marine interests are avoided where possible.

18.14 There are also opportunities for synergies with other sectors when laying telecommunications cables – electricity transmission cables for example.

Issues for Sustainability

18.15 While some elements of the telecommunications sector e.g. data centres may use a lot of energy (although many operators are keen to source renewable energy for this where possible), the sector itself can provide key tools for sustainable development. Solar, water, wind, power, electric vehicles for example are highly dependent on information technology and communications in both their operation and distribution and on wider front.

18.16 High-speed connectivity can contribute to climate change mitigation:

- It has the potential to reduce the need for carbon fuels, as a result of an increased incidence of remote working and other avoided trips, e.g. virtual monitoring of livestock;
- The promotion of energy efficiency through the enablement of smart technologies in the home, including smart meters which will support the use of renewables and reduce peak energy usage.
- The facilitation of coordinated weather warning systems; automated LED lighting for communities; remote alarms and sensors.

18.17 On the other hand, environmental factors such as rising sea levels, weather events such as storms and flooding, as well as coastal erosion all have the potential to damage telecommunications cables and their landing points.

19.0 Tourism

Objectives

- Position Ireland as a world class sustainable coastal and marine tourism destination through the sustainable development of coastal and marine recreation activities and industries in Ireland.
- Support communities in coastal areas through the increase in sustainable marine-based and coastal tourism activities.
- Maintenance of the natural marine and coastal areas which are a significant factor in bringing tourism and revenues to coastal communities in Ireland.
- Continued and improved access to marine and coastal resources for tourism activities and recreational use.

Planning Policies

Tourism Policy 1

Proposals supporting, promoting or facilitating sustainable tourism and recreation activities where appropriate, particularly where this creates diversification or additional utilisation of related facilities beyond typical usage patterns, should be supported.

Tourism Policy 2

Proposals must take into account the impact on tourism in the area to be impacted and demonstrate how potential negative impacts to tourism in communities have been minimised. This must include assessment of how the benefits of what is proposed are not outweighed by potential negative impacts identified.

Tourism Policy 3

Proposals for tourism development should seek to optimise facilities and use space whilst minimising environmental impact by taking a cross-sectoral development approach that provides for multiple activities.

Key References

- Marine Planning Policy Statement
- People, Place and Policy: Growing Tourism to 2025; policy statement centred on Ireland achieving its full potential as a destination for overseas tourism'
- National Planning Framework

Background and Context

19.1 Tourism is a hugely important indigenous economic industry in Ireland which provides income and jobs to all parts of the country, urban, rural and coastal. The sector has been very successful in growing over the last decade and played a very important part in the economic recovery experienced in that time.

19.2 The Department of Transport, Tourism and Sport is responsible for Government policy on tourism in Ireland. Implementation is carried out by the tourism agencies Fáilte Ireland and Tourism Ireland in collaboration with other State agencies, local authorities and the industry. Fáilte Ireland is the National Tourism Development Authority and its role is to support the tourism industry and work to sustain Ireland as a high-quality and competitive tourism destination. It is also a prescribed body in the planning process. Tourism Ireland is the all-island body which markets Ireland as a tourism destination in overseas markets.

19.3 Ireland's national tourism policy, *People, Place and Policy: Growing Tourism to 2025*, is a whole-of-government policy which places a focus on maximising the export contribution of tourism, while protecting the invaluable assets that are our natural, built and cultural heritage. Our marine and coastal environment is a major natural asset when it comes to tourism. The policy notes that the quality of our natural scenery and physical environment, physical heritage, and the range of activities for visitors, are areas in which the State has a key role to play, through preservation of that which is irreplaceable and the development of that which enhances the visitor's overall experience. This applies as much to the coastal and marine environment as it does for the urban and rural places in Ireland.

- Drawing on CSO published statistics, Fáilte Ireland (the National Tourism Development Authority) figures for 2018 show the importance of tourism to the Irish economy;
- Overall, tourism was worth almost €9.4 billion to the economy when domestic tourism and inbound travel receipts are factored in;
- Overseas tourism revenue grew by an estimated 6% to approximately €5.2bn, from over 9.5 million tourists, and €6.9bn when fare receipts to Irish carriers are included;
- Spending on holiday trips within Ireland amounted to over €2bn;
- Overall, tourism supported the employment of 260,000 people in the economy in 2018;
- Fáilte Ireland estimates that tourism is worth about €2 billion to the economies of our coastal counties (outside of Dublin), which means it is huge economic significance for communities in those areas.

19.4 Ireland's coastal areas, marine resources and activities are significant components in our overall tourism offering. The qualities that make a region attractive as a place to visit also enhance its attractiveness as a place to live, work and invest in. As well as recognising and endorsing cross-organisational collaboration on identifying and developing the most promising tourism segments, national tourism policy highlights the importance of maintaining and enhancing the quality of the place that visitors experience during their stay, through the protection of natural and cultural assets, while adapting to changing visitor requirements, within a context of sustainable development (which itself involves multiple stakeholders for mutual benefits).

19.5 A strong example of this approach can be seen in the 'Wild Atlantic Way', which adopts both a national and regional approach to tourism development and involves multiple stakeholders – including the tourism agencies, local authorities, the tourism industry and communities. Working collaboratively, they can advance common tourism, environmental and other coastal/marine-specific goals. The Wild Atlantic Way tourism experience brand is designed to highlight and leverage Ireland's unique geographical positioning along the Atlantic Ocean. By allowing tourists engage with and understand how the sea shaped our coastal communities, our lifestyle and our traditions, its key goal is to entice even more visitors to Ireland's shores and, most importantly, to give them a reason to stay longer and spend more.

19.6 In terms of coastal and maritime areas specifically, Fáilte Ireland research on Irish tourism businesses and tourist travel patterns within Ireland shows that 70% of visitors are concentrated in areas representing 30% of the country and the majority of these areas are along our coastline (refer to below).

19.7 The natural beauty and unspoilt environment of our coastal locations are huge factors in bringing tourists to these areas. In addition, coastal and marine-based activities, for example water sports and marine tours, are a growing attraction in these areas.

19.8 The following table gives an overview of the numbers of overseas tourists engaging in angling and other water-based activities in recent years. With specific regard to sailing, based on 3-year averages, Fáilte Ireland's best estimate for overseas tourists engaging in sailing is approximately 40,000 per annum.

Overseas Tourists (000s)	2012	2013	2014	2015	2016
Angling (all types)	118	127	157	163	131
Water-based activities	97	110	158	129	196

Table 8: Overseas Tourists Engaging in Angling and Water-based Activities 2012-2016

19.9 As regards the domestic tourism market, out of a total of 4.9 million domestic holiday trips in 2017, about 1 in 5 (21%) domestic holidaymakers engaged in watersports (excluding swimming), and 3% engaged in angling.

Key issues for Marine Planning

19.10 As tourism is a cross-cutting sector, it impacts and is impacted by multiple actions, strategies and policies beyond the immediate tourism sphere. Similar to tourism policy, maritime policy (and related strategies and actions) is also a whole-of-Government initiative. It recognises the potential of our ocean wealth to contribute to our overall social and economic well-being and aims for integrated actions across relevant broader, external policy areas.

19.11 Marine planning must take the impact on tourism into account of any development or regulatory measures with the potential to affect the sector. Marine or coastal development with economic benefits will often, apart from environmental or social costs, have less obvious economic costs from a tourism perspective which may have a greater impact that the benefits identified.

19.12 Fáilte Ireland survey data from 2018 shows that 93% of overseas holidaymakers rated "beautiful scenery" as important in considering Ireland for a holiday, more than any other reason. In addition 88% rated our "good range of natural attractions" as important with 86% rating our "natural unspoilt environment" as important. Satisfaction ratings for these features were higher than 90% in each case. From the perspective of marine planning and tourism, therefore, it is critical that issues such as the following are given due consideration:

- The need to preserve views of coastal/maritime areas from touring routes and walking/cycling trails.
- The importance of preserving the quality and extent of marine habitats, including beaches.
- The need to preserve our image as a clean, green destination, as set out in *Harnessing Our Ocean Wealth*.

19.13 With specific regard to areas of convergence between tourism and marine policy, there are mutual economic and social benefits that can accrue through closer collaboration. The following are some particular issues that could usefully be considered and addressed through integrated marine planning to optimise the use of our marine resources:

- **Access:** Access to the coastline can be limited in many areas and for a number of reasons, including landowner issues, insurance, planning or a perceived conflict in business activities, etc. It would be helpful if access to our shoreline could be improved, whether through investment in new or enhanced infrastructure, or by establishing new, more flexible, ways of working so that public resources such as ports, harbours, piers, marinas, etc., could be shared with private enterprises. This is an issue also for non-tourism related marine recreation. Marine planning should consider ways of increasing access to the coast and sea, both through new initiatives and also new uses of existing infrastructure.
- **Infrastructure:** Other jurisdictions have developed specific strategies to support investment in coastal and marine infrastructure. This is something that should be considered in the context of marine planning for Ireland.
- **Planning and Licensing:** An updated marine consent process will support innovation and development of tourism in coastal and marine areas. Clearly, a healthy marine environment protected by appropriate legislation and regulation is critical to our tourism offering. Nonetheless, tourism businesses and the local economies they support would benefit from a more integrated planning system, to avoid potential conflicts with other sectors and stakeholders, and also from a simplified planning and licensing regime.

