Expanding Ireland's Marine Protected Areas

A Legal Handbook

FAIR SEAS

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Prepared by Sarah Ryan Enright BL

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Fair Seas aims to build a movement of ocean stewardship across Ireland that energises and empowers people, to advocate for ambitious and robust legislation, provide impartial scientific data and research, and propose a network of effective, well-managed marine protected areas.

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Hook Head, Co. Wexford

Foreword

by Aoife O'Mahony
Fair Seas Campaign Manager

As we launch into the next phase of biodiversity conservation in Ireland and develop pioneering new MPA legislation, Fair Seas hopes this legal guide will provide ocean advocates, policy advisors, eNGO's and civil society with the background information and current status on existing legislation useful for informing policy making decisions in the future.

The creation of national MPA legislation is a key turning point in Ireland and a beacon of hope for our species and habitats. It represents a once in a generation opportunity to transformatively change the way we conserve, protect and restore our seas. We hope this guide will positively inform and engage those outside the legislative framework with the relevant marine directives and legislation, definitions of current protections, international examples, core principles and key targets with which successful new legislation must add to and account for.

This legal guide will complement the recently published scientific report "Revitalising our Seas" and help steer the conversation about marine protected areas in Ireland amongst all stakeholders. This also aligns with the work Fair Seas has completed on our MPA legislative Asks which we have shared with our colleagues in government and also encourage you to read.

As a European laggard in marine protection, Ireland can now lead the way by developing robust legislation that will serve our species and habitats, combat climate change and conserve and restore our ocean.

Recent Fair Seas research shows that 31% of people believe that Irish seas are healthy and that 67% of people believe the health of Irish seas has worsened in the past ten years. This public perception poll reveals that 45% of people know what a Marine Protected Area (MPA) is, up from 37% of people at the start of this year. It also shows strong support for additional marine biodiversity protections, with four out of five people saying they would support a campaign to protect more of our seas.

Citizens of Ireland want to see action on ocean restoration and conservation, this is evident in our recent research and also supported by the recommendations of the Citizens Assembly on biodiversity loss.

Not only is marine protection a key issue for the people of Ireland, this is also a European and global issue. Fair Seas has recently become a signatory to the European Mission charter to "Restore our Ocean and Waters by 2030" which brings together member states, regions and a wide range of stakeholders with the common goal of making our oceans healthy again. The Mission is highly ambitious and aligns with the Fair Seas objectives to protect a minimum of 30% of our seas, including 10% 'strictly' protected, from damaging human activity.

Be part of the Fair Seas campaign to help ensure we achieve these ambitious targets- follow us on social media, sign up for our newsletter, get involved with citizen science, and ask your public representatives what they are doing to conserve and restore our ocean for generations to come.

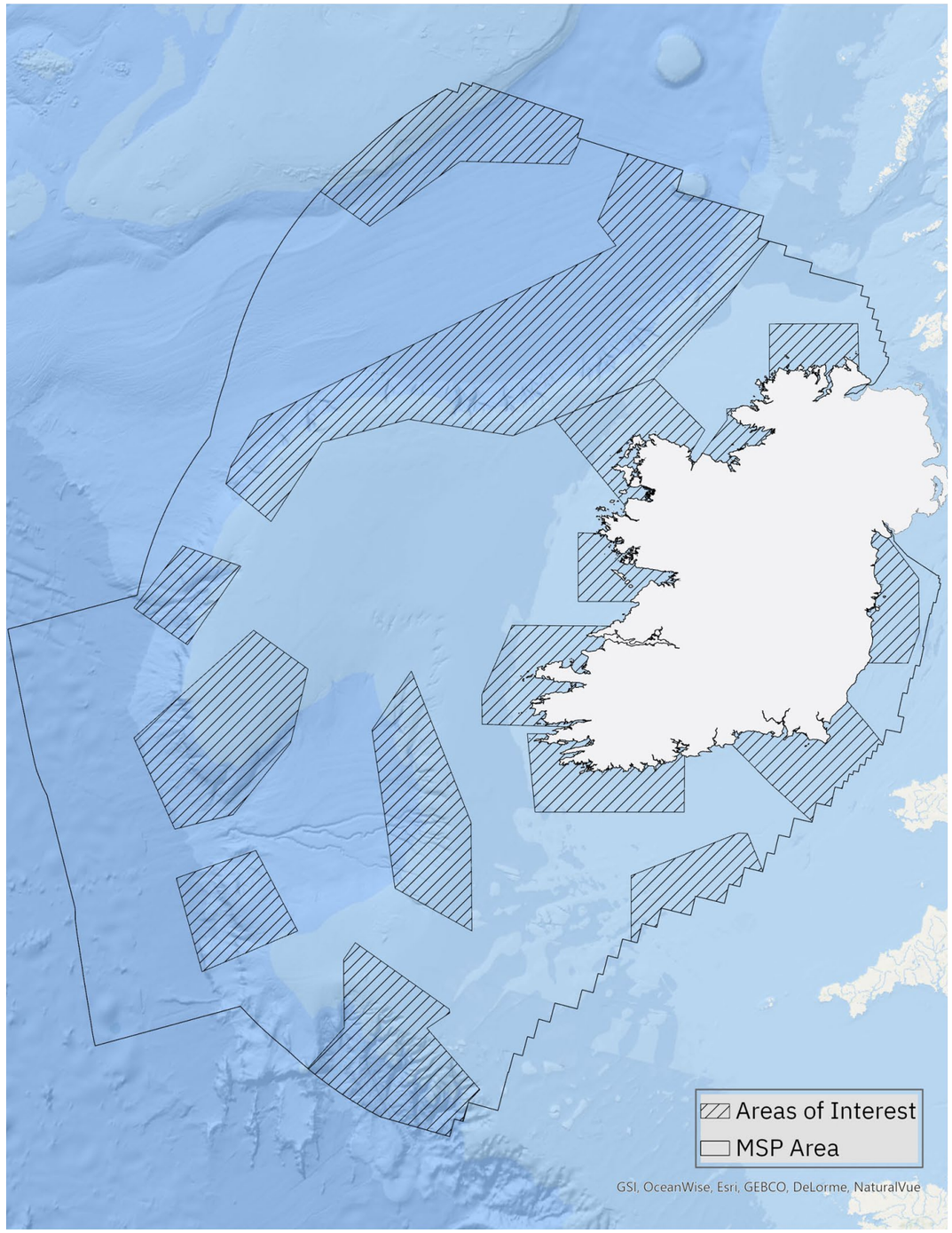


Figure 1: Full Network of Areas of Interest within Ireland's Maritime Area

Executive Summary

The aim of this guide is to provide non-Governmental organizations and other interested parties with information on the legal status of Marine Protected Areas (MPAs) in Ireland during a pivotal time for MPA expansion and marine policy in Ireland.

The decline of marine biological diversity worldwide, including in Ireland, due to human induced pressures, has led to calls for more legally protected areas. Under international and European law, Ireland has committed to protecting 10% of its waters by 2020. These targets were increased to 30% by 2030 (30x30) under the post 2020 Global Biodiversity Framework and are a commitment of the current Irish Government as stated in the 2020 Programme for Government 'Our Shared Future'. Ireland is also a party to the Regional Seas Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSPAR, 1992), under which it has committed to establishing an ecologically coherent network of MPAs. The European Union (EU) Biodiversity Strategy for 2030 has already incorporated the new 30x30 targets, of which 10% should be 'strictly protected', and requires the integration of ecological corridors into MPA networks. Member States have until the end of 2023 to demonstrate progress in legally designating new protected areas and integrating ecological corridors.

Ireland currently lags far behind its international commitments with only 2% of its waters under protection. It continues to rely on the spatial protection measures under the EU Birds and Habitats Directives (1979; 1992), which are predominantly coastal and limited by their focus on vulnerable, rare and/or endemic marine habitats and species, thus excluding significant aspects of the Irish marine environment. The Irish Government has acknowledged current limitations and is now in the process of developing specific MPA legislation. In July 2022 the Government approved the development of a General Scheme of a Bill, which was published on 13 December 2022. In a positive step forward, the Government also announced, on the same day, that it is on track to meet the global 10% MPA target by mid-2023 via new offshore protected area designations.

Section 1 of this report opens with an overview of the threats facing Ireland's marine environment and introduces MPAs as an essential part of the solution. Section 2 of the report contains a comprehensive overview of the current legal status of MPAs in Ireland, which derives predominantly from international and European law. Section 3 presents a summary of the gaps and weaknesses identified during the analysis of Irish law. Section 4 provides a comparative analysis of neighbouring jurisdictions with whom we share seas, the United Kingdom (UK) and France. The UK experience is of particular relevance to Ireland given our close geographical proximity, shared seas, common law legal heritage, and special political relationship. Despite the UK leaving the EU, it remains a member of OSPAR and therefore must continue to cooperate regionally for the protection of the marine environment of the Northeast Atlantic Ocean. France is also a relevant comparator given its maritime area in the Celtic seas, membership of the EU and OSPAR, and close geographical proximity. Furthermore, it has legislated for a broad spectrum of MPA types and management approaches, from which lessons can be learned.

The report concludes with a series of recommendations for the expansion of the Irish MPA network based on international best practice and insights from the comparative study. In light of the unprecedented gravity of the ocean, climate and biodiversity crises and the significant MPA expansion that will need to occur in Irish waters over a relatively short space of time, it is critical that legislation be enacted as a matter of urgency and equally important that sufficient resources be allocated for the design and implementation of Ireland's MPA network.

1 Introduction

1.1 AN OCEAN IN CRISIS

Life cannot exist without water, which is why the ocean is often referred to as Earth's life support system. The global ocean covers 71% of the surface of the planet, contains 97% of Earth's water and is teeming with rich marine biodiversity; in fact, it is home to 97% of all life in the world. The ocean is the provider of essential 'ecosystem services'[1] which make life on Earth possible: it regulates our climate and weather, absorbs much of the carbon dioxide from the atmosphere and is a source of food, water and oxygen. It is also a source of significant economic activity, which encompasses industries such as shipping, fishing, aquaculture, tourism and energy extraction.

Despite its vital role, the ocean faces grave threats due to decades of damaging human activities, such as overfishing, illegal fishing, land and sea-based pollution, and land and sea use change including coastal developments for infrastructure and aquaculture.[2] Climate change is an overarching danger which exacerbates the impact of these activities on marine biodiversity. On a global level, several alarming reports have been issued by groups of international scientists in recent years highlighting that global biological diversity, including marine biodiversity, is declining at rapidly increasing rates. In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an intergovernmental body which assesses the state of biodiversity, issued the Global Assessment Report on Biodiversity and Ecosystem Services, which revealed that two thirds of the marine environment had been 'severely altered' by human activity and approximately one third of reef forming corals, sharks, and marine mammals face extinction. The same year, the Intergovernmental Panel on Climate Change (IPCC), which is the United Nations body for assessing the science related to climate change, issued a Special Report on the Ocean and the Cryosphere in a Changing Climate in which it described how warmer waters and ocean acidification are leading to major shifts in species distributions, resulting in changes to ecosystem structure and functioning, eventually leading to loss of globally unique biodiversity.

According to the 2020 WWF Living Planet Report, there has been a 68% decline in populations of mammals, birds, fish, reptiles, and amphibians in just over 40 years. Furthermore, almost 6 billion tonnes of fish and invertebrates have been taken from the world's oceans since 1950.[3] In Europe, biodiversity of marine ecosystems is still classed as vulnerable with some marine populations and groups of species, including seabirds and cetaceans, under threat.[4] Many marine species across Europe's seas are experiencing a decrease in population size as well as a loss of distribution range and habitat due to impacts from human pressures.[5] Ireland is no exception to these worrying trends. The third National Biodiversity Action Plan for Ireland 2017—2021 determined that a significant proportion of Ireland's biodiversity is in a vulnerable state.[6] In 2019, the Government publicly declared a climate and biodiversity emergency,[7] and in a global first,[8] established a Citizen's Assembly on Biodiversity Loss, which will examine how the State can improve its response to the issue of biodiversity loss.[9] Their findings will be included in the fourth National Biodiversity Action Plan, covering the period 2023—2027, which is due to be published in early 2023.[10]

1.2 IRELAND'S MARINE ENVIRONMENT

Covering over 880,000 km^2, Ireland has one of the largest marine territories in Europe,[11] which 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.[12] These seas are home to a wide range of animals and plants, including plankton, cold water corals, fish, seabirds, and iconic marine mammals such as

dolphins and whales, and there is a variety of physical habitats and associated species, ranging from shallow inshore reefs and sandbanks to canyons, seamounts, troughs and cold-water coral reefs in deeper waters.[13] As an island nation, Ireland's economy, culture and society is inextricably linked to the sea. The Irish marine environment is a source of significant economic activity, such as fishing, tourism, shipping, energy and research,[14] the majority of which depend upon a healthy marine environment.

However, protection of the marine environment has been historically weak,[15] with only around 2% of Irish waters currently subject to protective measures,[16] and with limited regulation of human activities in our waters in comparison to land. Pressures on Ireland's coastal and marine biodiversity and ecosystem services from human activities has continued to grow from a range of sources including nutrient and chemical discharge from human activities (e.g. industry, agriculture, municipal wastewater), direct physical disturbance e.g. shipping, recreation and aquaculture; with pollution, litter, artificial noise and light causing habitats to degrade.[17] Climate change and ocean acidification are of particular concern as they may alter the effects of other pressures and facilitate the spread of invasive species.[18]

In a 2020 report assessing the state of Ireland's environment, the Environmental Protection Agency (EPA) reported that 65% of Ireland's coastal habitat types are in an unfavorable condition, with several nationally important marine species under threat.[19] Benthic habitats, including reefs are thought to have been severely damaged by bottom dredging fishing gear.[20]

Ireland's 6th national report to the Convention on Biological Diversity (CBD) in 2019 noted that commercial fisheries had been severely impacted by a prolonged period of overfishing and a high proportion of species populations remain below Maximum Sustainable Yield and the population status of many others being insufficiently understood.[21] A number of non-commercial fish species (e.g. sea lamprey, twaite shad, angel shark) are threatened because of habitat loss/disruption and by-catch.[22] Several elasmobranch species, including the sharks, rays and skates, are listed as critically endangered under Ireland's Red List while other comparatively protected species remain vulnerable to environmental degradation from human activities in Ireland's maritime area (e.g. some marine bird species, migratory baleen whales, deep-diving cetaceans).[23]

A 2017 report by the Irish Wildlife Trust claimed that extinction threatens 48 species living in the Irish marine environment, including fish, crustaceans, shellfish and invertebrates.[24] It warned that wild fish and invertebrate populations continue to be overfished and by-catch of marine life, from whales and dolphins to smaller invertebrates, is an on-going cause for concern. According to the fourth assessment of Birds of Conservation Concern in Ireland 2020—2026,[25] of Ireland's nineteen breeding seabird species, eleven are Amber-listed birds of medium conservation concern, four are red-listed birds of high conservation concern. Only one species is green listed.

With twin crises of unprecedented global biodiversity loss and climate change affecting the oceans and marine life, legislative frameworks that mandate, guide, fund, monitor and enforce conservation actions that target threatened species or habitats are essential. One of the key tools which will enable Ireland to conserve and restore biodiversity and ecosystem services in the marine environment are marine protected areas (MPAs), which is explicitly acknowledged in Ireland's third National Biodiversity Action Plan.[26]

1.3 MARINE PROTECTED AREAS

MPAs are a proven solution to many of the problems facing the ocean. Benefits include conservation of biodiversity, protection of habitats, improved fisheries, reversal of biodiversity loss via exclusion or reduction of harmful activities, increased ecosystem resilience, enhancement of ecosystem services and socio-economic benefits (once no conflict with conservation). [27] With respect to climate change, MPAs have also been lauded as having a key role to play in mitigation and adaptation: "when properly managed, MPAs can help conserve rich marine biodiversity and the life-supporting services that the ocean provides us with; they absorb large amounts of global carbon emissions, strengthen the ocean's resilience and are critical in supporting our ability to mitigate and adapt to climate change".[28] The IPCC in its Sixth Assessment Report recently called for protection of 30—50% of ocean areas, noting that "safeguarding biodiversity and ecosystems is fundamental to climate resilient development, in light of the threats climate change poses to them and their roles in adaptation and mitigation."[29]

While there is no universally agreed definition, MPAs can be described in simple terms as marine areas that are protected and managed over the long term for the purposes of conservation. They are distinct from other area-based protection measures such as those used for fisheries management.[30] Human activities usually need to be restricted at some level within an MPA. They can vary widely in their level of protection, depending on the human pressures at play and the conservation needs of the site to be protected, ranging from fully protected areas, where no extractive activities are permitted to lesser protected areas where some human activities may be allowed. 'Multiple use' MPAs may

Sperm Whales

also be divided into different zones, with some zones prohibiting any human activities bar essential scientific research, while other zones may allow minimal, low impact activities such as artisanal fishing and tourism.