19.14 Recent progress in regard to the terrestrial planning regime serves as an example of the benefits of such an integrated approach, which could now be applied to marine planning. Over the last number of years, Fáilte Ireland has worked closely with Government Departments and local authorities throughout Ireland to promote the spatial management of tourism. This move away from the traditional objective-based approach has seen tourism increasingly seen as a land-use – one that must be considered and planned for in the context of a range of other uses, all of which compete for resources, space and priority.

Issues for Other Sectors

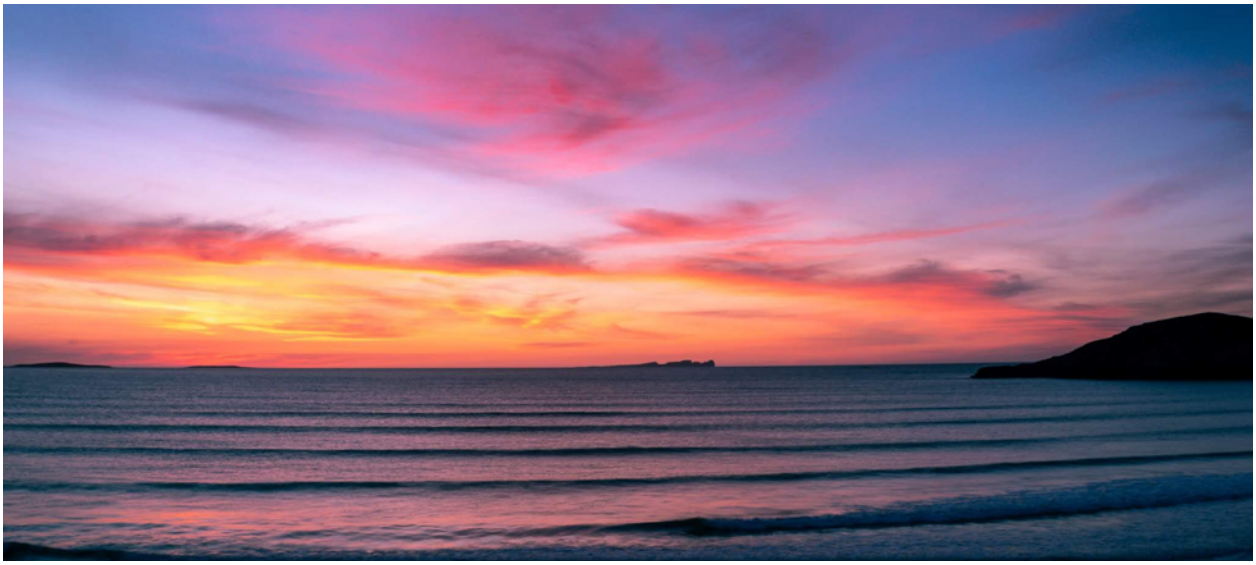
19.15 There are significant links and overlaps between tourism and many other sectors – for example, transport; port development; agriculture and seafood (especially aquaculture and fisheries); rural development; renewable energy; and the environment. For this reason, continued and enhanced cross-sectoral collaboration and integrated policy and strategies should be prioritised for the mutual benefit of all. This is particularly important for tourism, given that the sector does not directly own, manage or regulate many of the assets which underpin it.

19.16 Some of the main tourism linkages with other sectors to consider from a marine planning perspective include:

- **Aquaculture:** It is imperative that tourism impacts (including visual impacts and impacts on marine and coastal habitats, including beaches) are taken into account in licencing processes and decisions for aquaculture. Aquaculture and tourism can have positive synergies but a balance needs to be struck between the benefits of aquaculture and the costs it can impose on tourism, which can be difficult to quantify.
- **Cultural heritage and assets:** marine heritage is important in the branding of tourism products and destinations, the Wild Atlantic Way being the obvious example. In addition, specific attractions in the marine heritage area can be tourist attractions in their own right. Policies should therefore act to protect this heritage in so far as is practicable.
- **Energy:** Whilst renewable energy is of critical economic and environmental importance to Ireland, the impact of related infrastructure on tourism in terms of diminished natural amenity and scenery must also be taken into account in planning policy for the marine sector. In addition, tourism impacts of infrastructure associated with offshore energy sources must be considered when planning for such developments.
- **Fishing:** The fishing sector has many positive interactions with tourism, including in terms of providing tourists with authentic experiences in ports and harbours, exciting activities in sea-fishing and quality local food products and events. Marine planning policy which supports a sustainable and environmentally sound fishing sector will also be good for tourism.
- **Ports and harbours:** Cruise tourism and port/harbour related activities are important for tourism and can provide good synergies with other sectors using these facilities. In addition, ports are an important entry-point for overseas tourists coming to Ireland via ferry.
- **Sport and recreation:** Many marine-based and coastal sport and recreation activities, including competitive events, can also be seen as tourism activities and policy should be supportive of such activities where there are no undue negative impacts on the marine environment.
- **Nature conservation:** Given that tourism trades on Ireland's reputation as a clean/green destination, the maintenance of the marine environment is important for the sector. In addition, nature tourism such as eco-tours and whale watching is a growing segment of the market in Ireland.
- **Wastewater:** Tourism trades on Ireland's reputation as a clean/green destination so planning for effective wastewater systems is important to maintain this advantage. Beach quality is one obvious example where this can impact tourism. In addition, tourism-related development can impinge on wastewater system capacity in coastal areas, thus reinforcing the need for effective planning.

Issues for Sustainability

19.17 Tourism policy recognises the importance of growing the sector in a sustainable manner which does not have negative environmental, social or economic consequences. The *2019-2021 Tourism Action Plan* commits to the establishment of a working Group to propose guiding principles for sustainable tourism development in Ireland. While tourism can be



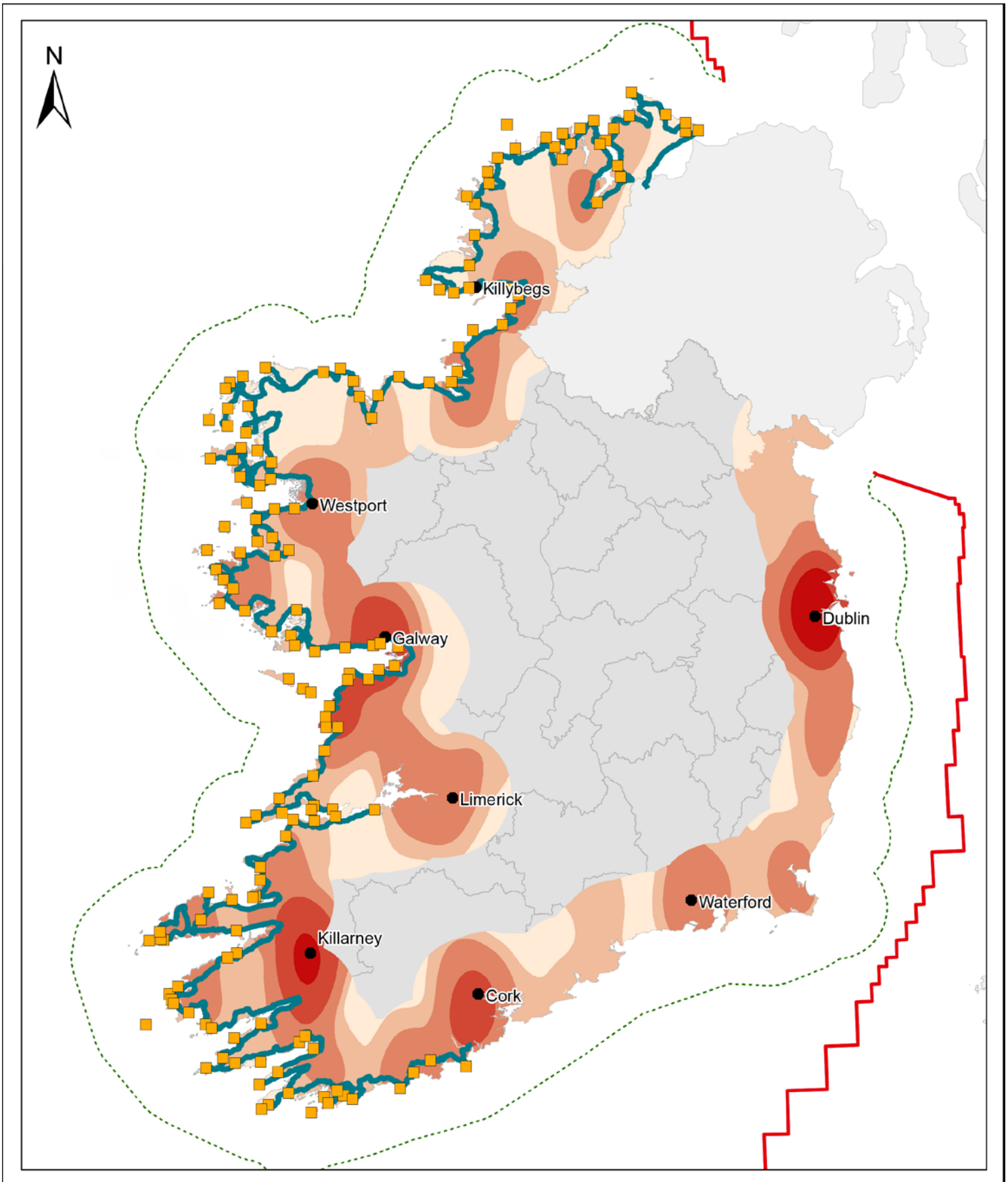
affected by impacts from other sectors, tourism development can also have an impact on the environment and this applies equally to development in coastal and marine areas. Marine planning policy must keep a balance between sustainable development for tourism and maintenance and preservation of the environment.

19.18 Tourism policy, through the *2019-2021 Tourism Action Plan*, also seeks to improve sustainability in the sector by achieving a greater dispersal of visitors in the country together with an extension in the tourism season. Achieving these aims can help tourism to grow in a way that avoids social and environmental problems. Greater dispersal of tourists will help to deliver a wider distribution of the benefits of the sector. It can also help to avoid congestion in the more traditional tourist destinations and reduce pressure on infrastructure in those places. Whilst many traditional destinations are coastal locations, there are also many opportunities to grow tourism in less-developed coastal locations. In addition, extending the tourist season can make the sector more sustainable in coastal locations, which tend to have a short season. The following heat map sets out Fáilte Ireland's ambition for regional dispersion.

19.19 Tourism and recreation present business opportunities for coastal areas. Coastal and maritime tourism is highly dependent on good environmental conditions and on good water quality in particular. Managed appropriately and developed sustainably, coastal/marine tourism and recreation can deliver sustainable products, services and jobs. Many of the specific issues for sustainability are similar to those already identified as issues for delivery.

19.20 If not managed properly, coastal tourism can put extra pressures on waste water, water pollution, or marine littering. In the broadest terms, supporting the sustainable development of the sectors – across their economic, social and environmental aspects – involves an integrated, collaborative, partnership approach across policy and programmes at both a national and local level. Across both policy and investment, it is important to address issues arising from fragmentation of responsibilities and instead ensure an integrated approach to policy development, planning, licensing, investment and access.

19.21 With specific regard to access in coastal and marine areas, there is a need to move towards a range of both sea-to-land and land-to-sea solutions and opportunities for shared access, reflective of how citizens and visitors access these experiences. These should involve the management, maintenance and regeneration of existing assets – not just new infrastructure – to reinvigorate the existing product and develop new offerings, thus potentially creating jobs and revenue.



Tourism trends and features

0 20 40 80 Kilometres

Discovery Point

Main Coastal City or Town

Wild Atlantic Way

Overnight Accommodation within 25km from the shoreline

Number of Nights

500 0

Credits: Data sourced from Fáilte Ireland, 2018.

20.0 Waste Water Treatment and Disposal

Objective

- To bring and maintain public water and wastewater services to acceptable international benchmarks, verified by independent monitoring and reporting, through increased wastewater treatment with a focus on, inter alia, ensuring full compliance with the Urban Waste Water Treatment Directive and wastewater licensing requirements.

Planning Policies

Waste Water Treatment and Disposal Policy 1

Proposals by Irish Water related to the treatment and disposal of waste water that contribute to the realisation of the objectives of:

- Ireland's River Basin Management Plan 2018–2021;
- The Water Services Policy Statement 2018–2025;
- Marine Strategy Framework Directive 2012–2020;

should be supported, provided they fully meet the environmental safeguards contained within relevant consenting processes.

Waste Water Treatment and Disposal Policy 2

Proposals that have the potential to significantly adversely affect existing and planned wastewater management and treatment infrastructure where a consent (see Glossary) or authorisation or lease has been granted or formally applied for by Irish Water should not be authorised unless compatibility with the existing, authorised or proposed activity can be satisfactorily demonstrated or there are exceptional circumstances.

Compatibility should be achieved, in order of preference, through:

(a) avoiding adverse impacts on those activities; and/or

(b) minimising impacts where they cannot be avoided; and/or

(c) mitigating impacts where they cannot be minimised.

Key References

- Marine Planning Policy Statement
- Water Services Policy Statement 2018-2025
- Urban Waste Water Treatment Directive
- River Basin Management Plan 2018-2021
- Marine Strategy Framework Directive (MSFD)
- Bathing Water Quality
- Shellfish Waters
- Water Framework Directive
- Local Authority Waters and Communities Office
- EPA Catchments

- Nitrates Directive
- EPA Report on Bathing Water Quality in Ireland 2018
- EPA Report on Urban Waste Water Treatment in 2017
- EPA Report on Urban Waste Water Treatment in 2016

Background and Context[21]

20.1 The objective of waste water treatment is to collect the waste water generated within our communities, remove the polluting material, and then release the treated water safely back into the environment. Without such treatment the waste water we produce would pollute our waters and create a health risk.

20.2 Irish Water is the national water utility, responsible for the collection, treatment and discharge of urban waste water. The Environmental Protection Agency (EPA) is the environmental regulator of Irish Water. The EPA issues and enforces authorisations for waste water discharges. The Commission for the Regulation of Utilities is the economic regulator of Irish Water. It ensures that Irish Water's revenue is spent efficiently and effectively to improve services.

20.3 In Ireland more than one billion litres of waste water is collected every day in approximately 30,000 kilometres of sewers. This is treated at 1,100 waste water treatment plants and then discharged into rivers, lakes and coastal waters. The table below shows the level of treatment provided for the national waste water load, before it is discharged back into the environment.

No treatment	Primary treatment	Secondary treatment	Nutrient removal
2%	1%	67%	30%
Effluent quality improves			

Figure 2: Level of Treatment of National Waste Water Load

Key Issues for Marine Planning

20.4 The European Union's Urban Waste Water Treatment Directive sets the basic standards for the collection, treatment and discharge of urban waste water from large urban areas. Meeting the standards in the Directive is a key step in protecting our environment from the adverse effects of waste water discharges.

20.5 The EPA is responsible for authorising and regulating urban waste water discharges. Licences are required where the population equivalent of the urban area is greater than 500, and certificates of authorisation are required for urban populations below this threshold. Authorisations include a requirement to address compliance with the Urban Waste Water Treatment Directive and, where necessary, provide for higher levels of treatment in order to achieve a water quality objective identified in a River Basin Management Plan or to address a requirement of EU legislation.

[21] Unless otherwise stated information in this chapter is based on the latest available EPA report on Urban Waste Water Treatment in 2017

20.6 The EU Commission has taken Ireland to court for failure to fully comply with the requirements of the Urban Waste Water Treatment Directive and in 2016 the EPA identified 44 areas around Ireland where waste water is collected and released back into the environment without treatment. As shown on the map following, the vast majority of these areas are in coastal locations.

20.7 Six of these are now connected to treatment plants. These are the Ringaskiddy – Crosshaven – Carrigaline area, Youghal, Killybegs, Bundoran, Rush and Belmullet.

Interactions with Other Activities

20.8 Waste water treatment is essential to protect our rivers, lakes and coastal waters. Aquatic ecosystems and human health can come under threat when waste water is not adequately collected and treated. Waste water continues to be one of the principal pressures on water quality in Ireland.

20.9 According to the EPA Report on Bathing Water Quality in Ireland 2018 waste water discharges contributed to poor quality bathing waters at 5 beaches in 2018, a decrease of 2 from the previous year. The beaches concerned were:

Poor in 2017		Poor in 2018	
Local Authority	**Bathing Water**	**Local Authority**	**Bathing Water**
Dublin City Council	Merrion Strand	Dublin City Council	Merrion Strand
Dublin City Council	Sandymount Strand	Dublin City Council	Sandymount Strand
Fingal County Council	Portrane, the Brook Beach	Fingal County Council	Portrane, the Brook Beach
Galway County Council	Clifden Beach	Galway County Council	Clifden Beach
Galway City Council	Ballyloughane Beach	Westmeath County Council	Lilliput, Lough Ennell
Fingal County Council	Loughshinny Beach		
Fingal County Council	Rush, South Beach		

Figure 3: Beaches with Poor Quality Bathing Waters 2017-2018

20.10 When bathing waters are classified as poor it means that there is a risk of periodic pollution, with the potential to cause illness such as skin rash and stomach upset to swimmers and other recreational users.

20.11 While waste water still pollutes some areas from time to time, the overall quality of Ireland's bathing water remains very good, with 94% meeting the basic standards (2018).

20.12 Waste water released into some coastal areas has the potential to contaminate filter feeding shellfish such as oysters, mussels, cockles and clams. Consumption of contaminated shellfish is a health risk, and can lead to vomiting, nausea and diarrhoea.

20.13 In some areas it is necessary to disinfect waste water during the treatment process, to safeguard shellfish habitats near the effluent discharge points. Disinfection is usually carried out using ultraviolet (often referred to as 'UV') lamps, which kill or inactivate most of the bugs and viruses in the waste water.

20.14 Irish Water must assess if discharges are impacting on designated shellfish waters. The EPA analyses the findings of these assessments to identify where disinfection, or other improvements in treatment, are needed to protect these waters. Ireland has designated 64 areas as shellfish waters. Assessments are either not required or found no adverse impact from waste water at 33 shellfish waters. Irish Water must complete assessments at the remaining 31 shellfish waters to determine if waste water is impacting on these areas. The findings of these assessments will inform the need for improvements in treatment.

20.15 In 2017 the EPA identified two urban areas where upgrade works are needed to provide waste water disinfection systems, a reduction from three in 2016 since a new treatment plant with ultraviolet disinfection was completed at Belmullet in County Mayo.