While static MPAs have been the norm to date, there is increasing recognition in scientific literature that 'dynamic' or 'mobile' MPAs, which have boundaries that vary across space and time, can be more effective at protecting dynamic habitats and mobile species.[31] 'Dynamic management' is a subset of spatial management which is now gaining traction as a solution to managing species with changing distributions, due to their migratory nature and/or the impact of climate change. Dynamic management strategies use near-real-time data to better align management measures to the pace of change in biological habitats.[32] Thus far, dynamic ocean management has developed in the context of spatial management of fisheries but has significant potential for improving conservation of mobile species.[33]

Edgar et al identified five common factors that greatly increase the conservation benefits of MPAs: if they are 'no take', well enforced, older than 10 years, large (greater than 100 km^2), and isolated by deep water or sand.[34] No-take zones are marine areas where all extractive activities are prohibited, except as necessary for monitoring or research.[35] The ecological benefits of 'no take' protected areas are well documented,[36] and they have been described as 'fully protected' MPAs.[37] The vast majority of MPAs are not fully or highly protected, nor were they designed to be; many MPAs are explicitly intended for multiple uses. [38] Studies have shown that while partially protected MPAs may have some benefits over unprotected open access areas,[39] no-take MPAs generally show greater benefits, in terms of increases in the biomass, density, species richness and size of organisms within their boundaries.[40] Research also backs the view that 'fully protected' MPAs are more likely to support climate resilience[41] and there have been calls for stricter levels of protection for carbon rich ecosystems and for areas of very high biodiversity value, which are more vulnerable to climate change.[42] It has also been demonstrated that 'no take' areas increase the resilience of marine populations to mass mortality caused by extreme climatic events.[43] There is an increasing recognition of the value of 'highly' or 'strictly' protected MPAs, with the European Union (EU) recently recommending that at least 10% of MPAs should be 'strictly protected',[44] and the United Kingdom (UK) Government commissioning an independent review into how 'Highly Protected Marine Areas' can be introduced into their waters (see further Section 4.1 on United Kingdom).[45] An earlier draft of the post 2020 global biodiversity framework text had included a requirement that at least 10% of protected areas should be under 'strict' protection,[46] but later drafts removed it with the focus now "areas of particular importance for biodiversity".[47]

In the context of the 10% target in the EU Biodiversity Strategy, strictly protected areas are defined as:

"Strictly protected areas are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the area's overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area".[48]

Studies of large scale MPAs have demonstrated their potential to provide added ecological value relative to smaller MPAs by protecting entire ecosystems, particularly offshore habitats, such as the deep sea, seamounts, and pelagic realms.[49] In addition, large scale MPAs directly protect highly mobile species such as tunas, billfish, sharks as well as sea turtles, marine mammals, seabirds and other pelagic species, which are often taken as by-catch.[50] Given that large scale MPAs preserve a greater diversity of environmental conditions and larger populations, they are more resilient to climate variation.[51] However they are often not feasible in many parts of the world for socio-economic reasons.[52] Concerns have also been raised regarding the designation of 'residual' MPAs in more remote areas with minimal human activities, thereby essentially not increasing protection to support biodiversity conservation.[53]

The broad diversity of MPAs in existence and the lack of a universal definition has understandably led to some confusion amongst stakeholders. The International Union for Conservation of Nature (IUCN)[54] defines a protected area as:

"a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".[55]

This definition applies to both terrestrial and marine protected areas and, along with the definition in the CBD (see next page), is the most widely accepted international definition of an MPA. Table 1 breaks down selected elements of the above definition and applies them in a marine context.

Table 1. IUCN MPA Definition[56]

Definition	Application to Marine Environment
Clearly defined	Implies a spatially defined area with agreed and demarcated borders. This means that MPAs must be mapped and have boundaries that are legally defined.
Geographic Space	Includes land, inland water, marine and coastal areas or a combination. An MPA should have a clear description of the dimensions that are actually protected i.e., airspace above sea surface, water surface, water column, seabed, sub-seabed or a combination.
Recognised	Implies that protection can include a range of governance types e.g., government, shared, private, indigenous, but that such sites should be recognised in some way, for example, through listing on the World Database of Protected Areas (WDPA).
Dedicated	Implies specific binding commitment to conservation in the long term, through e.g., international conventions and agreements, national, provincial and local law, customary law, covenants of NGOs, private trusts and company policies, certification schemes.
Managed	Assumes active steps to conserve the natural (and possibly other) values for which the MPA was established.
***Legal or other effective* means**	MPAs must either be gazetted (recognised under statutory civil law), recognised through an international convention or agreement, or managed through other effective but non-gazetted means, such as recognised traditional rules or the policies of established non-Governmental organizations.
To Achieve	Implies some level of effectiveness, requiring that the MPA be subject to monitoring, reporting and evaluation.

The IUCN created six different protected area categories based on management objectives known as the Protected Area Management Categories system, the intent of which was to create a common understanding of protected areas.[57] The six management categories range from strictly protected to areas managed for the sustainable use of resources. The below box explains how they apply in the marine environment.

Table 2: Application of IUCN Management Categories to MPAs[58]

	Definition	Primary Objective	Application to marine environment
Ia	Strictly protected areas set aside to protect biodiversity. Human uses strictly controlled.	To conserve outstanding ecosystems, species and/or geodiversity features.	Strict Nature Reserve: The objective in these MPAs is preservation of the biodiversity and other values in a strictly protected area. No-take areas/marine reserves are the specific type of MPA that achieves this outcome. They may comprise a whole MPA or be a separate zone within a multiple-use MPA. Any removal of marine species and modification, extraction or collection of marine resources (e.g., through fishing, harvesting, dredging, mining or drilling) is not compatible with this category, with exceptions such as scientific research. Human visitation is limited.
Ib	Typically large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.	To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity.	Wilderness Area: Category Ib areas in the marine environment should be sites of relatively undisturbed seascape, significantly free of human disturbance, works or facilities and capable of remaining so through effective management.
II	Large natural or near natural areas set aside to protect large-scale ecological processes, along with the species and ecosystems characteristic of the area; compatible spiritual, scientific, educational, recreational and visitor opportunities permitted.	To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.	National Park: Category II areas present a particular challenge in the marine environment, as they are managed for "ecosystem protection", with provision for visitation, recreational activities and nature tourism. In marine environments, extractive use as a key activity is generally not consistent with the objectives of category II areas.
III	Areas set aside to protect a specific natural monument, which can be a landform, seamount, submarine caverns, geological feature such as caves or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.	To protect specific outstanding natural features and their associated biodiversity and habitats.	Natural Monument: Localized protection of features such as seamounts has an important conservation value, while other marine features may have cultural or recreational value to particular groups, including flooded historical/archaeological landscapes. Category III is likely to be a relatively uncommon designation in marine ecosystems.
IV	Protected areas which aim to protect particular species or habitats.	To maintain, conserve and restore species and habitats.	Habitat/Species Management Area: Category IV areas in marine environments should play an important role in the protection of nature and the survival of species (incorporating, as appropriate, breeding areas, spawning areas, feeding/foraging areas) or other features essential to the well-being of nationally or locally important flora, or to resident or migratory fauna. Category IV is aimed at protection of particular species or habitats, often with active management intervention (e.g., protection of key benthic habitats from trawling or dredging). Protection regimes aimed at particular species or groups, where other activities are not curtailed, would often be classified as category IV, e.g., whale sanctuaries. Time-limited protection, as in the case of seasonal fishing bans or protection of turtle nesting beaches during the breeding season, might also qualify as category IV.
V	Areas where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.	To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.	Protected Landscape/Seascape: Category V protected areas stress the importance of the "interaction of people and nature over time". In a marine situation Category V might most typically be expected to occur in coastal areas.
VI	Areas which conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.	To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.	Managed Resource Protected Area: MPAs that maintain predominantly natural habitats but allow the sustainable collection of particular elements, such as particular food species or small amounts of coral or shells for the tourist trade.

Table 3: Adapted from The MPA Guide (2019)

MPA Establishment	
Proposed	The intent to create an MPA is made public.
Designated	An MPA is recognised via statutory instrument or other legal means and now exists 'on paper'.
Implemented	An MPA transitions from 'on paper' to being operational on the water with management in place to ensure compliance and enforcement.
Actively Managed	Ongoing monitoring, evaluation, adaptive management and enforcement.
Level of Protection	
Fully protected	No extractive or destructive activities allowed, and all impacts minimised.
Highly protected	Only light extractive activities are allowed, and other impacts minimised to extent possible.
Lightly protected	Some protection exists but moderate to significant extraction and impacts allowed.
Minimally protected	Extensive extraction and other impacts are allowed while still providing some conservation benefit to the area.

In applying the categories system the first step is to determine whether or not a site meets the definition of an MPA and then decide on the most suitable category for the site.[59] The IUCN categories classify sites based on the primary stated management objective of the MPA which must apply to at least 75% of the MPA, or a zone within an MPA.[60] The IUCN recognises that other areas within a protected area can be managed for other purposes so long as these are compatible with the primary objective of the protected area.[61] In the case of conflict, nature conservation will be the priority.[62] Area-based measures where the primary goals are something other than nature conservation, such as sustainable fishing, do not qualify as an MPA.[63] This means that fishing and other extractive activities in MPAs, if appropriate at all, have to have low ecological impact, be sustainable, compatible with the MPA objectives, with the IUCN protected area definition and category, and well managed as part of an integrated approach.[64] Any environmentally damaging industrial or infrastructural activities (e.g. industrial fishing, mining, oil and gas extraction) are not compatible with MPAs.[65]

The ICUN categories have been recognized by many international organisations (e.g., CBD) and Governments as the global standard for defining and recording protected areas. However, they have not been without criticism and the IUCN itself has admitted that application of the categories to MPAs has often been inaccurate and inconsistent.[66] Horta e Costa et al argue that the IUCN MPA category system is problematic for several reasons:[67]

- **The main objectives are often vaguely mentioned in management plans.**
- **There is too large a variability within categories; meaning the system does not capture the many different kinds of regulations within MPAs, which may be inconsistent with the stated objectives, thus misinterpretations are likely to occur.**
- **Many MPAs are multipurpose and contain different zones which are not being effectively captured by the current system.**

As an alternative they suggest a different kind of classification system based on the impacts of allowed uses.[68] Along similar lines, Sala et al propose distinguishing between 'fully protected' no take MPAs where all extractive activities are prohibited and 'strongly protected' MPAs where only minimal recreational or artisanal fishing occurs for example, and 'partially-protected' MPAs which allow some or a lot of fishing.[69] IUCN and partners developed an MPA Guide[70] in 2019 in which they attempt to clarify some of the confusion surrounding what actually counts as an MPA. To this end, it divides the establishment of MPAs into four stages (Proposed, Designated, Implemented and Actively Managed) and the level of protection into Fully protected, Highly protected, Lightly protected and Minimally protected. In a European context, it has been recommended to maintain the use of the ICUN categories given their widespread acceptance globally, but with slight modifications to better suit the specific requirements of a European MPA network.[71]

MPAs can operate as individual sites or as a network. Networks of MPAs have been defined by the IUCN as "a collection of individual MPAs operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfil ecological aims more effectively and comprehensively than individual sites could alone."[72] Historically, MPAs have been established on an individual ad hoc basis, over varying timescales and with different conservation objectives, rather than through a systematic, planned process.[73] However, MPA designation is now evolving globally from the protection of individual sites to a more holistic assessment and design of entire MPA networks based on an ecosystem approach. The high level of functional and spatial connectivity within marine ecosystems has led scientists to conclude that networks of MPAs provide greater ecological benefits over individual MPAs.[74] The IUCN uses five general criteria to define an MPA network: i) include the full range of biodiversity present in the biogeographic region; ii) ensure ecologically significant areas are incorporated; iii) maintain long-term protection; iv) ensure ecological linkages; and v) ensure maximum contribution of individual MPAs to the network.[75] It has been suggested that MPA networks may need to include a diversity of MPA types, including remote large scale MPAs, but also including smaller MPAs in metropolitan seas that promote sustainable use.[76]

As will be seen in the next section, international and European law require networks of MPAs to be 'ecologically coherent'. Ecological connectivity and coherency within MPA networks are still not fully understood. Connectivity is a complex multi-dimensional measure containing spatial, temporal and functional components.[77] The most recent definition of ecological connectivity at the international level was adopted by parties to the Convention on Migratory Species (CMS) in 2019 as "the unimpeded movement of species and the flow of natural processes that sustain life on Earth".[78] The United States National Oceanic and Atmospheric Administration (NOAA) recently published useful guidance on Ecological Connectivity for Marine Protected Areas in which it defined 'ecological connectivity' as a fundamental ecological process in which "the movement of populations, individuals, genes, gametes, and propagules between populations, communities, and ecosystems, as well as that of non-living material from one location to another."[79] Their successful design and management depends partly on identifying, maintaining, and enhancing connectivity among distinct sites within the network.[80] Therefore, NOAA defines effective ecological networks of MPAs as " systems of core habitats connected by ecological corridors [...]."[81] The EU Biodiversity Strategy for 2030 also explicitly underlines the need for ecological corridors: "in order to have a truly coherent and resilient Trans-European Nature Network, it will be important to set up ecological corridors to prevent genetic isolation, allow for species migration, and maintain and enhance healthy ecosystems".[82] To this end, cooperation across borders should be promoted and supported.[83] Foster et al (2017) have called for the facilitation of progress towards transboundary agreements and coordination of MPA designation processes to protect and connect marine biodiversity in shared marine areas.[84]

Despite the recognition that ecological connectivity is an essential component of effective conservation,[85] a recent study revealed that current use of connectivity in MPA design is minimal and geographically biased. The Balbar and Metaxas (2019) study which studied the application of connectivity in six countries or regions with advanced marine spatial planning, found that only 11% considered connectivity as an ecological criterion, 71% of which were in California or Australia.[86] In California, the Marine Life Protection Act 1999 required the State to redesign its system of MPAs to function as an ecologically coherent network.[87] During the design process, California used models of ocean circulation, MPA size and spacing guidelines based on typical larval dispersal distances, fishery species population dynamics, and fishing effort to evaluate the projected impact of the proposed network on species abundance and fishery yields.[88] Three different types of MPA designations were used (State marine reserves, State marine parks and State marine conservation areas) in addition to a State marine recreational management area and special closures.[89]

The high level of functional and spatial connectivity within marine ecosystems has led scientists to conclude that networks of MPAs provide greater ecological benefits over individual MPAs.

2 Legal Framework for Marine Protected Areas in Ireland

There is not yet any specific national legislation providing a legal basis for the designation of MPAs in Ireland. Rather, the law relating to MPAs in Ireland derives predominantly from international and European legislation, reflecting a 'top down' approach through which States undertake treaty obligations that they must fulfil by adopting domestic laws. In contrast, a 'bottom up' approach involves engaging with different groups of stakeholders likely to be affected by the problem at hand to elaborate strategies. It is operationalized through participatory mechanisms that allow stakeholder groups to express their views and take part in the decision-making process.[90] It is less common than the 'top down' approach but is increasing in popularity.

2.1 INTERNATIONAL LAW

During the early 1970s, international agreements such as the Ramsar Convention[91] and the World Heritage Convention[92] were adopted, reflecting international concern for marine environmental problems and spatial protection as a solution. The 1972 Stockholm Conference on Human Environment[93] led to the founding of the United Nations Environment Programme and its subsequent Regional Seas Programme in 1974.[94] Shortly thereafter, in 1975, IUCN held the first international conference on MPAs in which it called for the establishment of a system of MPAs that represented the world's marine ecosystems.[95]

In 1982 the United Nations Convention on the Law of the Sea (UNCLOS) was signed, creating an international obligation to protect marine habitats.[96] During the 1990s, programmes for Integrated Coastal Zone Management (ICZM) began to appear, inspired by US precedent.[97] Following on from Stockholm, the Rio Conference on Environment and Development was held in 1992 during which the Convention on Biological Diversity (CBD) [98] was signed, which created a legal obligation for States to establish protected areas, both marine and terrestrial.