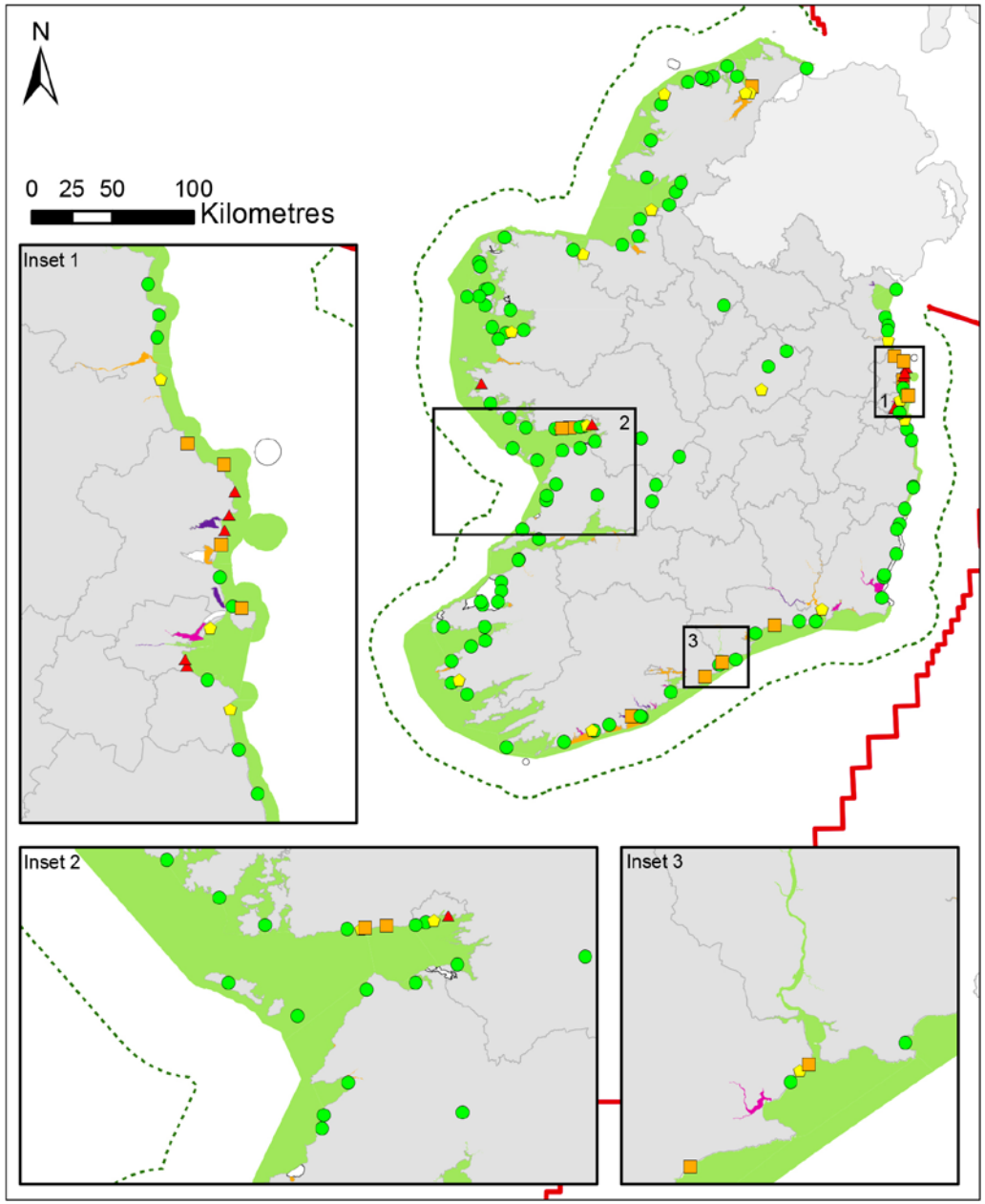
County	Urban area
Donegal	Rathmullan
Mayo	Killala

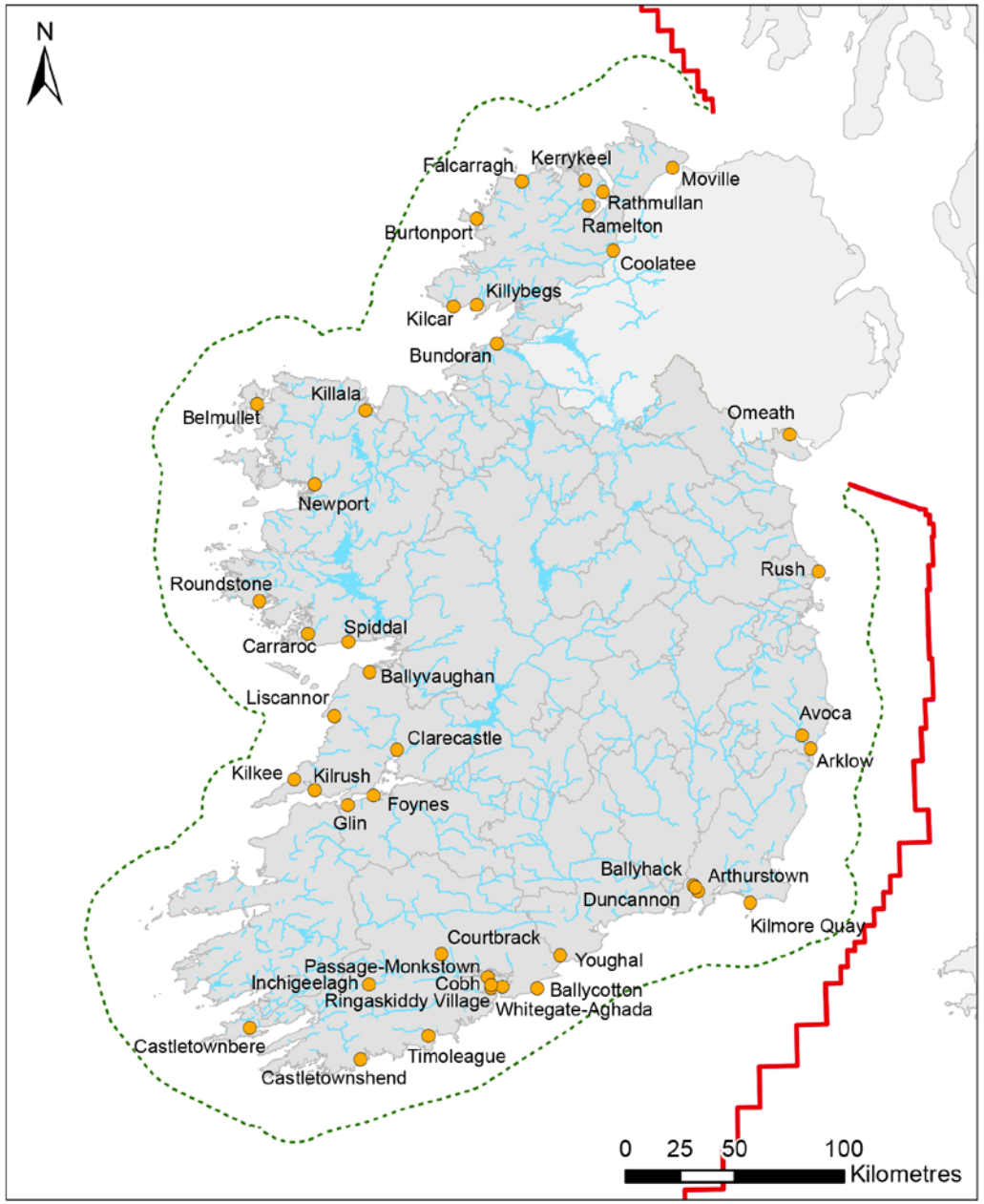
Figure 4: Urban Areas Discharging to Shellfish Waters that require Waste Water Disinfection Upgrades

Issues for Sustainability

20.16 Ireland's River Basin Management Plan 2018-2021 was published by the Minister for Housing, Planning and Local Government in April 2018. The priority objective for the river basin planning cycle is to secure compliance with the Water Framework Directive and Urban Waste Water Treatment Directive and to contribute to the improvement and protection of waters in keeping with the water quality objectives established by the Plan. This includes addressing waste water discharges and overflows where protected areas (i.e. designated bathing waters, shellfish waters and freshwater pearl-mussel sites) or high status waters are at risk from urban waste water pressures.

20.17 Details of the proposed upgrades to waste water treatment plants to 2021 are set out in Appendix 1 of the River Basin Management Plan 2018-2021.





Coastal Bathing Water Quality and Locations of Raw Sewage Discharge Around the Irish Coast

Bathing Water Quality
- Excellent Water Quality
- Good Water Quality
- Sufficient Water Quality
- Poor Water Quality

Transitional and Coastal Water Quality
- Unpolluted
- Intermediate
- Potentially Eutrophic
- Eutrophic
- Unassigned

- Raw Sewage Discharge Points
- Rivers and Lakes

Credits: EPA: Bathing Water Quality (2017), Transitional and Coastal Water Quality (2017), Waste Water Treatment Plant Locations (2018), Rivers and Lakes (2017); OpenDataNI: Rivers and Lakes (2016).

21.0 Implementation Arrangements

21.1 The success of the NMPF will be dependent upon its effective implementation. Through the development of this draft Plan, as well as the MPPS and the MPDM, strong implementation arrangements are a key focus. This includes providing clarity around the legislative basis for marine forward planning, the bodies responsible for implementing the plan, precisely what their implementation responsibilities are, how the Plan interacts with other strategic plans in place (including the National Planning Framework 2040, Regional Social and Economic Strategies and County Development Plans), who monitors implementation of the Plan and what happens if a public body does not properly implement the Plan.

Legislative Basis

21.2 Learning from experience with the National Planning Framework, legislative support, backed up by wider political and institutional commitment, is central to ensuring that the NMPF will influence public policy across Government.

21.3 In line with the recommendations of the final report of the Mahon Tribunal published in 2012, a statutory process for the making of the National Marine Planning Framework and its implementation has been put in place under Part 5 of the Planning and Development (Amendment) Act 2018 22.

21.4 The legislation repeals and replaces the European Union (Framework for Maritime Spatial Planning) Regulations 2016, which originally transposed the MSP Directive into national law. The new provisions provide for four main objectives:

- Transposition of the MSP Directive on a primary legislative basis;
- Introduction of formal arrangements for the marine plan-making process including governance, public participation, review and Oireachtas involvement, to ensure that the processes for making Ireland's two long term forward spatial plans, one marine, the other terrestrial, are consistent and fully aligned;
- Statutory provision that the objectives of the NMPF must be supported and implemented by all public bodies that have a role in making policies, plans or programmes relevant to the maritime area, or have a role in regulating activity or development in the maritime area. This means, for example, that when making a policy or plan for a marine sector, or when assessing and deciding on any application for a lease, license or consent, a public body is statutorily obliged to ensure consistency with the objectives of the National Marine Planning Framework;
- Power for the Minister for Housing, Planning and Local Government to direct a public body to adopt measures to implement or ensure compliance with the plan.

21.5 It is now proposed to consolidate these provisions into the new MPDM Bill to provide for the three components of an integrated marine planning system - marine forward planning, marine development management and marine planning enforcement - in a single piece of dedicated marine planning legislation.

[22] http://www.irishstatutebook.ie/eli/2018/act/16/enacted/en/pdf

Who is responsible for implementation of the NMPF?

21.6 As outlined above, all public bodies that have a role in making policies, plans or programmes relevant to the maritime area, or have a role in regulating activity or development in the maritime area are statutorily obliged to support and implement the objectives and policies of the NMPF when adopted. This includes, for example, all Government Departments with marine regulatory responsibilities, the Environmental Protection Agency, the Marine Institute, local authorities, the Commissioners of Irish Lights, the Sea Fisheries Protection Authority, the Aquaculture Licensing Appeals Board, An Bord Pleanála.

21.7 In practice, it means, for example, that in assessing and deciding on any application for a lease, license or consent, a public body must ensure consistency with the objectives of the NMPF. It also means that where a public body is introducing a new policy proposal or plan (e.g. a sectoral marine action plan) that policy document must also contribute to the achievement of the objectives and policies of the NMPF.

Interaction with Other Strategic Plans and Processes

21.8 In Chapter 2 the section on "Linkage with Land Planning and the National Planning Framework" sets out how the NMPF interacts with terrestrial forward plans at national, regional and county level. In the chapters on Overarching Marine Planning Policies and Sectoral Marine Planning Policies extensive referencing and signposting is provided on how the NMPF should be implemented, who will implement it and how it interacts with other strategic plans, policies and development management processes. Information is also provided at Appendix F on supporting actions being taken in parallel to support the implementation of marine objectives and policies (for example, a commitment to prepare statutory marine planning guidelines on specific marine planning issues).

Who will monitor implementation of the NMPF and what happens if a public body does not properly implement the plan?

21.9 As outlined above, under existing legislation (and to be carried through in the MPDM), the Minister for Housing, Planning and Local Government has specific powers to direct a public body to adopt measures to implement or ensure compliance with the plan. In practice this will require that once the final plan is in place before end 2020, the Department provides for an ongoing monitoring role to evaluate the relevant actions of public bodies (e.g. development of new plans and policies, decision making functions) and, where necessary, require measures to be taken to ensure compliance.

21.10 The above arrangements will be critical to the successful implementation of the plan but they must also be supported by appropriate cross-sectoral administrative and governance arrangements.

21.11 As outlined in Chapter 1.0, a high-level Interdepartmental Group and an external Stakeholder Advisory Group are in place to support the development of the NMPF. It is proposed that these groups will be repurposed – before finalisation of the NMPF – to become implementation bodies to ensure that the NMPF and its main proposals are given top-level commitment, including of a budgetary and investment nature, and are therefore appropriately driven, including constant monitoring to measure progress and focus accordingly.

Appendix A: Public Bodies with Marine Responsibilities

Department/Agencies	Functional Responsibilities
Agriculture, Food and the Marine Bord Bia Marine Institute (MI) Bord Iascaigh Mhara (BIM) Sea Fisheries Protection Authority (SFPA) Aquaculture Licences Appeals Board (ALAB)	Sea Fisheries Policy and Management Fishery Harbours Aquaculture Licensing Seafood development Seafood safety/fish health Marine research and development MI involvement in MSP
Culture, Heritage and the Gaeltacht Udarás na Gaeltachta Heritage Council	Nature conservation – European Sites Biodiversity Landscape Underwater archaeology National monuments/wrecks
Communications, Climate Action and Environment EPA Commission for Regulation of Utilities (CRU) Sustainable Energy Authority of Ireland (SEAI) EirGrid Gas Networks National Oil Reserves Agency (NORA) Geological Survey of Ireland (GSI) Inland Fisheries Ireland (IFI) Loughs Agency	Climate change Petroleum exploration and development Offshore renewable energy Offshore gas storage National oil reserves Energy interconnectors (electricity/gas) International telecoms cables Pollutant Release and Transfer Protocol
Defence Naval Service Air Corps Army	Fisheries protection Marine firing ranges Maritime security

Department/Agencies	Functional Responsibilities
Housing, Planning and Local Government An Bord Pleanála Coastal Local Authorities CCMA Irish Water Water Safety Ireland Ordnance Survey Ireland (OSI)	Maritime spatial planning (MSP) Marine environment/MSFD Shellfish waters Marine protected areas (MPAs) Dredging/Dumping at Sea Bathing water quality Sustainable development Terrestrial planning Foreshore consenting Water services Water safety
Business, Enterprise and Innovation Local Enterprise Offices Enterprise Ireland IDA Ireland Science Foundation Ireland InterTradeIreland Microfinance Ireland	Future Skills Needs – Marine Sector Research, development and innovation – Marine Sector
Public Expenditure and Reform OPW	State property/foreshore Coastal protection Flood protection
Transport, Tourism and Sport **Transport** Port Companies Irish Maritime Development Office (IMDO) Irish Coast Guard Marine Survey Office (MSO) **Tourism** Fáilte Ireland Tourism Ireland **Sport** Sport Ireland	Ports policy Shipping policy Maritime safety Navigational safety Emergency Response services and Marine Pollution prevention measures National tourism development (including Marine and coastal tourism and leisure) Marketing the island of Ireland overseas Sustainable development of competitive and recreational sport in Ireland
Foreign Affairs and Trade	Delineating the State's maritime jurisdictional zones, including maritime boundaries with neighbouring states

Appendix B: NMPF Stakeholder Advisory Group Membership

Chair: Damien English TD, Minister of State for Housing and Urban Development.

Pillar	Sector	Organisation
Public Sector	Competent Authority	Department of Housing, Planning and Local Government
	Planning	An Bord Pleanála
	Energy – Renewables	Sustainable Energy Authority of Ireland (SEAI)
	Marine Research and Innovation	Marine Institute
	Food	Bord Bia
	Local Government	County and City Management Association (CCMA)
	Local Government	Association of Irish Local Government (AILG)
Economic	Business/Employers	IBEC
	Ports/Shipping	Irish Ports Association
	Marine Leisure/Marina Operators	Irish Marine Federation
	Energy – Petroleum	Irish Offshore Operators Association
	Energy – Renewables	Marine Renewables Industry Association
	Energy – Renewables	National Offshore Wind Association of Ireland
	Energy – Renewables	Irish Wind Energy Association
	Fisheries – Inshore	National Inshore Fisheries Forum
	Fisheries – Sea Fishing	Irish Fish Producers Organisation
	Fisheries – Sea Fishing	Killybegs Fishermen's Organisation
	Fisheries – Sea Fishing	Irish South and West Fish Producers Organisation
	Fisheries – Sea Fishing	Irish South and East Fish Producers Organisation
	Aquaculture	IFA Aquaculture Section
	Fisheries – Processing	Irish Fish Processors and Exporters Association
	Tourism	Irish Tourism Industry Confederation
	Adventure Tourism	Irish Association for Adventure Tourism
	Seaweed Harvesting	Coiste Chearta Cladaí Chonamara
	Seaweed Processing	Ascophyllum Nodosum Processors Group
	Islands	Comhdháil Oileáin na hÉireann/ Irish Islands Federation

Pillar	Sector	Organisation
Social	Sustainable Development	National Economic and Social Council
	Unions	Irish Congress of Trade Unions/SIPTU
	Sports	Federation of Irish Sport
	Higher Education	Socio-economic Marine Research Unit (SEMRU), NUI Galway
	Higher Education	Centre for Marine and Renewable Energy, University College Cork
	Higher Education	Technological University of Dublin
Environmental	Irish Environmental Network	Coastwatch Birdwatch Ireland
		Irish Environmental Network
		Irish Environmental Network
		An Taisce
		Irish Whale and Dolphin Group
		SWAN Ireland

Appendix C: Summary of Stakeholder Engagement to Date

Meetings of Stakeholder Advisory Group

Seven meetings of the Stakeholder Advisory Group have been convened to date. Reports of the meetings and associated documents can be found here[23].