During the 2000s, the international community formally recognized the important role of MPAs at several key instances such as the World Summit on Sustainable Development (2002)[99] where it called for the "establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012"[100], and the Fifth World Parks Congress in 2003[101] where it called on countries to establish a global system of MPA networks to cover 20 to 30% of the world's oceans by 2012. In 2004, State parties to the CBD agreed that "marine and coastal protected areas are one of the essential tools and approaches in the conservation and sustainable use of marine and coastal biodiversity"[102], and set a goal of establishing and maintaining "marine and coastal protected areas that are effectively managed, ecologically based and contribute to a global network".[103]

2.1.1 Global MPA Targets

The international community continued to formally recognise the importance of MPAs in various instances, and perhaps most prominently via the adoption of global MPA targets. In 2010, State parties to the CBD adopted a *Strategic Plan for Biodiversity* which included the Aichi Targets. Aichi Target 11 stated the following:

"By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscape and seascape". [104]

Perhaps adding to the confusion and complexity surrounding what counts as an MPA, the CBD introduced the notion of 'other effective area-based conservation measures' (OECMs) in Aichi Target 11. OECMs were only formally defined in 2018, therefore limited information is available about their extent.[105] They have been defined as "a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values."[106]

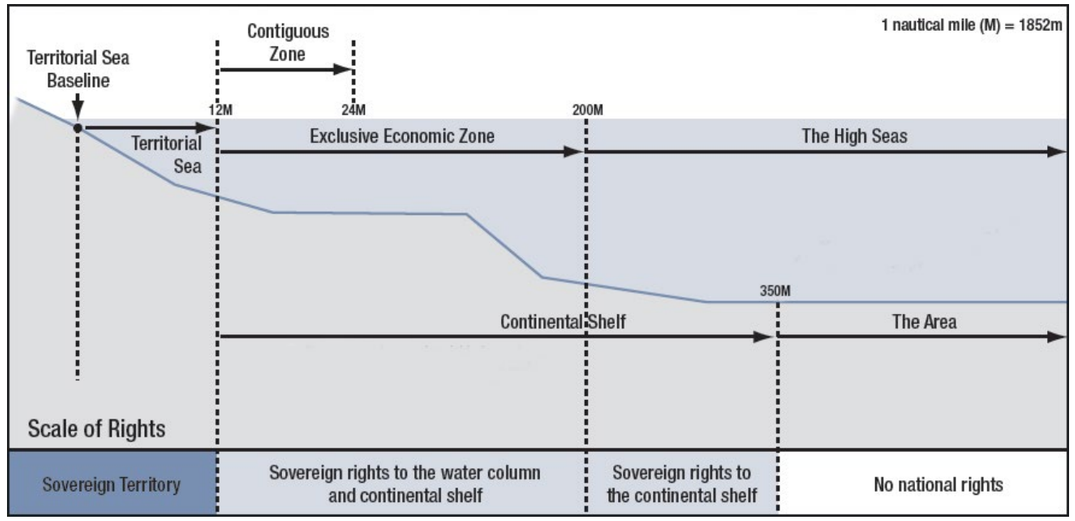
Technical and scientific guidance on identification of OECMs was issued by State parties to the CBD in 2018.[107] OECMs have been described as complementary to protected areas and as contributing to the coherence and connectivity of protected area networks.[108] They may allow for sustainable human activities while offering a clear benefit to biodiversity conservation.[109] According to IUCN guidance, OCEMs may be managed for many different objectives but they must deliver effective conservation.[110] Diz et al (2018)[111] suggest that areas that may be included as an OECM include private, local, community managed or non-statutory protected areas, areas where protection levels are increased for biodiversity conservation or resource management, such as Locally Managed Marine Areas[112] and areas of 'incidental' or 'de facto' conservation benefits, such as military areas and renewable energy sites. OECMs should not be viewed as a replacement for MPAs that qualify under Target 11, rather they should complement or contribute to these MPA networks.[113] The IUCN has emphasized that the key difference between MPAs and other area-based measures is that, whatever form MPAs take, the primary focus must be conservation of biodiversity.[114] It has been suggested that in comparison to MPAs, which offer a degree of long-term in-situ conservation, other area based management tools may be more suited to particular sectors and to challenges which require shorter term measures.[115] EU guidance states that OECMs may count as MPAs if: "the area is covered by a national or international legislative or administrative act or a contractual arrangement aiming to achieve long-term conservation outcomes, conservation objectives and measures are in place and effective management and monitoring of the biodiversity in the area is in place."[116]

In 2020, the Secretariat of the CBD published the *Global Biodiversity Outlook 5* which assessed progress to date on achieving the Aichi Targets.[117] It found that Target 11 had been partially achieved. While progress towards meeting the areal target was relatively on track, progress had been more modest in ensuring that protected areas safeguard the most important areas for biodiversity, are ecologically representative, connected to one another as well as to the wider seascape and are equitably and effectively managed. [118] Challenges in meeting this target include a bias towards creating protected areas in remote areas rather than on making them ecologically representative and covering areas of importance for biodiversity, a greater focus on terrestrial than on marine areas, limited recognition of the ecosystem approach, limited management effectiveness, a lack of assessment systems for management effectiveness, limited coordination between national agencies, a lack of management and development plans, limited monitoring and surveillance systems, and a lack of financial and human resources.[119]

In 2012 States committed politically to a series of Sustainable Development Goals (SDGs) which were presented in 2015 as part of the 2030 Agenda for Sustainable Development.[120] Goal 14 aims to "conserve and sustainably use the oceans, seas and marine resources for sustainable development." The achievement of Goal 14 is broken down into a subset of targets and indicators including conservation of "at least 10 per cent of coastal and marine areas...". While acknowledging that MPA coverage is increasing in line with global targets the *Sustainable Development Goals Report 2020* called for more coverage of key biodiversity areas.[121]

There is growing consensus among scientists and many Governments that the international target of 10 percent is insufficient and that a long-term goal of protecting more than 30 percent of the world's oceans is needed to protect biodiversity and maintain marine ecosystem services.[122] Some scientists go further and argue that 50% of the Earth should be protected in order for biodiversity to survive. E.O. Wilson argues for the protection of large reserves, whether stand alone or connected, as they harbour more ecosystems and diversity of life.[123] In 2014, the Sixth World Parks Congress advocated the goal of increasing the area of "effectively managed MPAs in well-connected networks" to 30% by 2030.[124] The Global Ocean Alliance, led by the UK, has continued to push this forward and their 30x30 campaign has received broad support from an increasing number of States.[125] The text of the post 2020 Global Biodiversity Framework (GBF), which aims to renew the targets contained in the 2010—2020 Strategic Plan for Biodiversity, increases the global target of protected area coverage from 10% to 30% by 2030.[126] The GBF negotiations were delayed due to the Covid 19 pandemic, with the text only finalized in December 2022.[127] The EU has also endorsed the 30x30 goal in its recently adopted *Biodiversity Strategy for 2030*.[128] Global MPA coverage is currently at 8%,[129] however it is a subject of debate among scientists as to whether this amounts to real protection given that many States simply designated large areas without corresponding management or

Figure 2: UNCLOS Zones of Maritime Jurisdiction



Copyright: LE Lallier and others, 'Access to and use of marine genetic resources: understanding the legal framework' (2014) 31 Natural product reports p.612

enforcement measures. As parties to the CBD, the EU and Ireland are committed to the targets agreed under the *Strategic Plan for Biodiversity* and the GBF.

2.1.2 Legal basis for MPAs in International Law

In international law, the legal basis for MPAs can be found in the United Nations Convention on the Law of the Sea (UNCLOS, 1982),[130] Convention on Biological Diversity (CBD, 1992)[131] and Regional Seas Conventions (RSCs), which aim to improve regional governance for the protection of the marine environment.[132]

2.1.2.1 United Nations Convention on the Law of the Sea

Ireland is a party to UNCLOS, which provides the overarching legal framework for the governance of the oceans. It is often referred to as the Constitution for the Oceans. However, UNCLOS must be viewed as a product of its time, during which less was known about marine biodiversity. Modern, science-based approaches to ocean management such as ecosystem-based management were just beginning to emerge and gain acceptance. Therefore, UNCLOS promotes a zonal and sectoral approach to ocean governance and contains no specific references to marine biodiversity or MPAs in its text.

Under UNCLOS, the oceans have been divided into different zones, which are essentially geo-political divisions and do not correspond with ecological boundaries. The first great divide is between areas of national jurisdiction, which are under individual State control, and areas beyond national jurisdiction (ABNJ), which are managed collectively as a 'global commons' under a complex array of international treaty regimes, reflecting different sectors and interests, such as fisheries, shipping, seabed mining and conservation. ABNJ make up over two thirds of the ocean and include the high seas, which is the water column beyond the exclusive economic zones (EEZs) of coastal States, and the 'Area' which is made up of the seabed, the ocean floor and its subsoil. Each of these zones are subject to different rules under UNCLOS. Areas under national jurisdiction are further broken down into territorial seas, which reach up to 12 nautical miles (nm) from the coastal State, EEZs which extend from the territorial seas up to 200 nm and the continental shelf, which is the seabed and subsoil extending beyond the territorial sea to the outer edge of the continental margin. The continental shelf may exceed 200nm but may never exceed 350nm. This legal framework has been described as fragmented, leaving many areas of the ocean unregulated and species and habitats unprotected.

The protection of the marine environment is explicitly listed as one of the objectives of UNCLOS in its Preamble and Part XII of the Convention deals explicitly with the "protection and preservation of the marine environment" but in a rather general and framework manner. Within Part XII, Article 192 UNCLOS contains a general obligation for States to "protect and preserve the marine environment". This principle is very broadly formulated and

could potentially include all types of harm to the environment. Article 194(5) requires that Parties take measures "to protect and preserve rare or fragile ecosystems, as well as the habitat of depleted, threatened or endangered species and other forms of marine life". There is no explicit legal basis under UNCLOS for the establishment of MPAs but there may be an implicit one. Recent judicial interpretation in the case of *Chagos Marine Protected Area Arbitration*[133] implied a recognition of protected areas as a means to comply with the general obligation to protect the environment contained in Article 192.[134] Coastal States may designate MPAs within its territorial seas as part of its sovereign rights, subject to the right of innocent passage of ships[135] and within its EEZ, but in this context it must have 'due regard'[136] to the rights and duties of other States under UNCLOS, such as freedoms of navigation and overflight, and the laying of submarine cables and pipelines, subject to the regulation of the coastal State.[137] Similarly, States may establish MPAs on the Continental Shelf but must not interfere with other State's freedoms.[138] Extended continental shelf areas beyond 200nm present particular legal complexities in terms of MPA designation as the water column above is the high seas.

The designation of MPAs under UNCLOS remains a contentious matter in light of the 'freedom of the high seas' principle which guides the international law of the sea.[139] Given the lack of an explicit legal basis or overarching legal framework to establish MPAs in ABNJ, only 1% of this part of the ocean has been protected, despite it accounting for 60% of the global ocean.[140] The failure to adequately protect biodiversity beyond national jurisdiction has been recognised as a serious gap in ocean governance and a new treaty, to be adopted under UNCLOS, is currently being negotiated to address designation of MPAs and other matters.[141] The latest round of negotiations took place in August 2022, but failed to produce a final treaty text.[142]

2.1.2.2 Convention on Biological Diversity

The regulation of biodiversity was first targeted at the international level with the adoption of the CBD in 1992. It remains the leading global treaty for the conservation of biological diversity and is considered influential due to its large number of Parties, which includes Ireland, the EU and all Parties to UNCLOS. Article 8 (a) of the Convention sets out a legal obligation for State Parties to establish protected areas:

"Each Contracting Party shall, as far as possible and as appropriate: Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity".

The notion of a protected area is defined broadly in Article 2 of the Convention, and encompasses both marine and terrestrial areas:

"'Protected area' means a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives".

Article 8 (b) requires States to develop, where necessary, guidelines for the selection, establishment and management of protected areas. The Convention also recognises that activities occurring outside a protected area impact conservation and in Article 8(c) it requires States to "regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use" while Article 8 (e) requires States to "promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas."

In 2008, the CBD issued guidance on how to select areas in order to establish representative MPA networks.[143] As part of this guidance, the CBD

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adopted criteria for the identification of marine areas in need of protection, known as ecologically or biologically significant marine areas (EBSAs).[144] For the purposes of MPA network design, these criteria were complemented with criteria for ecological representativity which include, in addition to EBSAs, connectivity, representativity, replication, and adequacy criteria.[145] While all areas that meet the EBSA criteria will not necessarily be designated as MPAs, the development and adoption of these criteria will provide sound guidance for ecologically representative MPA network planning through the identification of areas important for biodiversity conservation.[146]

2.1.2.3 Regional Seas Convention for the Northeast Atlantic (OSPAR)

Ireland is a party to the Regional Seas Convention for the Protection of the Marine Environment of the Northeast Atlantic,[147] under which it has committed to establishing an ecologically coherent network of MPAs.[148] OSPAR obliges its 15 member States, including Ireland and the EU, [149] "to take all possible steps to prevent and eliminate pollution, and...take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected."[150] Annex V of the Convention enables the establishment of MPAs.[151] The maritime area of OSPAR encompasses all member States' maritime areas, as well as a significant portion of the high seas.[152] Therefore, the North East Atlantic is notable for being the first region to introduce a transboundary network of MPAs encompassing both national jurisdictions and ABNJ. By the end of 2021, the network comprised of 583 MPAs covering 11% of the OSPAR Maritime Area (see Fig. 2).

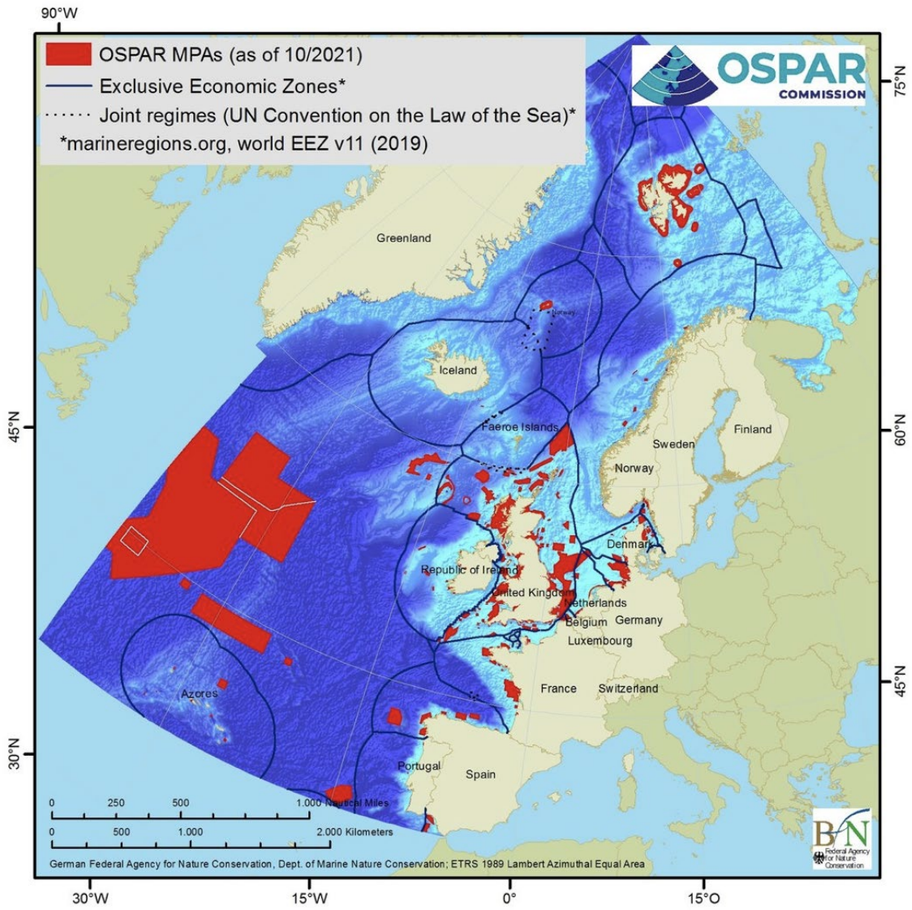


Figure 3: OSPAR MPA Network[153]

OSPAR defines an MPA as follows:

"Marine Protected Area means an area within the maritime area for which protective, conservation, restorative or precautionary measures, consistent with international law, have been instituted for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes of the marine environment".[154] This has been described as a comprehensive MPA definition, which includes the protection of particular species and their habitats and aims at a holistic view of marine ecosystems.[155]

Contracting parties are required to nominate sites to include in the OSPAR network, which must then be reported on annually.[156] OSPAR MPAs aim to:

- **Protect, conserve and restore species, habitats and ecological processes which are adversely affected as a result of human activities.**
- **Prevent degradation of and damage to species, habitats and ecological processes, following the precautionary principle.**
- **Protect and conserve areas that best represent the range of species, habitats and ecological processes in the OSPAR maritime area.[157]**

For a site to be designated as an MPA by OSPAR, it must meet several but not all of the following criteria as specified in Appendix 1 of OSPAR Guidelines 2003—17, which fall under the following headings: Threatened or declining species and habitats/ biotopes, Important species and habitats/biotopes, Ecological significance, High natural biological diversity, Representativity, Sensitivity, Naturalness. In relation to threatened or declining species and habitats, the OSPAR Commission prepares the OSPAR List of Threatened and/or Declining Species and Habitats, which is based on nominations by State parties and observers.[158] Not all of the habitats and species in this list appear in the Annexes to the EU Nature Conservation Directives, which means that certain species and habitats which are recognised at regional sea level as being threatened or in decline have no protection under EU law.[159]

Appendix 2 of the 2003—17 Guidelines lists some practical considerations to take into account, such as size, potential for restoration, degree of political and stakeholder acceptance, potential for success of management measures, impact of human activities and scientific value. The process of identification and selection of MPAs is broken down into two stages:[160]

1: Identification of possible sites, following criteria in Appendix 1.

2: Prioritisation of sites for designation, again following criteria in Appendices 1 and 2.

OSPAR has issued influential guidance on how to develop an ecologically coherent network of MPAs.[161] It describes a network as being characterised by a coherence in purpose and by the connections between its constituent parts.[162] It identified the following factors as contributing to coherence:[163]

- **A network's constituent parts should firstly be identified on the basis of criteria which aim to support the purpose of the network.**
- **The development of an ecologically coherent network of MPAs should take account of the relationships and interactions between marine species and their environment both in the establishment of its purpose and in the criteria by which the constituent elements are identified.**
- **A functioning ecologically coherent network of MPAs should interact with, and support, the wider environment as well as other MPAs although this is dependent on appropriate management to support good ecosystem health and function within and outside the MPAs."**

OSPAR encourages the regulation of MPAs through implementation of their Guidelines on management.[164] However, there is no formal regulation on behalf of OSPAR. Ireland does not have any legislation to legally underpin MPA commitments under international law. Therefore, Ireland designated 19 of its existing European protected sites as OSPAR MPAs.[165]

2.1.2.4 Other

Other international conventions, such as the UNESCO World Heritage Convention[166] and the Ramsar Convention,[167] also designate sites of regional and international importance. Ireland has two World Heritage Sites, including Sceilig Mhichil, an important site for breeding seabirds.[168] Ireland currently has 45 sites designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 66,994 hectares.[169]

The UNESCO Man and Biosphere Programme is an initiative that provides for the creation of Biosphere Reserves.[170] It is an intergovernmental scientific programme launched in 1971 and aims to combine effective conservation and sustainable use, described by UNESCO as "instruments for the integrated management of socio-ecological systems or cultural landscapes", with an emphasis on stakeholder participation in decision making structures.[171] A Biosphere reserve can comprise terrestrial, marine and coastal ecosystems. They are nominated by national Governments and remain under the sovereign jurisdiction of the States where they are located.[172] Within Ireland, Dublin Bay and Kerry have been nominated as biosphere reserves.[173]

A biosphere reserve has three zones and can comprise terrestrial, marine and coastal ecosystems.[174]

- **The core area which comprises a "strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation."[175]**
- **The buffer zone "surrounds or adjoins the core area(s) and is used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education."[176]**
- **The transition area is where the greatest activity is allowed, described as where "communities foster socio-culturally and ecologically sustainable economic and human activities."[177]**

Whether Ramsar, World Heritage Sites or Biospheres count or not as MPAs is not clear cut. Some countries view such designations as automatically protected areas, while others do not.[178] The IUCN recommends assigning full protected area status to these designations via national law as the best way of ensuring the long-term conservation of the site's values.[179]

2.2 EUROPEAN LAW

Ireland is a Member State of the European Union, which means it must transpose European law into national legislation in certain areas, including in the fields of nature conservation and marine environmental protection. Failure to do so can result in legal proceedings being initiated by the European Commission against Ireland in the European Court of Justice (ECJ), potentially resulting in sanctions in the form of fines.