Public Consultation on NMPF Baseline Report

Public consultation on the NMPF Baseline Report[24] was open for three months from 18th September to 14th December 2018. Five regional events were held to launch the Baseline Report and promote awareness of the opportunity for public participation in the process.

The Department received 173 responses to the consultation from a broad range of stakeholders, including members of the public, coastal community groups, environmental NGOs, sports bodies, stakeholder representative bodies, fisheries organisations, energy providers, Local Authorities, public sector bodies, political representatives and parties, and higher education bodies. An overview of the submissions received can be found here[25] and all of the submissions received can be found here[26].

Ongoing Public and Stakeholder Engagement

In its efforts to promote awareness, understanding and participation in the planning process by the public and stakeholders the MSP Team has arranged public events in all coastal counties, and has presented at a large number of conferences, seminars, and stakeholder events. The MSP Team has arranged or participated in approx. 150 of such engagement events.

[23] https://www.housing.gov.ie/planning/marine-spatial-planning/marine-spatial-planning-advisory-group

[24] https://www.housing.gov.ie/sites/default/files/publications/files/national_marine_planning_framework_baseline_report_0.pdf

[25] https://www.housing.gov.ie/sites/default/files/public-consultation/files/responses/baseline_report_consultation_overview_for_website.pdf

[26] https://www.housing.gov.ie/node/9027/public-consultation-responses

Appendix D: Spatial Designation Process - Strategic Marine Activity Zones

This draft NMPF does not set out spatial designations or marine zonings for specific activities. The issue of zoning has however been a critical consideration in the development of the draft plan. It was the subject of a specific consultation question in the National Marine Planning Framework Baseline Report and has been discussed on several occasions at the NMPF Advisory Group.

The Baseline Report question and discussions at the Advisory Group were framed around consideration of options for structuring the plan on the basis of (1) policy only (2) full zoning (i.e. all of Ireland's seas zoned for specific purposes) or (3) a hybrid approach involving zoning for specific activities or zoning certain areas.

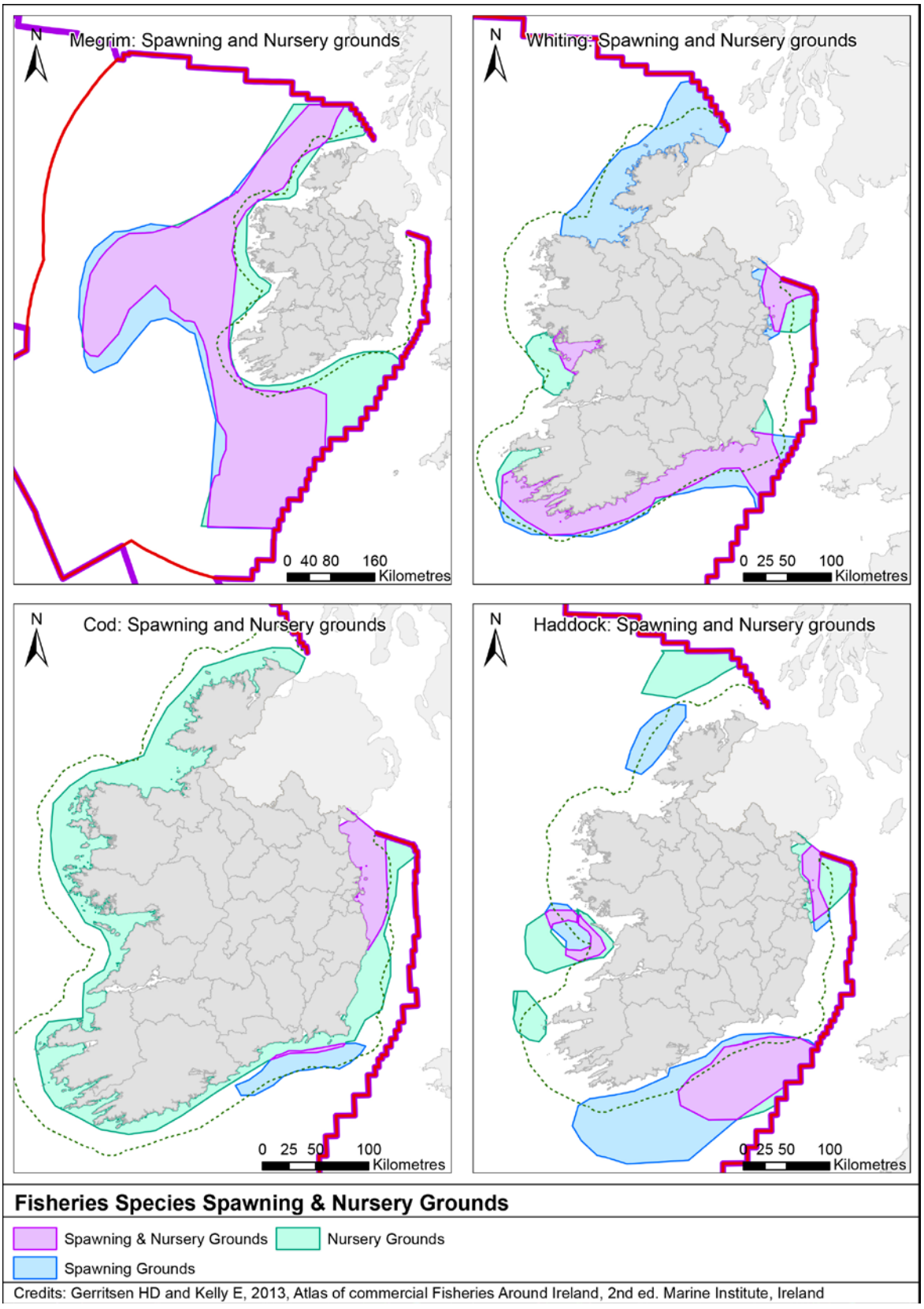
A strong consensus view emerged around option (3).

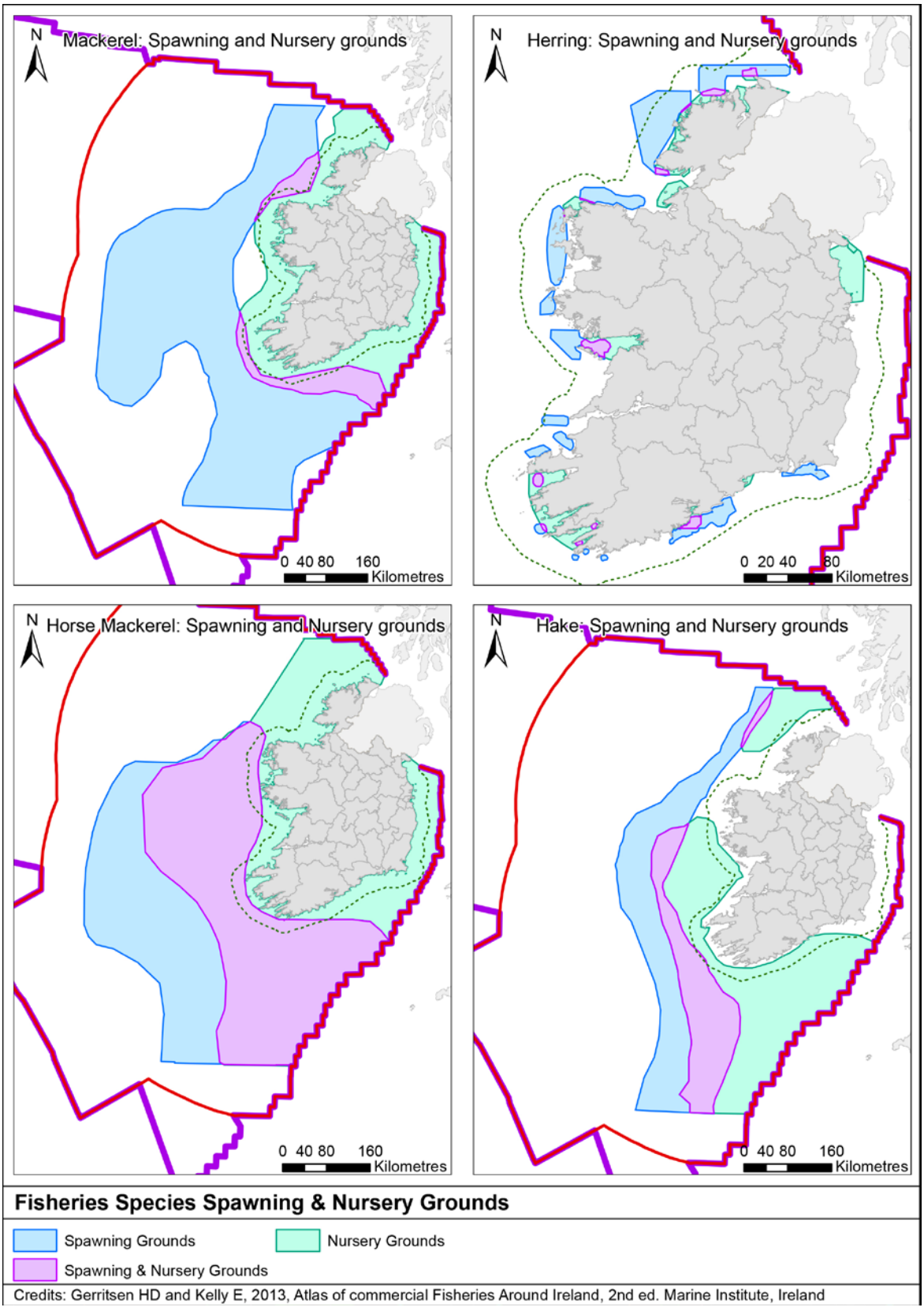
Arrangements are being made at present to include provisions in the Marine Planning and Development Management Bill to provide for a system of designation of Strategic Marine Activity Zones. While it is intended to be open to any Minister to bring forward for proposals for designation of one or more such zones, the Bill will provide that the final adoption of a zone will be a matter for Government collectively under the National Marine Planning Framework. This is to ensure that all parts of the Government have full visibility around uses of our seas and a joined up approach to marine forward planning.

The proposed designation process will include multiple opportunities for public engagement and consultation and all proposed zonings will be subject to full environmental assessment (SEA and AA).

The Bill will also provide that when a formal designation is made by Order of the Government (following public consultations and environmental assessments), the zoning is automatically deemed to become part of the National Marine Planning Framework, thereby becoming a binding consideration for marine decision makers.

Appendix E: Maps of Fish Spawning and Nursery Grounds

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Mackerel: Spawning and Nursery grounds
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Kilometres
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Herring: Spawning and Nursery grounds
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Horse Mackerel: Spawning and Nursery grounds
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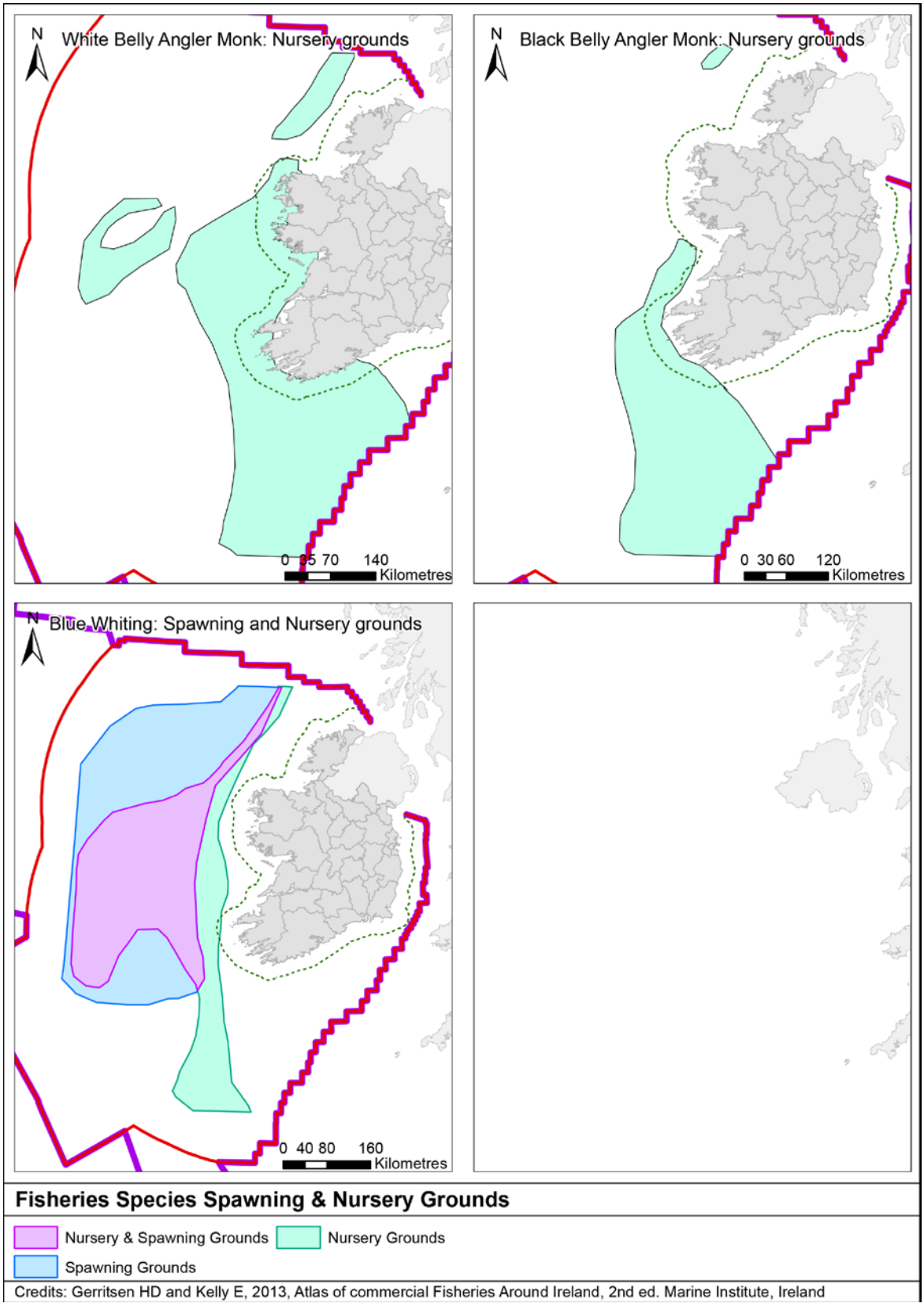
Hake: Spawning and Nursery grounds
0 40 80 160
Kilometres
Fisheries Species Spawning & Nursery Grounds
Spawning Grounds
Nursery Grounds
Spawning & Nursery Grounds
Credits: Gerritsen HD and Kelly E, 2013, Atlas of commercial Fisheries Around Ireland, 2nd ed. Marine Institute, Ireland


N
White Belly Angler Monk: Nursery grounds
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Kilometres
N
Black Belly Angler Monk: Nursery grounds
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Kilometres
N
Blue Whiting: Spawning and Nursery grounds
0 40 80 160
Kilometres
Fisheries Species Spawning & Nursery Grounds
Nursery & Spawning Grounds
Nursery Grounds
Spawning Grounds
Credits: Gerritsen HD and Kelly E, 2013, Atlas of commercial Fisheries Around Ireland, 2nd ed. Marine Institute, Ireland

Appendix F: Supporting Actions

In developing this Draft NMPF a number of actions have been identified that may support further development of the NMPF ahead of a final version being approved and/or support the development of Ireland's marine planning system overall. These actions are recorded below with the intention that they will be developed continually as part of creating the marine planning system and implementing the NMPF.

Action No.	Description	Policy areas that this relates to
1	Develop a statutory marine planning guideline on Offshore Renewable Energy development, to include: details of visualisation assessments, the approach to zoning, and identification of best available evidence to support assessments as well as known evidence gaps.	Offshore Renewable Energy (particularly: ORE 1, ORE 2, ORE 4, ORE 6, ORE 7, ORE 9, ORE 10, ORE 11).
2	Develop statutory marine planning guideline on Development Management. This will be a step-by-step guide for those interacting with the new plan-led development management system. This will be informed by existing statutory guidelines developed under S.28 of the Planning and Development Act 2000 (as amended). A matter to be addressed in these guidelines is improvement of transparency and identification of how development management processes can be used to identify and contribute to addressing evidence gaps, furthering our understanding of the maritime area and reducing duplication of effort in evidence gathering.	ALL
3	Develop maps setting out best available knowledge in relation to the distribution of highly mobile and migratory species.	Biodiversity; Disturbance; Underwater Noise; Aquaculture; ORE; Fisheries
4	Map of telecoms cables in Irish waters to be developed with neighbouring states to support consideration of telecoms assets.	Telecommunications
5	Identify opportunities to improve mapping of features of importance to ports, harbours and shipping. This may include but will not be limited to: port limits (defined in the Harbours Acts and related Statutory Instruments), pilotage limits and pilot boarding areas, approaches, anchorages, fairways, precautionary areas, navigational marking / aids to navigation.	Ports, Harbours and Shipping; Safety at Sea

Glossary – Terms and Acronyms

Appropriate Assessment: The assessment that is required by the Birds and Habitats Directives to determine the potential effect of a project or plan on a Special Protected Area or Special Area of Conservation with respect to their qualifying interests.

BAT: Best Available Technology

Benthic: A description for animals, plants and habitats associated with the seabed. All plants and animals that live in, on or near the seabed are referred to as benthos.

Best Environmental Practice (BEP): The most appropriate combination of environmental control measures and strategies.

BIM: Bord Iascaigh Mhara

Biodiversity: The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they form part; this includes diversity within species, between species and of ecosystems.

Biomass: Biomass is the biological material derived from a living organism. Fish stock biomass refers to the total estimated weight of a stock or species of fish (in ICES advice this is often called Total Stock Biomass or TSB).

BMW: Biodegradeable Municipal Waste

BnM: Bord na Móna

BOE: Barrel of oil equivalent – term used to summarise the amount of energy that is equivalent to the amount of energy found in a barrel of crude oil.

Bycatch: The catch of non-target species and undersized fish of the target species.

Carrying capacity: The potential maximum production a species or population can maintain in relation to available food resources, or other environmental limit, within an area.

CCS: Carbon Capture and Storage

CGI: Central Grid Injection

CHP: Combined Heat and Power

Closed area: An area within which fishing by one or more methods of fishing, or fishing for one or more species of fish, is prohibited. Such areas may be permanently closed or be subject to closures over time.