The European Union is a party to several international agreements relevant to the protection of the marine environment, including UNCLOS, the CBD and OSPAR as well as the Bonn Convention on the Conservation of Migratory Species of Wild Animals[180] and the Bern Convention on the Conservation of European Wildlife and Natural Habitats.[181] The European Union recently reaffirmed its commitment to protecting and restoring biodiversity and has explicitly acknowledged the instrumental role of MPAs in achieving this. *The EU Biodiversity Strategy for 2030* contains key commitments regarding MPAs including legally protecting 30% of EU sea area, integrating ecological corridors, strictly protecting 10% of protected areas and effectively managing all protected areas, defining clear conservation objectives and measures and monitoring them appropriately.[182] Member States have until the end of 2023 to demonstrate progress in legally designating new protected areas and integrating ecological corridors.[183]

Protecting biodiversity and ecosystems is also a key objective of the European Green Deal (2019) in which the European Commission stated that it will "support more connected and well-managed marine protected areas." [184] While these ambitious goals are to be commended and are in step with international trends, recent reports published in 2020 by Oceana[185] and the European Court of Auditors[186] have highlighted problems with the current MPA network in Europe. The Court of Auditors concluded that while the EU has an overall framework in place to protect the marine environment, its actions have not restored seas to good environmental status, as required by legislation.[187] Regarding the MPA network, it found that it was not representative of the EU's diverse seas and sometimes provided little protection.[188] The Oceana report found that nearly all MPAs in the EU's Natura 2000 network allow some extractive activity, and most lack active management.

2.2.1 Natura 2000 Network of Protected Areas

The European Union's network of protected areas, known as the Natura 2000 network, is the largest coordinated network of protected areas in the world.[189] Figures as of the end 2019, which account for the UK's exit from the EU, show that Natura 2000 marine sites cover 8.7% of EU seas, while the total of all MPA designations in EU member States covers approximately 12% of EU marine territory.[190] As is evident from these figures, Natura sites are the main contributor to the European MPA network.

Natura 2000 protected areas can be established for both terrestrial and marine sites, either as Special Protected Areas (SPAs) under the Birds Directive[191] or Special Areas of Conservation (SACs) under the Habitats Directive,[192] in force since 1979 and 1992 respectively. The Natura 2000 protection regime is applicable within the territorial seas, Exclusive Economic Zone (EEZ) and the continental shelf.[193] According to the European Commission, the definition of protected areas under the Birds and Habitats Directives is in line with the CBD definition of protected areas i.e., they are geographically defined, they have clear conservation objectives, and management measures shall be taken in their territory to achieve these objectives.[194]

The EU adopted the Habitats Directive in 1992, which aims to protect vulnerable natural habitats and wild fauna and flora including those considered rare and/or endemic.[195] The overarching aim of the Habitats Directive is to ensure that these species and habitats listed in its Annexes achieve or maintain "favourable conservation status" (FCS).[196] FCS is a benchmark of significant importance for the practical implementation of Member States' obligations under the Habitats Directive.[197] The European Commission explained the concept in simple terms as follows:

"FCS could be described as a situation where a habitat type or species is doing sufficiently well in terms of quality and quantity and has good prospects of continuing to do so in future. The fact that a habitat or species is not threatened (i.e., not faced by any direct extinction risk) does not necessarily mean that it has favourable conservation status."[198]

Therefore, the obligation to achieve FCS is framed in a positive way whereby Member States are required to do more than just avoid extinction.[199] The Commission explained that all measures taken under the Directive must aim to reach or maintain FCS.[200]

Article 3 (1) of the Directive sets out the legal obligation for Member States to establish a network of protected areas:

"A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. The Natura 2000 network shall include the special protection areas classified by the Member States pursuant to Directive 79/409/EEC."

As can be seen, SPAs under the Birds Directive also form part of the Natura 2000 network. The Habitats Directive therefore complements and forms an integrated legal framework together with the Birds Directive, which contains similar obligations concerning the EU's wild birdlife.[201] Article 4 of the Birds Directive requires that the species listed for protection in the Directive:

"shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution... Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species in the geographical sea and land area where this Directive applies."

An SAC is defined as:

"a site of Community importance designated by the Member States through a statutory, administrative and/or contractual act where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of the natural habitats and/or the populations of the species for which the site is designated."[202]

The Directive lists nine marine habitat types[203] and 16 species[204] for which marine site designation is required, whilst the Birds Directive lists a further 60 bird species[205] whose conservation requires marine site protection.[206] Certain habitat types and species are highlighted as 'priority natural habitat types and species' which means they are in danger of disappearance.[207] When present on a site, they make that site more likely to be designated as a SAC and, once designated, are afforded a higher level of protection from adverse activities than other SACs. MPAs only qualify for designation under the Natura network if they specifically refer to the habitats and species listed in the Birds and Habitats Directives.[208]

The Natura network is considered a success overall and remains the largest single contributor of MPAs in terms of coverage in the EU seas.[209] Approximately 75% of EU MPAs are sites designated under the Habitats and Birds Directives.[210] The regime established by the two Directives is generally regarded as a highly effective and influential legal framework, when compared to other international legal instruments for biodiversity conservation due to its high degree of enforceability through a powerful judicial system at the national and EU level[211] and the watchdog role of the European Commission.[212] A fitness check carried out in 2016 by the European Commission concluded that the Birds and Habitats Directives are fit for purpose.[213]

Despite this, it has been acknowledged that implementation on the ground is lagging behind.[214] *The Biodiversity Strategy for 2030* openly acknowledges that protection of nature in the EU has been incomplete, restoration has been small scale and enforcement of legislation insufficient.[215] The European Environment Agency (EEA) issued a report in March 2021 assessing the conservation status of species under the Habitats Directive, in which it confirmed that the EU did not meet its 2020 target to improve the conservation status of EU protected species and habitats and found that only 27% of species assessed have a good conservation status, with 63% having a poor or bad conservation status.[216]

The European Commission recently noted that only 60% of Natura 2000 sites have management plans and few are being implemented, often due to lack of resources.[217] Where conservation measures are being taken, they tend to focus on passive measures such as maintaining the status quo or preventing further degradation rather than actively improving the conservation status of the site. [218] *The Biodiversity Strategy for 2030* states that going forward enforcement will focus on completing the Natura 2000 network and the effective management of all sites.[219]

The Natura 2000 network has specific limitations in a marine context. Notably, significant aspects of the marine ecosystem are excluded from protection, in particular offshore habitats and certain marine species.[220] The EU has agreed that the Annexes in both Directives do not incorporate

recent scientific knowledge nor sufficiently cover marine habitats.[221] The nine marine habitats (compared to 230 terrestrial) listed in the Annexes of the Habitats Directive have a coastal distribution overall and while some are defined quite broadly, they do not fully represent the diversity of marine habitats found in Europe's seas.[222] For example, many deep-sea habitats are not specifically listed. This has resulted in a biased distribution of the marine Natura 2000 network with better coverage in coastal waters compared to further offshore.[223] Furthermore the EEA concluded that while the Directives provide, in principle, a coherent approach to the protection of seabirds, turtles and marine mammals, the approach to the protection of marine fish, invertebrate species and marine habitats is less coherent.[224] For example, while many species are in principle covered by the protection recommended for their habitats, relatively few marine species have been listed specifically for protection (excluding birds).[225] A reason cited for this is the Directives' focus on rare habitats and vulnerable species (including those that are rare and/or endemic).[226] In 2015, the EEA concluded that Natura 2000 was not, in its current form, set up to deliver an ecologically coherent and representative network of MPAs.[227]

2.2.2 Marine Strategy Framework Directive

In 2008, the European Union adopted the ambitious Marine Strategy Framework Directive (MSFD), the goal of which is to protect more effectively the marine environment across Europe.[228] The Directive applies to internal waters, territorial sea, exclusive economic zone, and the continental shelf, including the areas beyond 200 nautical miles.[229] It is the first piece of European legislation to deal specifically with the protection of marine biodiversity and promotes a more holistic approach to the designation of MPAs based on modern design and management principles, including the ecosystem-based approach and adaptive management.

The goal of the Directive is to secure 'good environmental status' (GES) of the EU's marine waters by 2020.[230] GES is the centerpiece of the MSFD upon which all other provisions depend.[231] Determining it adequately is crucial. GES is defined in Article 3(5) of the Directive 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 conditions, and the use of the marine environment is at a level that is sustainable".

GES has a much broader material scope than FCS in the Birds and Habitats Directives, which is focused on the status of particular species and habitats. In order to achieve GES, each Member State is firstly required to develop a strategy for its marine waters,[232] which must be kept up-to-date and reviewed every six years in line with an adaptive management approach. A marine strategy involves the following:[233]

- **An initial assessment of the current environmental status of national marine waters and the environmental impact and socio-economic analysis of human activities in these waters.**
- **On the basis of such analyses, Member States should determine a set of characteristics for what GES means for their national marine waters.**
- **The establishment of environmental targets and associated indicators to achieve GES by 2020.**
- **The establishment of a monitoring programme for the ongoing assessment and the regular update of targets.**
- **The development of a programme of measures designed to achieve or maintain GES by 2020.**

11 qualitative descriptors are set out in Annex I of the Directive, which describe what GES of marine waters should look like:

"(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.

(2) Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.

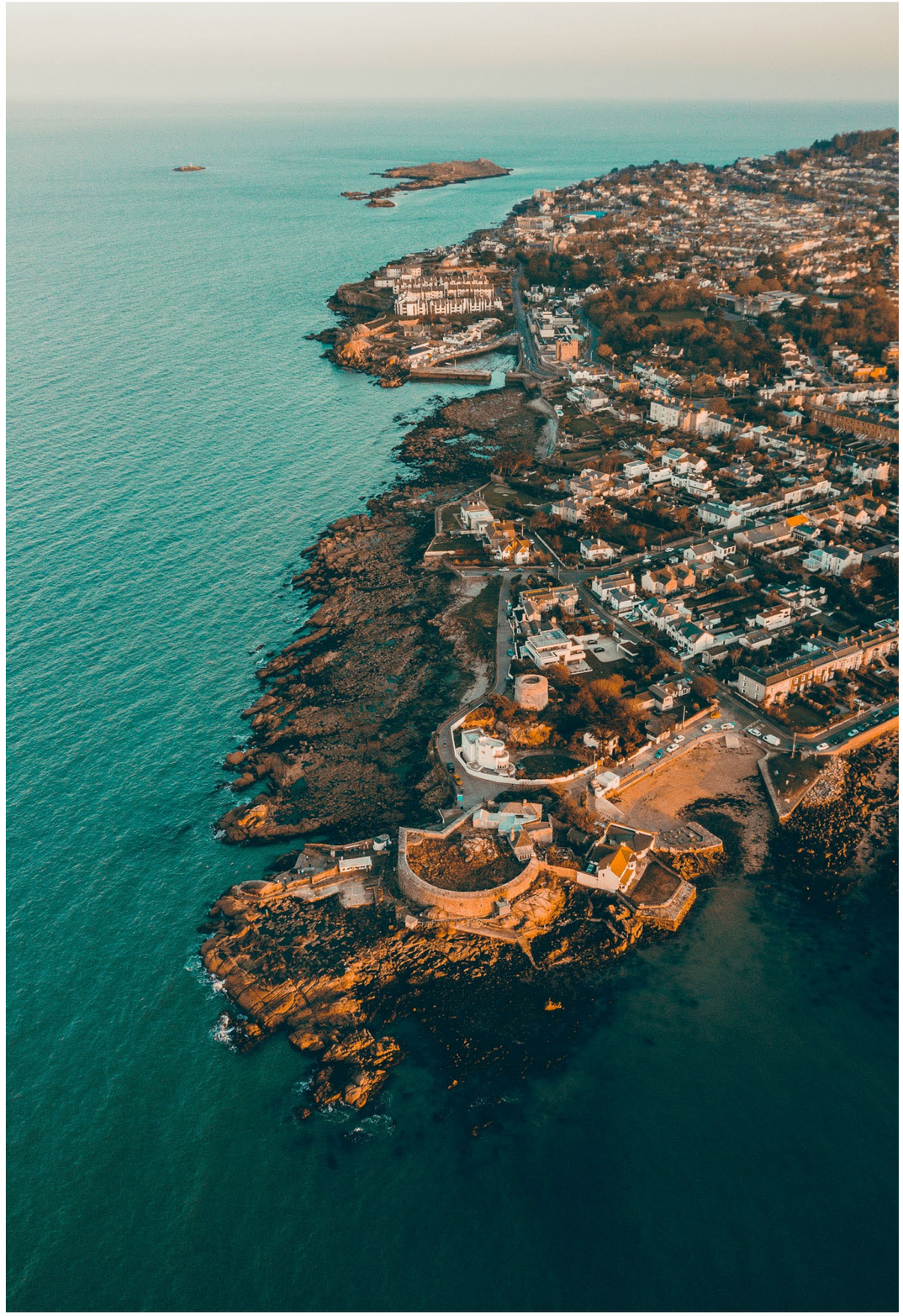
(3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

(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.

(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.

(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.

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



Sandycove, Co. Dublin

(8) Concentrations of contaminants are at levels not giving rise to pollution effects.

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

(10) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.

(11) Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment."

The Preamble of the Directive states that the approach to conservation of marine ecosystems should include protected areas and "address all human activities that have an impact on the marine environment."[234] However, fisheries will continue to be regulated exclusively through the Common Fisheries Policy (CFP): the Preamble to the MSFD states that measures regulating fisheries management can be taken in the context of the CFP, including the full closure of certain areas to fisheries to enable ecosystems to be maintained or restored and where appropriate to safeguard spawning, nursery and feeding grounds. [235]

MPAs are viewed as an important contribution to the achievement of GES.[236] The legal obligation to establish MPAs is set out in Article 13(4) of the Directive:

"Programmes of measures established pursuant to this Article shall include spatial protection measures, contributing to coherent and representative networks of marine protected areas, adequately covering the diversity of the constituent ecosystems".

While the Directive does not define an MPA, it explicitly acknowledges that Natura 2000 protected areas as well as spatial protection measures under regional and international agreements to which a Member State is a party can be counted as MPAs for the purposes of the MSFD.[237] In recognition of the relatively narrow focus of the spatial protection measures under the Birds and Habitats Directives, the Commission recommended that where necessary Member States should establish management measures outside Natura 2000 sites in order to adequately cover the full diversity of marine ecosystems under the MSFD and also might need to broaden the scope of management measures within Natura 2000 sites.[238] The EEA reported that some Member States designated additional MPAs under domestic legislation in order to address shortcomings.[239]

In 2015, the European Commission prepared a progress report on the establishment of MPAs under the Directive, as required by Article 21, in which it stated that for the purposes of the MSFD and all related EU policies, MPAs are "geographically defined marine areas; whose primary and clearly stated objective is nature conservation; and which are regulated and managed through legal or other effective means to achieve this objective".[240] The report assessed progress made by Member States in establishing MPAs up to the end of 2012. Unfortunately, Article 21 of the Directive only provided for the submission of one assessment report on MPAs and does not envisage any new report, which would provide updated information on the status of MPAs in Europe. This is in contrast to other provisions of the Directive which request submission of reports on a regular basis. Even the European Commission has noted that the evolvement of MPAs is a dynamic process and called for more attention to MPAs in subsequent reporting cycles.[241]

In the Article 21 report, the Commission identified three types of MPA in existence in Europe: marine Natura 2000 sites, MPAs designated under Regional Sea Conventions, and individual national MPAs, and noted significant overlap between the different sites. It stated that there was no evidence to demonstrate that multiple, overlapping designations increase protection levels. In relation to the marine Natura sites, it noted a higher concentration of coverage in coastal areas, due to the initial terrestrial focus of the Habitats Directive and the lack of knowledge about deep-sea habitats at the time it was drafted.

The report observed that there is no EU-wide method to assess the coherence and representativity of European MPA networks. This issue remains problematic to date. There is still a lack of guidance and consensus on how to determine 'coherent' and 'representative' and as a result no standard is currently applied uniformly across the region.[242] Furthermore, the information provided by Member States in their Programme of Measures has been deemed insufficient to conduct this kind of analysis. While many Member States declared that their spatial measures contributed to coherent and representative networks of MPAs, in half of the cases the information reported was too ambiguous to evaluate it.[243] It is therefore no surprise that a 2014 study concluded that the European Natura 2000 network is not coherent in the sense of truly interconnected protected areas throughout an entire country or throughout the whole of the EU.[244] The European Commission has advised that achieving ecologically coherent MPA networks would be facilitated by following some common principles and a holistic approach at a regional scale, such as common regional GES determinations and targets and coordinated management measures.[245] In addition, improved and harmonised MPA reporting systems across

Europe and monitoring geared to adaptive management processes will be essential for the attainment of coherence.[246]

During the first phase of implementation, the European Commission criticised Member States for showing limited ambition to achieve GES and stated that a uniform understanding or interpretation of GES among Member States was lacking.[247] The Commission recommended full implementation of a revised 2017 Decision[248] which aims to make GES more easily measurable and advised that Member States lay down their GES determinations and targets in a statutory manner to improve their enforceability.[249]

In July 2018, the Commission published its first report assessing Member States' Programme of Measures for achieving GES.[250] The Commission pointed out that, in general, the spatial measures reported did not always provide clear and specific information on the management efforts that were to be put in place and there were significant information gaps on the representation of species and habitats within MPAs, the size, number and location of MPAs, the conservation objectives of the MPAs, their coherence, and the policies and measures that will be in place within these areas.[251]

In its 2020 report on implementation of the Directive, the Commission noted that spatial protection measures are unevenly distributed across regions and across depth zones.[252] For example, despite 10% coverage being achieved across Europe as a whole, this is not the case for each sub region.[253] The majority of sites remain coastal. In addition, larger sites are needed to ensure wider ecosystem protection. In 2018, the EEA[254] reported that 50% of EU MPAs were under 30 km², with a very high proportion of these being smaller than 5km². While these smaller sites may be suitable for conservation of single features or vulnerable habitats, larger areas are also essential for protecting larger ecosystems, building ecosystem resilience and thus helping to mitigate against the effects of climate change.

Management of sites is a recurring theme in all EU assessment reports. The Article 21 report in 2015 made a point of underlining that MPAs must include management measures, such as management plans, which ensure effective monitoring and enforcement, in order to deliver their potential.[255] Yet by 2020, the Commission notes that many sites are still not properly managed and cannot be assessed in terms of coherence and effectiveness due to the lack of appropriate instruments and data flows.[256] In practice, they have found that information about management effectiveness is scarce and thus far has not been properly captured by MSFD reporting.[257] Some estimates suggest that only 1.8% of EU waters may be protected with a management plan in place.[258] A 2018 study by Dureuil et al found that 59% of MPAs in Europe are commercially trawled, leading to a 69% decrease in the abundance of sensitive species in those protected areas.[259] Of the MPAs studied as part of this research, 50% did not report a management plan, more than 90% were not classified according to IUCN criteria, and more than 99% had no information on no-take areas.[260]

In order to turn MPA networks into effective conservation tools, the European Commission (2020) recommends the following:[261]

- **Establish networks of protected sites that are ecologically significant on a regional scale, which in some regions will involve enlarging the coverage and enlarging the minimum size of the protected sites.**
- **Raise the proportion of strictly protected or no-take zones and enhance enforcement and control activities to prevent the existence of 'paper parks'.**
- **Implement effective management plans with tailored measures and provide adequate resources in each protected area.**

The EEA (2018) also recommended the following steps be taken:[262]

- **Better capture the components of biodiversity that are protected within MPAs.**
- **Improve understanding of how marine systems are interconnected to better designate and plan MPAs across Europe and improve the connectivity and representativity of MPA networks.**
- **Improve management of MPAs and consider how to extract the greatest conservation benefits from individual MPA designations.**
- **Improve MPA related reporting mechanisms and data flows across Europe.**
- **Share knowledge and experience of the response of European marine life to pressures; and the results of the management regimes intended to protect it.**
- **Accurately measure the degree to which MPAs and the network as a whole are achieving their intended purpose.**

2.3 NATIONAL LAW

The Wildlife Acts 1976—2018[263] provide the legal basis for nature conservation in Ireland and provide for several categories of protected area, *Nature Reserves, Refuges for Fauna and Natural Heritage Areas* (NHAs), many of which have marine and coastal elements, but would not generally be described as MPAs. The geographical scope of the

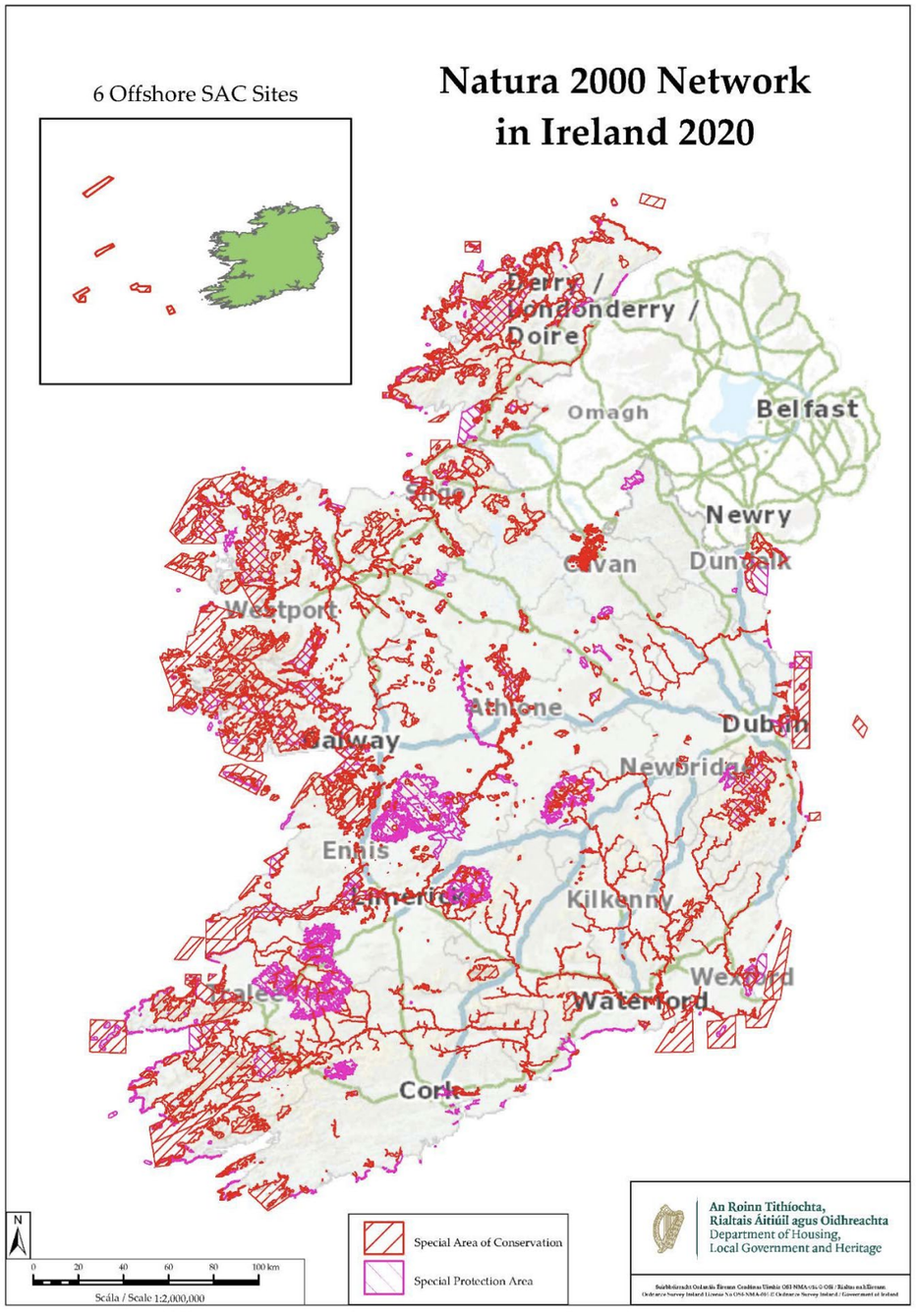


Figure 4: Natura 2000 Network in Ireland 2020 [264]

Act covers land (including land covered by inland waters), the foreshore and the seabed under the territorial waters of the State (up to 12 nautical miles). [265] It has had limited application in a marine context to date.[266] However, in 2022, basking sharks were given the status of "protected wild animal' under the Act.[267] This means that it is now an offence to hunt or injure a basking shark (without permission or licence), willfully interfere with or destroy its breeding or resting places.[268] This brings Irish law into line with UK law on protection of basking sharks.[269] It is also worth noting that the Wildlife Acts are undergoing a review as under the current Programme for Government.[270]

The Wildlife Amendment Act 2000 was an attempt to address weaknesses in the habitat and site protection measures in the 1976 Act by introducing NHAs as a category and providing protection for important geological and geomorphological sites.[271] It also broadened the scope of the legislation to include more fish and aquatic invertebrate species and gave statutory recognition to Ireland's commitments under the CBD. [272] In terms of enforcement, it increased the level of fines for contravention of the Wildlife Acts and allowed for the imposition of prison sentences.[273]

The National Parks and Wildlife Service (NPWS), which falls under the remit of the Department of Housing, Local Government and Heritage,[274] is responsible for designating and managing protected areas in Ireland.[275] It identifies potential areas for nature conservation using a variety of sources, including the following:[276]

- **The list of Areas of Scientific Interest compiled in the 1970s.**
- **Various publications on important bird areas in Ireland and other surveys.**
- **The Natural Heritage Area (NHA) survey, carried out from 1991—1994.**
- **Continuing surveys and site visits by the NPWS.**
- **Inputs from Non-Governmental Organisations (NGOs) and professional and amateur ecologists.**

2.3.1 Current MPA Network in Ireland

In addition to the Natura 2000 sites designated under the Birds and Habitats Directives, the Irish MPA network also includes national designations under the Wildlife Acts, as well as sites designated under the Ramsar Convention and those nominated to the OSPAR network.[277] These designations offer different levels of protection to different habitats and species and not all would fit the definition of an MPA. However, all of these sites are also designated as Natura 2000 sites, thus providing a significant level of legal protection enforceable through the European Court of Justice. Therefore, when calculating Ireland's total MPA coverage, the figures for Ireland's Natura 2000 marine network can be referred to.

As of July 2020,[278] Ireland has a network of 439 sites adopted by the European Commission as Sites of Community Importance. The total area of these sites is 16,947km², including marine areas. The marine component, which includes six large offshore SACs, comprises 9,867km². Ireland has 154 Special Protection Areas (SPAs) covering some 5,894 km². This includes marine areas totalling 1,717km².[279] Therefore, there is a total area of 10,420 km² for marine Natura 2000 sites, which amounts to 2.13% of Ireland's total maritime area of 488,762 km². On 13 December 2022, the Government announced its intention to designate two new large offshore SACs, which will increase protection levels to 8.3%, with the goal to achieve 10% by mid-2023.[280]

2.3.2 Protected Areas under European Law

The Birds and Habitats Directives were transposed into national law by the European Communities (Birds and Natural Habitats) Regulations, 2011—2015.[281]

2.3.2.1 Special Areas of Conservation (SACs)

Spectrum of Protection

The Directive lists habitats and species in its Annexes which must be protected by Member States. Seven marine habitat types in Ireland 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.[282] Coastal habitats that are transitional from land to sea such as saltmarshes and lagoons, also require protection under the Directive, but are not counted as 'marine' for reporting purposes.[283] Four entirely marine species commonly found in Irish waters require SAC designation: harbour porpoise, bottle-nosed dolphin, grey seal and harbour (common) seal. Other partly marine species such as otter are also listed in the Directive as requiring protection.[284] All cetacean species are protected under Annex IV of the Directive.

Sites are selected on the basis of the presence of the above habitats and/or species. These are referred to as 'qualifying interests' for the site. Government figures from 2018 state that one or more of the above listed habitats or species are included as qualifying interests in 159 Irish SACs.[285] Most are concentrated near the coast, but there are six reef sites offshore.[286]

Designation

Sites are designated as SACs in accordance with the procedure laid down in Article 4 of the Habitats Directive, which consists of three main stages.

1. Each Member State (MS) shall submit to the European Commission (EC) a list of proposed sites within their territory which are important for the conservation of the habitat types and species listed in the Directive. Discretion of MS is limited and should be based on scientific selection criteria set out in Annex III of the Directive. ECJ case law indicates that once a site appears on a list sent to the Commission, the MS should take protective measures to safeguard the ecological interest of the site[287] and not authorize activities which would risk compromising the ecological characteristics of those sites.[288]

2. The Commission will then establish, in agreement with the MS, a list of Sites of Community Importance (SCIs). Not all sites proposed by Member States on national lists will be found to be sufficiently important to be selected as SCIs. However, all proposed sites which contain a priority habitat type or priority species are automatically selected as SCIs. Once a site is adopted as an SCI by the Commission, certain management obligations will apply, specifically those contained in Articles 6(2)—(4), discussed below.[289]

3. The final step is designation of the selected SCIs as SACs by the MS. This must be done within six years after a site is adopted as an SCI.

The National Parks and Wildlife Service (NPWS) outline the site selection criteria they apply in line with the requirements of the Directive:[290]

- **The importance within Ireland of the site for its habitats or species.**
- **How representative is the example of the relevant habitat present on the site (in practice, this means that a suite of sites is selected which encompasses the range of variation found).**
- **How isolated is the population of the relevant species on the site (the more isolated the population, the more likely it is to be genetically different from other populations).**
- **The intactness of the habitat on the site.**
- **Other factors, including the need to ensure a good geographic spread of sites, the total number of habitats and species listed in the Habitats Directive present on the site, whether or not there is a priority habitat (i.e., a habitat in danger of disappearance) on the site and whether or not the site contains habitats or species for which Ireland is especially important.**

Landowners and the public are notified when a site is being proposed as a SCI.[291] Objections may be made within three months of being notified.[292] Protection applies from the time of notification of proposed sites.[293]

Ireland's designation process under the Habitats Directive began in 1997. As of December 2019, 439 SACs have been selected (270 of which have been formally designated by Statutory Instrument).[294] Ireland was recently referred to the ECJ over designation failures under the Habitats Directive.[295] At the time of referral, 154 out of 423 SCIs, were not yet designated as SACs in the Atlantic biogeographical region, despite the relevant deadline expiring in December 2014. Furthermore, site-specific conservation objectives had not been established for 87 sites, and the necessary conservation measures had not been established at any of the 423 sites.[296]

Management

NPWS is the body responsible for developing conservation objectives for Natura 2000 sites and managing those sites with local stakeholders and competent authorities. The process for management of Natura sites has been criticised as fundamentally top down with not enough stakeholder involvement.[297] This has been explained by the fact that the Birds and Habitats Directives were drafted at a time when stakeholder participation in environmental management was not a formal requirement.[298]

Article 6(1) of the Habitats Directive requires Member States to establish conservation measures for SACs. This is a positive obligation and distinguishable from the rest of Article 6 which is focused on preventing deterioration of sites.[299] As stated earlier, the purpose of the Directive is to achieve FCS for all habitats and species listed. This general objective needs to be translated into site Site-Specific Conservation Objectives (SSCOs) for each SAC which are:

"a set of specified objectives to be met in a site in order to make sure that the site contributes in the best possible way to achieving FCS at the appropriate level (taking into account the natural range of the respective species or habitat types)."[300]

The implementing regulations in Ireland state that the Minister shall establish conservation objectives as necessary to achieve the FCS of sites.[301] As of October 2020, SSCOs have been published for all marine SACs, except for offshore reef sites,[302] and there is an ongoing programme to complete the SSCO process for Natura 2000 sites.[303] In the meantime, generic conservation objectives have been compiled for the remaining SAC and SPAs, which are based on maintaining/restoring the favourable conservation condition of the habitats and species for which sites are selected.[304]

Conservation measures are the mechanisms and actions that need to be put in place in order to achieve the conservation objectives of a specific

site.[305] They should correspond to the ecological requirements of the site and address the pressures and threats to the site. Conservation measures can range from non-intervention, especially in the case of habitats and species that are very vulnerable to any kind of human intervention, to more active restoration activities involving the extensive removal of invasive species, for example.[306] In terms of implementation, the Directive states that the conservation measures may involve:

"if need be, appropriate management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures".[307]

Therefore, management plans are not obligatory; it is for the MS to decide how best to implement conservation measures. They should choose between statutory, administrative or contractual measures. Statutory measures are usually specific legal requirements that allow or restrict activities on the site; administrative provisions are often related to the implementation of conservation measures or the authorization of activities on a site and contractual measures usually involve establishing contracts or agreements among managing authorities and landowners or users in the site.[308] While acknowledging that they may not be needed in all cases, the EC recommends the use of management plans for formulating a site's conservation objectives, on the basis of an analysis of the conservation status of species and habitats on the site and the pressures and threats they face, together with the measures necessary to attain these objectives.[309] It recommends that management plans should address all existing activities affecting the site and considers them a useful way to involve all stakeholders in a transparent way. [310]

No MPAs have management plans as of yet in Ireland.[311] However, Ireland has established conservation management plans for several other protected sites, which identify and evaluate the features of interest, set conservation objectives, describe the site and its management, identify issues that might influence the site and set out appropriate strategies and/or management actions to achieve the conservation objectives.[312] Sector specific regulatory regimes are the mechanisms by which many management measures are implemented in Ireland.[313]