CNG: Compressed Natural Gas

Common Fisheries Policy: The Common Fisheries Policy establishes an EU system for the conservation of fisheries resources and the management of fisheries targeting them as well as market and financial measures in support of those objectives. In addition, it also covers fresh water and biological resources, aquaculture activities as well as the processing and marketing of fishery and aquaculture products.

Continental shelf: Under the United Nations Convention on the Law of the Sea (UNCLOS) the continental shelf is that part of the seabed over which a coastal State exercises sovereign rights with regard to the exploration and exploitation of natural resources including petroleum deposits as well as other minerals and biological resources of the seabed. The legal continental shelf (consisting of the shelf, the slope and the rise) extends out to a distance of 200 nautical miles from the coastline, or further if the shelf naturally extends beyond that limit (as it does in Ireland's case).

Cumulative impacts: Changes to the environment that are caused by an action in combination with other past, present and future human actions.

DAFM: Department of Agriculture, Food and the Marine

DCCAE: Department of Communications, Climate Action and Environment

DCHG: Department of Culture, Heritage and the Gaeltacht

Demersal: Demersal fish live on or near the seabed and feed on bottom-living organisms and other fish. Although fisheries may be directed towards particular species or species groups, demersal fish are often caught together and comprise a mixed demersal fishery.

DHPLG: Department of Housing, Planning and Local Government

Discards: Those components of a fish stock thrown back after capture because they are below the minimum landing size or because quotas have been exhausted for that species.

DoH: Department of Health

DoT: Department of the Taoiseach

Dredging: The removal of material from the sea bed, for a variety of purposes, including the clearing of channels for navigation, or the extraction of minerals.

DTTAS: Department of Transport, Tourism and Sport

EU Birds Directive: EU Directive 79/409/ EEC on the Conservation of Wild Birds, as amended.

EU Habitats Directive: EU Directive 92/43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna, as amended.

EU Water Framework Directive (WFD): EU Directive 2000/60/establishing a framework for Community action in the field of water policy.

EU Marine Strategy Framework Directive (MSFD): EU Directive 2008/56/ EC on establishing a framework for community action in the field of marine environmental policy, known as the Marine Strategy Framework Directive.

Ecosystem: a biological community of interacting organisms (plants, animals and microbes) and their physical environment (OSPAR definition).

Ecosystem approach: the comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity (OSPAR definition).

Ecosystem functioning: how plants, animals, micro-organisms and the non-living environment that make up the ecosystem work together.

Ecosystem services: processes by which the environment produces resources utilised by humans, such as clean air, water, food and materials.

EMEC: European Marine Energy Centre

EOR: Enhanced Oil Recovery – the process of obtaining stranded oil not recovered from an oil reservoir through certain extraction processes.

EPA: Environmental Protection Agency

ESB: Electricity Supply Board

ESRI: Economic and Social Research Institute

EU: European Union

Eutrophication: The enrichment of water by nutrients, especially compounds of nitrogen and phosphorus, causing an accelerated growth of algae and higher forms of plant life. This in turn can produce an undesirable disturbance to the balance of organisms and the quality of the water concerned.

GES: Good Environmental Status, defined in the Marine Strategy Framework Directive as the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive.

GES descriptors: Descriptors set by the Marine Strategy Framework Directive which describe what the environment will look like when Good Environmental Status has been achieved.

GIS: Geographical Information System

GNI: Gas Networks Ireland

GVA: Gross Value Added, a measure of the contribution to the economy of each individual producer, industry or sector in the UK.

GW: Gigawatt

ha: hectare

Harmful algal blooms: Concentrations of phytoplankton producing toxins which can affect human health, oxygen levels in water and which can kill or harm fish and other vertebrate and invertebrates.

HLMO: High-level Marine Objectives

HVAC: High Voltage Alternating Current

HVDC: High Voltage Direct Current

ICES: International Council for the Exploration of the Seas is the oldest intergovernmental organisation in the world concerned with marine and fisheries science.

IMO: International Maritime Organisation.

Inshore waters: Term used generally to describe all waters within 12 nautical miles of the coast.

Integrated Coastal Zone Management: Brings together all those involved in the development, management and use of the coast within a framework that facilitates the integration of their interests and responsibilities.

Invasive non-native species: Invasive non-native animals or plants are those that have the ability to spread causing damage to the environment, the economy, our health and the way we live. A non-native species is a species, subspecies or lower taxon, introduced (i.e. by human action) outside its natural past or present distribution.

km: kilometer

kWh: KiloWatt hour

Marine spatial planning: a process that brings together multiple users of the ocean to make informed and coordinated decisions about how to use marine resources sustainably. It is a process by which the relevant public authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives.

MPDM: Marine Planning and Development Management Bill

MSY: Maximum Sustainable Yield – The highest theoretical yield that can be continuously taken from a stock under existing environmental conditions without significantly affecting recruitment.

Mt: Million tonnes

Multi-trophic: In Integrated Multi Trophic Aquaculture (IMTA) systems, species which are fed or farmed (for example Atlantic salmon) are grown alongside species whose culture results in nutrient (or energy) extraction (for example sea urchins, mussels or seaweeds). The aims are for greater efficiency in resource use such as feedstuffs, space, and labour, with a consequent reduction in negative environmental impacts.

Natura sites: EU-wide network of nature conservation sites (Special Areas of Conservation and Special Protection Areas) established under EC Directive 92/43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna and EC Directive 79/409/ EEC on the Conservation of Birds.

Nautical miles: The unit of length used in marine navigation. One nautical mile is slightly longer than a statute mile, equal to 1.15 statute miles and 1.85 kilometres.

NBP: National Broadband Plan

NDCA: National Dialogue on Climate Action

NDP: National Development Plan

NECP: National Energy and Climate Plan

NESC: National Economic and Social Council

Non-native species: A species that does not originate in local waters and which has been introduced from other parts of the world by humans, either deliberately or accidentally.

NPF: National Planning Framework

NSAD: National Strategy for Angling Development

NSAI: National Standards Authority of Ireland

NTA: National Transport Authority

OCAC: Oireachtas Climate Action Committee

OECD: Organisation for Economic Co-operation and Development

OGP: Office of Government Procurement

OPW: Office of Public Works

OREDP: Offshore Renewable Energy Development Plan

OSPAR: The Commission which manages work under the OSPAR Convention (Convention for the Protection of the Marine Environment of the North East Atlantic).

PI 2040: Project Ireland 2040

Proposal: A proposal in the context of the policies outlined in the Framework include any plan, project, policy or application under or involving any of the sectoral activities included in the Framework. The term "proposal" refers to the following in line with the Planning and Development Act (Amended) (2018);

- The formulation of any policy, programme or plan in relation to development or activity, or proposed development or activity, in the maritime area,
- The giving of any consent or approval, or the grant or issue of licences, certificates or other like documents, under any enactment for the purposes of any such development or activity, or any such proposed development or activity,
- The regulation of any such development or activity.

Public Benefit: This term is used in a number of policies and requires a proposal to consider public benefit where significant impact cannot be avoided, minimised or mitigated. Where consideration of public benefit is required, a proposal must demonstrate that the overall benefits that will result from it outweigh any significant impact on particular marine activity identified within a policy. The definition of public benefit will vary depending upon the marine activity addressed by the policy, as well as proposal-specific features such as scale, location, timing and nature of the proposal. Where evidence of public benefit is put forward as part of a proposal, it is for decision makers to evaluate in a proportionate and appropriate way whether or not the public benefit of a proposal will outweigh the significant impact(s). Evaluation of public benefit may include consideration of environmental, social (community), and economic factors as well as all phases of a proposal such as exploratory works, installation, operation and decommissioning. Decision makers should seek advice from the expert bodies related to the topics of policies and / or proposals where relevant, details of which may be found in supporting text throughout this NMPF.

RDP: Rural Development Programme

Recruitment: New, young fish which enter the stock and the fishery. Often very highly variable in number, not always related to the size of the parent stock.

RES: Renewable Energy Source

RES-E: Renewable Energy Source – Electricity

RES-H: Renewable Energy Source – Heat

RESS: Renewable Electricity Support Scheme

RES-T: Renewable Energy Source – Transport

River basin: Area of land from which all surface water flows through a sequence of streams, rivers and, possibly, freshwater lochs into the sea at a single river mouth, estuary or delta.

SAC: Special Areas of Conservation (SAC) under the EC Directive 92/43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna.

SDZs: Strategic Development Zones

SEAI: Sustainable Energy Authority of Ireland

SECs: Sustainable Energy Communities

SEZ: Sustainable Energy Zone

SMEs: Small and Medium-sized Enterprises

SMP: Sectoral Marine Plan.

SPAs: Special Protection Areas under EC Directive 79/409/ EEC on the Conservation of Birds.

Sport development: Encouraging participation and development in sport with a focus on schools and clubs participation and development by way of training, coaching, leadership and qualification through competition and events.

SUP: Single Use Plastics

Sustainable development – Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable economic growth: Building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life too.

t: tonnes

Terrestrial planning: The term 'terrestrial planning' is used throughout this Plan to refer to all elements of the land use planning system and therefore encompasses the National Planning Framework, Local Development Plans, land use plans, and is synonymous with terms such as 'town planning', 'town and country planning', 'land use planning' and 'urban and regional planning'.

TWh: TeraWatt hour

UNCLOS: United Nations Convention of the Law of the Sea

Waste hierarchy: This should be read according to the most up to date definition provided by the Department of Communications, Climate Action and Environment.

Water Framework Directive (WFD): Directive 2000/60/ EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

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