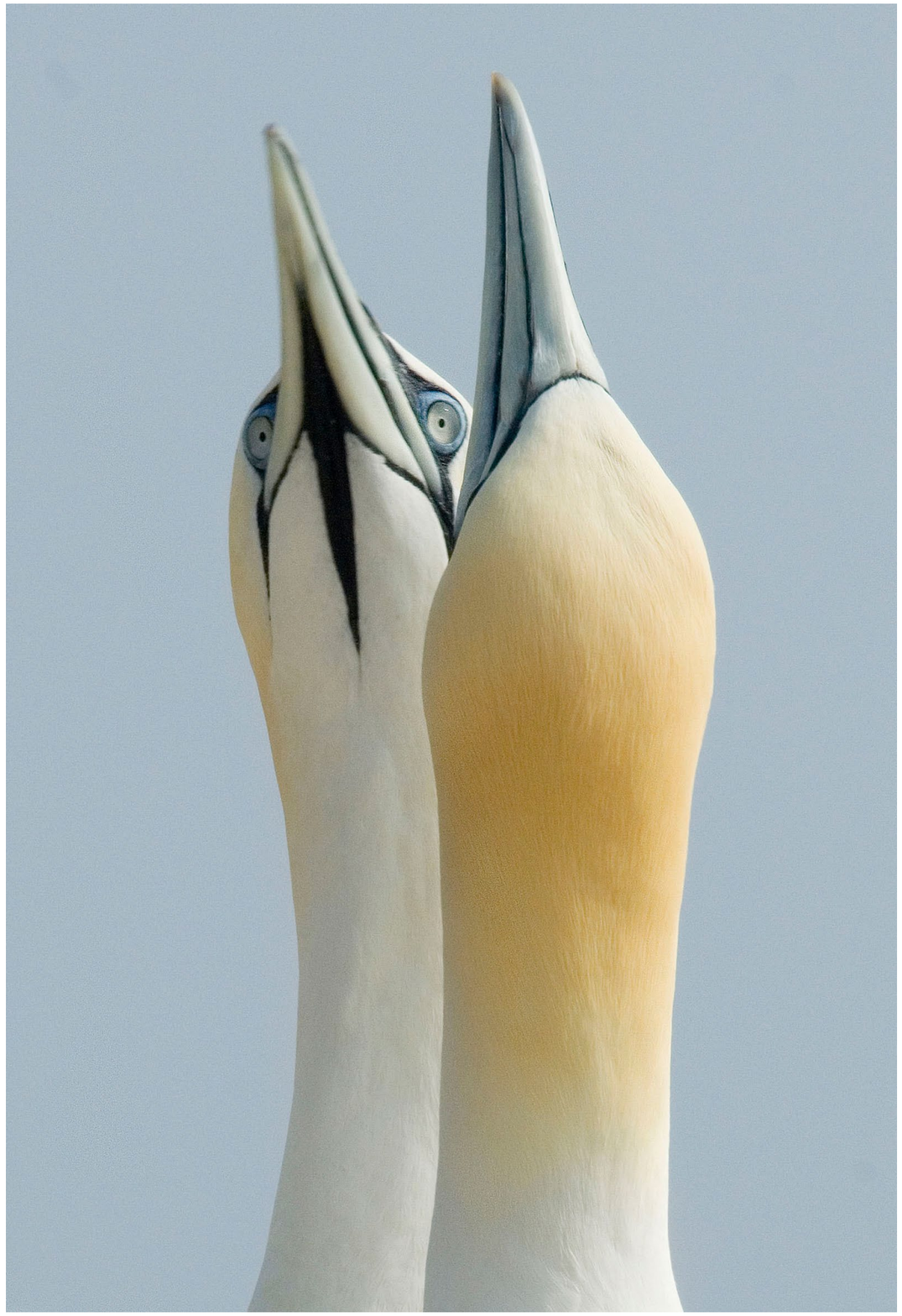
Article 6(2) of the Directive requires Member States to take steps to avoid deterioration of natural habitats and habitats of species, as well as disturbance of species, in SACs.

Article 6(3) requires an 'appropriate assessment' to be carried out of any plan or project, not directly connected with or necessary to the management of the site, but likely to have a significant effect on the SAC, either individually or in combination with other plans or projects. Such an activity can only be authorised if it will not 'adversely affect the integrity' of the SAC. In exceptional cases, where there is no alternative and for reasons of overriding public interest, an activity may be permitted to proceed even in the event of a negative assessment.[314] In such a case, the MS must take compensatory measures to ensure that the overall coherence of the Natura 2000 network is protected and inform the Commission of such. The Natura 2000 network does not purport to create strict nature reserves where human activities are excluded.[315] Rather, each plan or project must be assessed on its own or in combination with other cumulative pressures in order to ascertain whether a particular activity will adversely impact the site.

Under Article 11 of the Directive, MS must monitor the conservation status of the habitats and species protected by the Directive. A monitoring survey carried out by the NPWS between 2016 and 2018 to assess the conservation status of six marine SAC habitat types[316] found that the main pressures acting on the selected sites were agriculture, commercial forestry, urbanisation (resulting in effluent discharge and storm water run-off) and aquaculture, with future threats likely to arise from the development of windfarm infrastructure.[317]

While NPWS is responsible for monitoring and reporting under the Habitats and Birds Directives, collaborations with other Government departments and agencies are also utilised in order to inform monitoring and reporting, e.g. aerial surveys of Ireland's maritime area under the ObSERVE programme, which is jointly funded by the Department of the Environment, Climate and Communications, the Department of Housing, Local Government and Heritage and Sustainable Energy Authority Ireland (SEAI),[318] and INFOMAR, which is a joint project between the Geological Survey Ireland and the Marine Institute, to map Ireland's seabed.[319]

Ireland reports to the European Commission every six years on the conservation status of the habitats and species listed in the Nature Directives.[320] In April 2019, Ireland submitted its third assessment, carried out by NPWS,[321] which found that the four protected marine species under the Directive all have *favourable status*. In relation to marine habitats protected by the Directive, it found sandbanks, submarine structures made by leaking gases and sea caves have a favourable status; estuaries, tidal mudflats and reefs have *inadequate status* while large shallow inlets and bays and lagoons were in *bad status.* The causes of the unfavourable-bad status assignment in nearshore areas are persistent eutrophication issues (in lagoons, large shallow inlets and bays), loss of species (seagrass and maërl in large shallow inlets



Gannets mating dance

and bays) and human-induced impacts,[322] such as pollution from domestic wastewater, agriculture and aquaculture and alien invasive species.[323] The main pressures on reefs were found to be fishing methods that damage the sea floor.[324] Large shallow inlets and bays are vulnerable to anthropogenic activities occurring both within and outside of the SAC network.[325]

Nevertheless, the 2019 status report was an improvement on previous years. The 2013 assessment revealed only sandbanks and sea caves were assessed as being in favourable status; estuaries, tidal mudflats, large shallow inlets and bays were assessed as being in inadequate status and reefs (in particular deepwater reefs) and lagoons were in bad status.[326] In 2007, no marine habitat assessed had favourable status.[327]

Enforcement

It is common for regulations covering designated sites to contain specific provisions on how they can be managed and how that management might be enforced.[328] For example, the SAC for Lambay Island cites a list of activities requiring the consent of the Minister (e.g., blasting, drilling, dredging) due to their potential to cause disturbance or damage to the natural habitat types and animal and plant species protected (which includes reefs, sea cliffs and the grey and harbour seal) and deems it an offence to carry out any of the listed activities without such consent.[329]

Enforcement is dependent on the nature of the actions and can fall under a number of bodies. NPWS has a role in enforcement, as do officials in other Government departments and agencies, such as Department of Agriculture, Food and the Marine (DAFM), the Environmental Protection Agency (EPA) and Inland Fisheries Ireland.[330] Inland Fisheries Ireland comes under the Department of the Environment, Climate and Communications (DECC). Their responsibilities cover enforcement of the Inland Fisheries Acts and conservation, protection and management policies related to these areas.[331] DAFM is the competent authority for aquaculture and fisheries consents.[332] It carries out approximately 1,300 cross compliance inspections annually, including checks for birds, habitats and species under the Habitats Regulations.[333]

The Sea Fisheries Protection Authority (SFPA), which comes under the competence of DAFM,[334] undertakes patrols and inspections at sea and ports throughout Ireland's EEZ, in conjunction with the Naval Service, to ensure compliance with fisheries legislation.[335] The Fisheries Monitoring Centre (FMC) Ireland, is responsible for the monitoring of all Irish fishing vessels fitted with vessel monitoring systems (VMS) and those fishing vessels fitted with VMS (vessels over 12m) inside Ireland's EEZ.[336] The FMC is manned to monitor activity around the clock; and information is distributed as appropriate to the Naval Service, Air Corps and SFPA.[337] The monitoring and surveillance carried out by FMC includes any areas where fishing is restricted, including SACs and SPAs.[338] The Naval Service currently has a fleet of nine vessels and the Air Corps have two Maritime Patrol Aircraft that conduct patrols.[339]

There has been more formalized interaction between NPWS and other Government Departments and An Garda Síochána in relation to wildlife crime in recent years.[340] In 2018, the NPWS established an internal Wildlife Crime Group[341] and had been in the process of establishing a Wildlife Crime Unit,[342] however those plans are currently unclear in light of current restructuring at NPWS in light of a recent review (see further below).[343] According to the 2020 interim review of the implementation of Ireland's National Biodiversity Action Plan, a total of 57 cases have been submitted to the Chief State Solicitor's Office for prosecution under the Wildlife Acts and the EU Birds and Habitats Regulations since 2017. Of these, there have been 36 successful prosecutions.[344] However, concerns have been raised about levels of illegal activity in Natura 2000 sites as well as enforcement capacity and resource availability for nature conservation in Ireland.[345] Weaknesses in the NPWS have been acknowledged[346] and it recently underwent a review of its remit, status and funding.[347] In 2022, this Government commissioned an independent review found that the NPWS was unfit to protect the State's natural environment.[348] In response, the Minister of State for Heritage, Malcom Noonan, announced a funding package to restructure the NPWS and establish it as an executive agency within the Department of Housing, Local Government and Heritage.[349]

2.3.2.2 Special Protection Areas (SPAs)

Spectrum of Protection

The Birds Directive protects all wild bird species, 60 of which require marine site protection.[350] The main groups of birds that utilise marine/coastal waters to a greater or lesser extent are breeding seabirds and wintering waterbirds.[351] Article 4 of the Birds Directive requires Member States to classify "the most suitable territories in number and size as special protection areas" for the conservation of the bird species listed in Annex I as well as for any regularly occurring bird species not listed in Annex I.[352] For these regularly occurring migratory birds, Member States must also bear in mind their need for spatial protection as regards their breeding, moulting and wintering areas and staging posts along their migration routes.[353] Particular attention should be paid to wetland areas that provide essential resources for resident or migrating birds.[354]

Designation
Sites which meet any of the following criteria may be classified as SPAs under the Birds Directive:[355]

- **A site holding 20,000 waterbirds or 10,000 pairs of seabirds.**
- **A site holding 1% or more of the all-Ireland population of a species listed in Annex I of the Directive.**
- **A site holding 1% or more of the biogeographical population of a migratory species.**
- **A site considered to be one of the most suitable sites in Ireland for an Annex I species or a migratory species.**

The European Commission has a more limited role in the designation of SPAs in comparison to SACs. Based on the information provided by the Member State, the Commission determines if the sites designated constitute a coherent network of protection or if they are vulnerable, and after this process, the sites become an integral part of the Natura 2000 network.[356]

A programme to identify and designate SPA sites has been in place in Ireland since 1985 and Ireland's SPA Network now encompasses over 597,000 hectares of marine and terrestrial habitats.[357] As of March 2022, 165 SPAs have been selected (154 of which have been formally designated by Statutory Instrument.).[358] There are 89 SPAs with marine elements that have been selected for wintering waterbirds (including productive intertidal zones of bays and estuaries) and breeding seabirds (marine waters adjacent to breeding seabird colonies).[359] Many SPAs in Ireland are coastal or intertidal in their nature and the vast majority are coincident in their boundary with SACs.[360]

Management
Article 4(4) of the original Birds Directive provided for protection requirements regarding SPAs "… Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds…" After the entry into force of the Habitats Directive these obligations were replaced pursuant to Article 7 of that Directive which provides as follows: "Obligations arising under Article 6(2), (3) and (4) of this Directive shall replace any obligations arising under the first sentence of Article 4(4) of Directive 79/409/EEC". Thus, the provisions of Article 6(1) of the Habitats Directive regarding conservation measures do not apply to SPAs. However, analogous provisions apply to SPAs by virtue of Articles 3 and 4(1) and (2) of the Birds Directive.[361] Article 3(1) provides that MS shall take the "requisite measures" to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds covered by the Directive and Article 4(1) requires "special conservation measures" for the species covered by Annex I.

The National Parks and Wildlife Service is the body responsible for developing conservation objectives for SPAs and managing those sites with local stakeholders and competent authorities. SSCOs have been published for 37 marine SPAs.[362]

Article 12 of the Birds Directive requires Member States to report on the status of all bird species every three years. Ireland submitted the latest Article 12 report to the European Commission in 2019. As part of this reporting process, pressures and threats for Ireland's breeding seabirds were identified. On a per species basis, the most frequently identified threats included offshore wind energy developments; the potential impacts of climate changes on foraging habitats; overfishing and incidental seabird bycatch; mammalian predation; recreational disturbance; and plastic waste.[363]

In 2020, the EPA reported that numerous resident and migratory water bird species that spend the winter at coastal sites in Ireland, such as estuaries and lagoons, are showing significant and continued population declines.[364] It also noted that until recently there has been comparatively little monitoring data on those species that overwinter offshore, such as sea ducks and divers.[365] It has been acknowledged that more research is needed to understand the distribution, population trends and habitat preferences of Ireland's seabirds and waterbirds at sea.[366]

In the recent *Prioritised Action Framework for Natura 2000* in Ireland, it was declared that Ireland is undertaking a significant body of work to meet designation requirements for marine birds, via the ObSERVE programme, mentioned above.[367] It is expected that there will be further SPA designations for marine birds between 2021 and 2025.[368]

Enforcement
See SACs.

2.3.2.3 MPAs under MSFD
The MSFD was transposed into Irish law by the European Communities (Marine strategy Framework) Regulations 2011.[369]

Spectrum of Protection
In the Government's 2018 baseline report on the National Marine Planning Framework, it elaborated on what was required under Article 13 (4) of the MSFD: "a coherent and representative network of spatial protection measures be put in place where appropriate in order to achieve or maintain the good environmental status of our national and shared maritime area" and in such MPAs, it clarified, some or all human activities may be restricted or limited some or all of the time.[370]

Designation
MPAs under the MSFD may take a wide variety of forms including incorporation of existing SPA and SACs under the Birds or Habitats Directives, national MPA designations and spatial conservation measures established under Article 11 of the EU Common Fisheries Policy, which may designate areas where certain types of fishing or all fishing is prohibited or limited.[371] It also recognised that MPAs may go beyond existing measures and consist of new types of protected areas or may cover species or ecosystems not identified under the Birds or Habitats Directive but to which the MSFD applies.

Management
In Ireland, the Department of Housing, Local Government and Heritage is the lead body for the implementation of the MSFD and is supported by several other Government departments and State agencies, in particular the Marine Institute.[372]

In its first report on implementation of the MSFD Directive, the European Commission found that Ireland did not have defined environmental targets and associated indicators for its marine waters, as required by Article 10 of the Directive,[373] nor did it have defined targets for biodiversity or an adequate definition of GES.[374] It stated that GES is defined mainly at the descriptor level, including only some elements of the criteria; it is generally only qualitative and therefore not measurable.[375] The report recommended that Ireland strengthen the GES definition of the biodiversity descriptors in a way which goes beyond what is in existing legislation. It also advised to improve GES definitions including through regional cooperation using the work of the Regional Seas Conventions as much as possible focusing on quantitative aspects and baselines, with the aim to make GES measurable.[376]

In its 2018 report on measures taken by Member States to achieve GES, the Commission noted that Ireland's programme of measures exploits synergies with existing international, EU and regional measures and processes for all GES descriptors.[377] The programme includes spatial measures however it does not always provide clear and specific information on the management efforts in place (or to be implemented in the future), to what extent the relevant pressure will be addressed or how the MPA will contribute to progress towards targets and GES. Information gaps include the representation of species and habitats within the MPAs, the size, number, and location of MPAs and the conservation objectives of the MPAs.[378]

In relation to Ireland, the Commission recommended the following:[379]

- **Ireland should provide more information about its measures and its spatial protection measures (representation of species and habitats within the MPAs, the size, number and location of MPAs, the conservation objectives of the MPAs).**
- **Ireland should define the spatial scope of its measures in detail. Furthermore, the spatial scope of measures should be expanded to cover marine waters beyond coastal waters, where relevant pressures are present. Ireland should consider establishing additional measures beyond spatial protection efforts to address species and habitats. It is important that pressures are addressed across all marine waters.**
- **Ireland's programme should clearly identify the timelines for implementation, secured funding, and the entities in charge of implementation for all their measures.**

2.3.2.4 Marine Spatial Planning and MPAs
In 2014 the EU adopted a Directive with the goal of creating a common framework for maritime spatial planning (MSP) in Europe.[380] The Directive required EU Member States to draw up maritime spatial plans no later than 31 March 2021,[381] which should map existing human activities in their marine waters and identify their most effective future spatial development. Article 8 of the MSP Directive requires Member States, "when establishing and implementing maritime spatial planning" to "take into consideration relevant interactions of activities and uses…which may include "nature and species conservation sites and protected areas." According to the European Commission, "MPAs will form part of maritime spatial plans established under the Directive."[382]

The MSP Directive was transposed into Irish legislation by Part 5 of the Planning and Development (Amendment) Act 2018.[383] Ireland's first marine spatial plan, known as the National Marine Planning Framework (NMPF) was launched on 1 July 2021.[384] The NMPF will be the key decision-making tool for Government departments, State agencies, regulatory authorities and policy makers for decisions on marine activities. A key component of the marine plan is new marine planning legislation, the Maritime Area Planning Act, which was enacted in December 2021.[385] This Act establishes a new planning regime for the maritime area and replaces existing State and development consent regimes.[386] It streamlines agreements on the basis of a single consent principle (one State consent, known as Maritime Area Consent) to enable occupation of the maritime area and one development consent (planning permission) with a single environmental assessment.[387] The Act also provides for "Designated Maritime Area Plans" (DMAPs), which are specific parts of the maritime area that are designated for particular "maritime usages".[388] The Act states that any proposal for a DMAP shall specify *inter alia* the protected sites to be taken into consideration during the preparation

of the Plan.[389] However, how MPAs and DMAPs will interact in practice remains to be seen.

The new Act also provides for the establishment of a new state agency known as the Maritime Area Regulatory Authority (MARA), which will be responsible for regulating development and activity in Ireland's maritime area.[390] The Government aims to have MARA established in early 2023. MARA will be responsible for:

- **Granting of all Maritime Area Consents**
- **Marine licensing for specified activities**
- **Compliance and enforcement of MACs, licences and offshore development consents**
- **Administration of the Foreshore consent portfolio of the Minister for Housing, Local Government and Heritage.[391]**

The NMPF has been criticised for being pushed through before legislation for MPAs was put in place.[392] An independent report evaluating the NMPF found that it lacked a spatial dimension and ecosystem-based approach and recommended inter alia that it should be partnered with a comprehensive network of effective MPAs, regional scale marine spatial plans and measures for ecosystem restoration.[393] Otherwise, there is a real risk that it will lead to a 'developer led' approach to planning at sea.[394] A recent report issued by WWF assessing MSP in the North East Atlantic found that Ireland was the worst-performing country in the region.[395]

2.3.2.5 Fisheries and MPAs

The EU has exclusive competence for the conservation of marine biological resources under the Common Fisheries Policy (CFP).[396] The CFP governs fishing in Irish waters from 12 nm up to 200nm, the limit of the EEZ.[397] Within 6 nautical miles, Irish registered fishing vessels have exclusive rights to fish and the Irish Government can develop and implement fishery management measures for MPAs within this limit. The impact of sea-fisheries and aquaculture on SACs and SPAs is managed and regulated through European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013,[398] which establishes a legal framework for management of sea-fisheries in Natura 2000 areas.[399] However, this must be done at regional EU level for MPAs outside the 6 nautical mile limit.[400] Between six and twelve miles some fishing vessels, flying the flags of the U.K., France, Belgium, The Netherlands and Germany, have historical fishing rights. Under the CFP, the coastal State (Ireland) is permitted to regulate these vessels. [401]

Under Article 11 of the recent reform of the CFP,[402] Member States may take environmental protection measures with regard to their own flagged vessels within all waters under their jurisdiction. However, only the Commission has the power to do so in the case of non-Irish flagged vessels on the basis of a request by a Member State.[403] Member States have been reluctant to use Article 11 of the CFP as the process is complicated to apply and could lead to weaker final restrictions than those initially put forward by the Member State making the proposal and requires lengthy discussion during which the area would remain open to vessels of other Member States and further damage to sensitive habitats could continue.[404]

At the national level, the Sea-Fisheries and Maritime Jurisdiction Act 2006 contains provisions relating to management of sea fisheries and conservation of fish resources in specific areas of the sea, with controls and restrictions on fishing activities within the territorial waters of the country, in line with the EU's Common Fisheries Policy.[405] There are many 'technical measures' regulations under this Act covering things like species, opening/closing seasons, gear restrictions, etc. A contravention of any provisions of European legislation implementing technical measures is an offence under the Act.

Fish stock recovery areas may be established under Article 8 of the CFP:[406]

"The Union shall, while taking due account of existing conservation areas, endeavour to establish protected areas due to their biological sensitivity, including areas where there is clear evidence of heavy concentrations of fish below minimum conservation reference size and of spawning grounds. In such areas fishing activities may be restricted or prohibited in order to contribute to the conservation of living aquatic resources and marine ecosystems. The Union shall continue to give additional protection to existing biologically sensitive areas."

Recent EU guidance states that such fish stock recovery areas may be considered as protected areas once they meet the minimum criteria.[407] Since 2003, the level of fishing effort has been regulated in an area off the southwest coast of Ireland.[408] It was defined on scientific grounds by the Marine Institute because of its importance for spawning and as a nursery area for certain commercially exploited fish.[409]

Recent conservation measures at EU level include a ban on bottom trawling at a depth below 800 metres, known as the Deep-sea Access Regulation[410] and the introduction of technical conservation measures to protect sensitive species and habitats.[411] Another provision of the Deep-sea Access regulation is the protection of Vulnerable Marine Ecosystems (VMEs) below 400 metres depth, which was just recently implemented with the closure of 87 sensitive zones to all bottom gears in EU waters of the North East Atlantic.[412] These

Lough Hyne, Co. Cork

new bottom fishing closures apply to 1.8% of Irish waters.[413] The SFPA has undertaken monitoring activities, with the assistance of the Naval Service, on the use of acoustic deterrent devices as part of fishing gear on vessels[414] to support compliance with EU Regulations aiming at protecting cetaceans.[415]

2.3.3. Protected Areas under National Law

2.3.3.1 Nature Reserves

Spectrum of Protection

The NPWS describes a nature reserve in simple terms as an area of importance to wildlife.[416] It is defined by the Act as "an area managed primarily for conservation of one or more species, communities, habitats or for any feature of geological, geomorphological or other natural interest".[417] There are currently 78 Statutory Nature Reserves in Ireland, 13 of which include marine elements, all of which overlap with Natura 2000 sites.[418] Of these 13, Lough Hyne[419] in Co. Cork was the first nature reserve in Ireland to focus on a marine ecosystem.[420] Human activities are tightly restricted. Boat use is controlled, and permits are required for some limited recreational activities, such as diving. Fishing is prohibited except for the type of recreational fishing specified in the Regulations.[421]

Designation

Pursuant to Section 15 of the Act, nature reserves can be designated via an 'Establishment Order' by the Minister on land owned by the State, the foreshore and land which forms the seabed up to 12 nautical miles. The Establishment Order must set out the reasons and objectives for which the nature reserve is being established. Most nature reserves are on land owned by the State; however, they can also be established on privately owned land via a 'Recognition Order', pursuant to Section 16 of the Act. A recognition order must state the Minister's reason for recognising the land as a nature reserve and state the objectives for which the land is to be used or managed as a nature reserve. Before making an Establishment or Recognition Order, the Minister must consult with the public authorities in whose area the land is situated and once an Order is made a copy must be sent to those respective authorities (e.g., planning authorities). The Minister may not amend an Establishment or Recognition Order unless he/she or they considers that the objectives require revision due to "changes in the features, characteristics or boundaries of the reserve or in any other circumstance which affects the reserve."[422]

Management

The regional management offices of the NPWS are responsible for the management of State-owned Nature Reserves.[423] In the case of privately owned lands, the occupier of the land must be capable of establishing, managing and maintaining the nature reserve on their land, in accordance with any conditions imposed by the Minister.[424]

Enforcement

Section 12 places a general obligation on Ministers of State and other public authorities for the protection of land established or recognised as a nature reserve. Section 59 provides that the Minister may make regulations regarding public access to and use of nature reserves.

2.3.3.2 Refuges for Fauna

Spectrum of Protection

Section 17 of the Act, as amended by the Wildlife (Amendment) Act 2000, provides for the designation of a Refuge for Fauna by the Minister where they consider that:

"a particular species, or particular species of either or both fauna and flora, should be specially protected on any land which is, or is contiguous to, a habitat of the species, or that land has features of the landscape which are of major importance for wild flora and fauna including birds, which include those features which by virtue of:
(a) their linear and continuous structure, such as rivers or canals with their banks or the traditional systems of marking field boundaries, or
(b) their function as stepping stones, such as ponds or small woods, are essential for the migration, dispersal and genetic exchange of wild species, for the purposes of the Habitats Directive or the Birds Directive".

There are currently seven Refuges for Fauna in Ireland, and all are islands or cliffs of importance for breeding seabirds and overlap with sites in the SPA network.[425]

Designation

Prior to designation, the Minister must consult with public authorities in whose area the land is situated and notify the owner or occupier of the land.[426] The general public must also be informed via a public notice of intention to designate. Any objections may be made within two months of the Minister publicly announcing their intention to designate.[427] In their public notice of intention to designate, the Minister must indicate the species they propose to protect, the applicable land and associated protective measures.[428] Compensation may be paid to a person who has an interest in the land if the value of the land diminishes as a result of the designation.[429]

Management

Section 59 provides that the Minster may make regulations permitting public access to or use of the refuge to such extent as is necessary to enable the relevant designation order to have full effect.

Enforcement

Section 12 places a general obligation on Ministers of State and other public authorities for the protection of land established or recognised as a refuge.

Section 17(15) of the 1976 Act provides that any person who contravenes a designation order shall be guilty of an offence.

2.3.3.3 Natural Heritage Areas

Spectrum of Protection

NHAs are the basic designation for wildlife in Ireland.[430] They are defined by the Act as areas **"worthy of conservation for one or more species, communities, habitats, landforms or geological or geomorphological features, or for its diversity of natural attributes".**[431]

NPWS reports that while some terrestrial and coastal NHAs may encompass adjacent marine areas, no NHAs have been established for marine habitats to date.[432] Coastal and marine sites have been proposed as NHAs but none have yet been designated.[433] The Irish Wildlife Trust has observed that there are no 'qualifying criteria' for NHAs and so it is difficult to determine whether these have been proposed for marine, intertidal, or purely terrestrial reasons.[434] Currently, there are 148 NHAs in Ireland that have been designated by Statutory Instrument, which are all bogs.[435]

Designation

Selection criteria for NHAs include the following:[436]

- **Protection of the site will make a significant contribution to the conservation of one or more species (or other biological type) which are considered vulnerable, rare or endangered in Ireland, or in the Atlantic biogeographical region, or which are covered by any relevant international treaty to which Ireland is a party.**
- **Protection of the site will make a significant contribution to the conservation of one or more species which are protected in Ireland under national or international law.**
- **Protection of the site will make a significant contribution to the conservation of one or more habitats which are considered vulnerable, rare or endangered, either in Ireland or in western Europe.**
- **The site is one of a series selected to represent habitats or ecosystems which are typical of Ireland.**
- **The site is one of a series of sites selected to represent a range of variation of habitats which are typical of Ireland.**
- **The protection of the site will, in the judgement of the Geological Survey of Ireland, contribute significantly to the conservation of geological, geomorphological or fossil features.**

A NHA may be designated by the Minister under Section 18 of the Wildlife Amendment Act 2000 after consulting with the landowner and general public.[437] A three-month period is allowed for lodging an objection to a proposed designation and/or any of the activities requiring consent.[438] An objection may be made by an owner or legal user of the site and by a person with an interest in land outside the site which could potentially be affected by the designation and/or any of the activities requiring consent.[439] An objection is assessed on scientific grounds only.[440]

Management

NHAs have some legal protection from the date they are formally proposed for designation.[441] Once designated, no activity which destroys or significantly alters, damages or interferes with the integrity of the site, or any of its species, communities or habitats may be carried out, unless the Minister gives consent.[442] If landowners wish to carry out certain works on a NHA, they must apply for permission to the Minister under Section 19 of the Wildlife (Amendment) Act 2000.[443] The works which require the consent of the Minister are found at Schedule 2 of the S.I. designating the relevant NHA.[444]

Enforcement

The Wildlife (Amendment) Act 2000 provides for restrictions on carrying out certain works on NHAs and associated offences for carrying out such works without consent. Section 20 of the Wildlife (Amendment) Act, 2000 provides for the Minister to apply to the Court to prohibit the continuance of the works which may damage the integrity of an NHA. This also applies to works being carried out on land that has not been designated as an NHA, but which are liable to have an adverse effect on the integrity of an NHA.[445]

2.3.3.4 Wildfowl Sanctuaries

Areas over which shooting of wild birds is prohibited are commonly referred to as exclusion zones or Wildfowl Sanctuaries. There are currently 68 in the State, on areas of private and state land, many of which are coastal sites.[446] An order may be issued under section 24 of the Wildlife Acts excluding certain areas of land from hunting of wild game birds. The Wildlife Acts do not set out the process for selecting and creating Wildfowl Sanctuaries.[447]

2.3.3.5 Whale and Dolphin Sanctuary

In 1991, the Irish Government declared its waters, up to 200 nautical miles, a Whale and Dolphin Sanctuary. The Government stated that existing legislative provisions in the Whale Fisheries Act 1937 and the Wildlife Act 1976, empowered it to establish the Sanctuary.[448] Therefore, there was no formal site designation or associated protective or management measures involved in its creation.[449] In any event, as stated above in Section 2.3.2.1, all cetacean species are now protected under the Habitats Directive.

Under the Whale Fisheries Act 1937, the hunting of all whale species, including dolphins and porpoises, is totally banned within the fisheries limits of the State (up to 200 nm).[450] The hunting by Irish registered ships of certain whales is also banned outside of the fisheries limits of the State.[451]

2.3.3.6 National Parks

Ireland has six terrestrial national parks with no coastal or marine features, managed by NPWS.[452] They are almost all State owned and have no statutory footing except for Killarney National Park.[453] In its Programme for Government 2020, the Government announced its intention to "examine the establishment of an offshore maritime area as Ireland's seventh national park".[454] There is currently no legal basis in Irish law for the creation of National Parks, however this is cited as an action for Government in the 2020 interim review of Ireland's National Biodiversity Action Plan.[455] To date, limited progress has been made.

There is currently no legal basis in Irish law for the creation of National Parks, however this is cited as an action for Government in the 2020 interim review of Ireland's National Biodiversity Action Plan. To date, limited progress has been made.

3 Gaps and Weaknesses in Irish Law

Spectrum of Protection

- Targets agreed at international and European level require 30% of Irish waters to be protected by 2030, with 10% under strict protection. Currently 2% of Irish waters are protected, (soon to be 8%) with only one MPA that could be described as under strict protection (Lough Hyne Nature Reserve, Co, Cork). Therefore, a significant expansion of MPA protection is required in a relatively short period of time.

- There is not yet any dedicated legislation providing a legal basis for and regulating the designation and management of a network of MPAs in Ireland. However, work is ongoing in this regard and the General Scheme of a Bill was published in December 2022.

- There is no definition of 'marine protected area' in Irish Law.

- The Wildlife Acts 1976—2018 provide the legal basis for nature conservation in Ireland and provide for several categories of protected area, including *Nature Reserves, Refuges for Fauna and Natural Heritage Areas,* many of which have marine and coastal elements, but would not generally be described as MPAs. The geographical scope of the Act is limited to Ireland's territorial waters (up to 12nm) and has had a limited application in a marine context to date.

- The Habitats and Birds Directives (1979; 1992) provide the legal basis in Ireland for the protection of vulnerable, rare and/or endemic marine habitats and species via designation of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which form part of the EU Natura 2000 network of protected areas. The Directives apply within Ireland's territorial seas, Exclusive Economic Zone (EEZ) and the continental shelf. It is the only legal basis for the designation of MPAs beyond 12 nm.

- Despite this, Ireland's SACs and SPAs have a predominantly coastal focus, with only six offshore designations. Two additional offshore SACs were announced in December 2022.

- Ireland is a member of the Regional Seas Convention for the Northeast Atlantic (OSPAR), under which it has committed to establishing an ecologically coherent network of MPAs. Given there is no legislation to legally underpin these commitments, Ireland has had to designate existing SACs as OSPAR MPAs, and therefore cannot protect the full spectrum of habitats and species that OSPAR considers to be threatened or in decline.

Designation

- SACs and SPAs are limited to the protection of habitats and species listed in the Birds and Habitats Directives, which are more than 25 years old and focused on protecting vulnerable, rare and/or endemic habitats and species. Only MPAs which include these habitats and species may be designated as SACs and SPAs. Therefore, significant aspects of the Irish marine environment are excluded from protection under the current legal framework.

- Ireland has only protected six offshore sites, which are all reefs. More MPAs are needed beyond 12nm given the extent of ocean habitats, species and ecosystems that remain without protection.

- Ireland's first maritime spatial plan was launched on 1 July 2021 prior to the development of new legislation to expand Ireland's MPA network. There is a risk that significant maritime space may be allocated to new activities before new MPA sites can be identified and designated.

Management

- No MPAs have management plans in Ireland.

- Sector specific regulatory regimes are the mechanisms by which many management measures are implemented in Ireland.

- Monitoring of Ireland's MPA network is primarily driven by obligations deriving from the Birds and Habitats Directive.

- The Natura 2000 network does not purport to create strict nature reserves where human activities are excluded.

- Ireland has only one MPA that can be considered highly protected, with limited human activities allowed, Lough Hyne in County Cork.

- The majority of MPAs in Ireland cannot be considered to be highly protected. A recent NPWS monitoring report (Scally et al, 2020) of six marine habitat types protected by the Habitats Directive found them to be negatively affected by human activities both within and outside sites from agriculture, commercial forestry and aquaculture with future threats likely to arise from the development of windfarm infrastructure.

- Ireland's 2019 report to the European Commission under the Habitats Directive identified the following threats and pressures on SAC marine habitats: eutrophication, pollution from domestic wastewater, agriculture and aquaculture, alien invasive species and fishing methods that damage the sea floor.

- Ireland's recent 2019 report to the European Commission under the Birds Directive identified the following pressures and threats for Ireland's breeding seabirds: offshore wind energy developments, the potential impacts of climate changes on foraging habitats, overfishing and incidental seabird bycatch, recreational disturbance and plastic waste.

- In its 2018 assessment of Ireland's spatial protection measures under the MSFD, the European Commission stated that Ireland does not provide sufficient information on how relevant pressures will be addressed or on the size, number and location of MPAs.

Enforcement

- Marine governance in Ireland is fragmented with many functions split across various Government departments and agencies.

- Weaknesses in NPWS have been acknowledged and it is currently undergoing a restructuring.

- Concerns have been raised about levels of illegal activity in Natura 2000 sites, enforcement capacity and resource availability for nature conservation in Ireland. The Irish Naval Service currently has a fleet of nine vessels and the Air Corps have two Maritime Patrol Aircraft that conduct patrols. This is unlikely to be sufficient for patrolling a greatly expanded MPA network in the Irish maritime area.

There is not yet any dedicated legislation providing a legal basis for and regulating the designation and management of a network of MPAs in Ireland.

4 Comparative Analysis

4.1 UNITED KINGDOM

38% of UK waters are covered by MPAs.[456] In the United Kingdom (UK), nature conservation, and therefore the establishment of MPAs, is a devolved responsibility. England, Scotland, Wales and Northern Ireland each have their own country-level strategies for biodiversity and the environment. Obligations arising from international treaties and conventions to which the UK is a party, such as UNCLOS, the CBD, OSPAR and the Ramsar Convention, are the responsibility of the UK Government, with the devolved administrations responsible for implementing obligations that concern devolved matters.[457]

The obligation to create a network of MPAs in the UK marine area[458] is contained in Article 123 of the Marine and Coastal Access Act (MCAA), 2009 and should satisfy the following conditions:

(a) the network contributes to the conservation or improvement of the marine environment in the UK marine area;

(b) the features which are protected by the sites in the network represent the range of features present in the UK marine area;

(c) the designation of sites in the network reflects the fact that the conservation of a feature may require the designation of more than one site.[459]

Several categories of MPA exist in the UK marine area, including:

- **Special Areas of Conservation.**
- **Special Protection Areas.**
- **Marine Conservation Zones (England, Wales, Northern Ireland, Offshore Waters), known as Nature Conservation MPAs in Scotland (Scottish territorial and offshore waters).**
- **Sites of Special Scientific Interest (England, Wales, Scotland), known as Areas of Special Scientific Interest in Northern Ireland.**
- **Ramsar Sites.**

As will be seen in the following sections, these categories have different objectives for conservation, designation, management and governance.[460] However, they all contribute to the UK network and some sites may overlap.[461] OSPAR has been influential in the design of the UK MPA network.[462] In December 2012, the UK Administrations issued a Joint Administration's Statement outlining how the UK would contribute to an ecologically coherent MPA network in the Northeast Atlantic, in which it agreed that each Administration would follow the OSPAR design principles in establishing their respective MPA networks.[463]

Within territorial waters, MPA designation and management is a competence of the devolved administrations of Scotland, Wales and Northern Ireland.[464] In UK offshore waters, the Joint Nature Conservation Committee (JNCC) provides scientific advice to the UK Government and devolved administrations on the designation and management of MPAs and establishes conservation objectives for offshore MPAs.[465] It collaborates with the devolved administrations to provide joint advice on MPAs which fall within both inshore and offshore waters.[466] In relation to transboundary cooperation, the JNCC is the body responsible for assisting the UK Government in liaising with the EU Member States and ensuring management of sites whose boundaries are next to protected sites in their waters.[467] JNCC does this via the provision of scientific advice on management

options and supporting stakeholder engagement and consultations, for example.[468] The Marine Management Organization (MMO)[469] would lead this process with regard to any fisheries management measures beyond 6nm.[470]

UK MPAS are currently 'feature based', which means they are established to protect specific species and habitats within a site, rather than to protect everything within a site's boundaries; an approach inspired by OSPAR guidelines.[471] However, in its 25 Year Environment Plan,[472] the UK Government committed to a 'whole site' approach for MPAs of greatest biodiversity interest, which recognises the interdependence of many species and habitats and as a result extends protection to the wider ecosystem within a protected area.[473] While the 'whole site' approach is not yet defined, it may entail management measures which apply across the whole site.[474]

4.1.1 England

Spectrum of Protection

The relevant Secretary of State (Minister) has direct responsibility for English inshore waters and offshore waters adjacent to England and Northern Ireland.[475] Therefore, these waters are often referred to as Secretary of State waters in the legislation and literature. Since the introduction of the MCAA in 2009, the number of MPAs in English coastal waters rose significantly, due to the introduction of a new form of MPA in the Act, the Marine Conservation Zone, as well as the UK's international commitments to create a network of MPAs in its waters.[476] 40% of English waters are currently protected by MPAs.[477]

European sites: Following Britain's exit from the European Union, SACs and SPAs have now become part of the domestic network of protected sites.[478] In the UK, marine SACs and SPAs are known collectively as European marine sites.[479] As of December 2020, there were 116 marine SACs in UK waters, covering approximately 14% of the UK marine area,[480] and 125 SPAs.[481]

Marine Conservation Zones (MCZs) can be designated in English, Welsh and Northern Irish territorial and offshore waters.[482] They may be designated to conserve a wide range of nationally important marine wildlife in the UK: marine flora or fauna, whether or not they are rare or threatened (but particularly if they are rare or threatened), marine habitats or types of marine habitat and features of geological or geomorphological interest.[483] The legislation does not provide a specific list of species and habitats that must be protected, although Government agencies have developed non-statutory guidance.[484]

There are currently 89 MCZs designated in England and a further two in Northern Ireland offshore waters.[485] There are three 'no take zones' in English inshore waters, forming part of larger MPAs, and which are managed by Inshore Fisheries and Conservation Authorities (IFCA) using byelaws to control fishing but no other damaging impacts. [486]

Sites of Special Scientific Interest (SSSIs) are a national suite of sites providing statutory protection for the best examples of the UK's flora, fauna or geological or physiographical features.[487] The main purpose of this category is to preserve essential areas threatened by development, pollution, and/or climate change. [488] In the case of marine ecosystems, SSSI areas can be coastal habitats, salt marshes and sand dunes.[489] This category is considered as an MPA where it protects intertidal or sub tidal habitats and species but, as they do not normally offer protection below the low water mark, only a limited range of marine wildlife can be protected under this category.[490] They are also used to underpin other national and international nature conservation designations.[491] For example, in England, all listed Ramsar sites are currently SSSIs and many are also designated as SACs or SPAs.[492]

Highly Protected Marine Areas

With respect to human activities, the current network of MPAs in England and offshore Northern Ireland continues to allow activities to occur, under the proviso 'sustainable use', meaning that "extractive and depositional activities continue in many protected sites, albeit under strict conditions".[493] Fishing, including the use of bottom-towed gears,[494] pots, nets and angling, continues in many sites and several MPAs co-exist with windfarms and aggregate dredging.[495] Management regimes prohibit only the most damaging forms of activities when they conflict with the designated features of an MPA.[496] Many conservation NGOs have described the current network of MPAs as "lamentable".[497]

In order to provide for a higher level of marine protection, the UK Government commissioned an independent review in 2019 to examine how Highly Protected Marine Areas (HPMAs) could be introduced in English inshore and offshore waters and Northern Ireland offshore zones.[498] The 'Benyon Review' was published in June 2020 and issues a set of 25 recommendations concerning HPMAs.[499] It recommends that HPMAs should be defined as areas of the sea that allow the protection and recovery of marine ecosystems, prohibit extractive, destructive and depositional uses and allow only non-damaging levels of other activities.[500] It endorses a 'whole site approach' for HPMAs which conserves all habitats and species within the site boundary, and which also includes mobile and migratory species that pass through the site.[501] It advises the use of quick and pragmatic legislative approaches, and recommends that HPMAs be located within existing MPAs as they would act as a buffer zone.[502] It also suggested

Rock-a-Nore Beach, Hastings, England

that in the future alternative locations such as co-location with existing and emerging industries could be considered.[503] It recommends that blue carbon habitats be considered when identifying HPMAs.[504] With regard to management, the report advocates co-management where possible and the development of voluntary approaches and codes of conduct with stakeholder user groups.[505] Regarding permissible activities, the review considers that HPMAs should not be 'no-go zones' and should allow non-damaging levels of recreational activities such as surfing, scuba diving and kayaking.[506]

On 8 June 2021, the UK Government published its response to the review in which it stated that it will designate pilot sites for HPMAs in English inshore and offshore waters using existing powers under the Marine and Coastal Access Act 2009, either inside or outside existing MPAs.[507] They will be identified by the statutory conservation bodies, Natural England[508] and JNCC, with input from stakeholders. A formal consultation was launched in 2022 for five candidate sites.[509] The pilot HPMAs will be designated as MCZs with extractive, destructive and depositional activities prohibited, which includes commercial and recreational fishing, dredging, construction and anchoring.[510] A 'whole site approach' will be adopted, conserving all species and habitats within the HPMA site boundary, including the water column, to maximise potential for ecosystem recovery.[511] With regard to enforcement, the Government will continue to rely on traditional methods such as physical inspections and observations as one of the main tools but will also explore technological options such as VMS and Remote Electronic Monitoring.[512]

Designation

European sites: SACs and SPAs are designated under the Conservation of Habitats and Species Regulations 2017[513] and the Conservation of Offshore Marine Habitats and Species Regulations 2017.[514] In the UK, SACs and SPAs are deemed to be at Favourable Conservation Status when originally selected, unless there is evidence to the contrary.[515] For offshore sites, best available evidence is used to inform JNCC's view of protected habitat and species condition at the time of designation.[516]

The implementing regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019,[517] so that they remain operable post Brexit.[518] This means that the UK Government and devolved administrations may continue to designate SACs and SPAs as a contribution to the UK MPA network.[519] Most of the changes introduced were procedural in nature and involve transferring functions from the European Commission to the appropriate authorities in England.[520] All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.[521]

Following a high court challenge, it was clarified that the legal duties to achieve favourable conservation status of European sites remain and sites cannot be declassified without following proper procedure.[522]

MCZs are designated by the Secretary of State for Environment, Food and Rural Affairs under section 116 MCAA in order to form a network of conservation sites in accordance with Article 123 of the Act. MCZ sites are designated following public consultation[523] and analysis by statutory conservation bodies, the JNCC and Natural England. Each designation order defines the MCZ area, lists the features being protected within that area and specifies the conservation objective or objectives of the MCZ. [524] Generally, each MCZ has one conservation objective, which applies to all features being protected and is the same for all sites, which is that each of the features be in favourable condition.[525] Therefore, the general management approach to achieve this is to either maintain it in a favourable condition if it is already so or recover it to a favourable condition and then maintain it thereafter.[526]

If a proposed MCZ will affect or be affected by an activity in a neighbouring devolved territory (i.e. Scotland, Wales and Northern Ireland), then consultation with the relevant authorities is also required.[527] However, the final decision about designation, and what will appear on a designation order (including what the site conservation objectives are), rests with the Secretary of State.[528] The Secretary of State retains discretion to determine which sites, and how many, should be protected.[529] Critics argue that this discretion in combination with lack of clear deadlines has resulted in a slow designation process. [530]

The process for selecting MCZ sites in England begins with recommendations provided by stakeholders, through a bottom-up approach, then their consequent designation and implementation follows a top-down approach.[531] The MCZ selection process in England has been described as unusual and lengthy.[532] It was not done by Government but via the Marine Conservation Zone Project, which was launched in 2008 to identify MCZs in English inshore and English, Welsh and Northern Irish offshore waters to recommend to Government.[533] The Project was led by JNCC and Natural England and four regional project groups covering the south-west (Finding Sanctuary), Irish Sea (Irish Sea Conservation Zones), North Sea (Net Gain) and south-east (Balanced Seas).[534] These groups were established to work with a range of sea users and interest groups to identify recommendations for MCZs within their regions.[535] After the regional project groups had identified proposed sites, the Government then undertook a formal consultation, and DEFRA, Natural England and JNCC recommended the final sites for designation to the Secretary of State.[536] While this type of stakeholder engagement held much promise, it has been suggested that the way it was handled led to stakeholder disillusionment with the process.[537] For example, the Government elected to designate far fewer sites than recommended by the regional project group without providing an explanation and there were also lengthy delays with the process.[538] Given that England was the first jurisdiction in the UK to launch the MCZ designation process, valuable lessons were learned by the other administrations.[539]

Unlike other MPA designations, social and economic factors may be taken into account in the identification of MCZ sites,[540] with the goal being that their inclusion will secure community and industry buy in, leading to higher levels of compliance.[541]

SSSIs: The Wildlife and Countryside Act 1981 provides for the designation of SSSIs.[542] Natural England must identify an area as a new SSSI when it believes the land is of special interest by reason of any of its flora, fauna, geological, geomorphological or physiographical features.[543] The designation includes a notification and confirmation process.[544] Most SSSIs are privately owned or managed while others are owned or managed by public bodies or non-governmental organisations.[545]

Management

European sites: Management plans were not obligatory under transposing legislation for Natura sites in any part of the UK (reflecting the fact that they are not obligatory under Article 6 of the Directive), therefore not all sites have them.[546] The Conservation of Habitats and Species Regulations 2017 contains directions regarding the establishment of a 'management scheme' (similar to a management plan) for European sites, which "may" inter alia require conservation measures. [547]

In a 2018 assessment of the UK's MPA measures, the European Commission observed that spatial protection measures were often lacking in detail on their area coverage and temporal ranges of restrictions; and recommended that the UK provide more information on representation of species and habitats within the MPAs, the size, number and location of MPAs, the conservation objectives of the MPAs and exact geographical coverage.[548] It also observed that in the North-East Atlantic, the UK programme includes measures that target destructive fishing practices, particularly in MPAs but minimal consideration is given to the broader issues of trawling outside of these spatially protected areas.[549]

MCZs: The MCAA 2009 provides that where any public authority has functions which are capable of affecting an MCZ, it must exercise its functions in a manner which best furthers the conservation objectives of the MCZ.[550] Where this is not possible,

they should exercise their functions in a manner which 'least hinders' those objectives. [551] According to some commentators, this effectively allows an authority to continue a function or activity that may cause significant damage or deterioration to a site, if such an approach is considered to be the option that 'least hinders' a site's conservation objectives.[552] If a public authority considers that any of its functions would or might significantly hinder the achievement of the conservation objectives for an MCZ, it must inform the appropriate statutory conservation body,[553] which is Natural England or JNCC for offshore sites. There is no legal requirement to follow any guidance issued by the statutory conservation bodies, however, rather the MCAA states that the authority should 'have regard' to it.[554]

There is no automatic restriction of economic or recreational activities within MCZs.[555] Given that social and economic factors may be taken into account in their designation, it is arguable that they are intended to allow sustainable development. The MCAA lays out a process to be followed when deciding whether to authorise activities that are capable of affecting an MCZ.[556] Before granting permission, authorities must be satisfied that there is no 'significant risk' that the activity will hinder the achievement of the site's conservation objectives.[557] There is a public interest exemption provided in the Act in the following circumstances: where there is no other means of proceeding with the act, the benefit to the public outweighs the risk of damage to the environment and the person seeking authorization will compensate for any damage caused by the activity.[558] Commentators have described the MCZ management regime as weaker than that established for European sites, in particular the wider discretion that public authorities have regarding management decisions, which makes it difficult for civil society to challenge them.[559]

Activities which require a marine license, such as oil and gas exploration, are managed through the existing marine licensing process.[560] The MMO is responsible for marine licensing in English inshore and offshore areas and for the Northern Ireland offshore area.[561] Licensable activities within offshore MCZs have to comply with the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended).[562] The MCZ assessment process is embedded in the licensing process and the impact on sites of potential new activities are assessed in line with legislative requirements.[563] Natural England and JNCC provide advice on the impact of industry on nature conservation, both within and outside MPAs.[564]

With regard to fishing activity, the MMO is the lead authority regarding the implementation of, and compliance with, any measures implemented for the management of fishing activity in the 6—12 nm zone and offshore (12—200nm) MPAs.[565] Prior to Brexit, fisheries in the offshore zone were managed through the CFP.[566] Within 6nm, the Inshore Fishery and Conservation Authorities (IFCA) are responsible.[567] Overall responsibility for the management of fisheries in MPAs lies with DEFRA.[568]

Management regimes for fisheries in England are developed after designation of an MPA following an assessment of the compatibility of fishing activities with the conservation objectives of the site.[569] This separation of fisheries management from the designation process for sites has been critiqued as ineffective from a compliance perspective, as it can lead affected communities to feel dissociated from the policy origins of the management measures.[570]

Not all MPAs require management measures for fishing. If the MPA fisheries assessment finds that there is no negative impact of the fishery on the protected features of the MPA, management measures will not be implemented. [571] However the site may be monitored to ensure that any changes in site activities are captured.[572] If the MPA fisheries assessment does find negative effects, then the next step is to identify how to avoid or mitigate the impacts, which includes potential management measures which are developed in consultation with stakeholders.[573] Management of fishing activity within an MPA may apply to the entire site, or to specific parts of the site, if this allows for the feature to be protected and enable fishing activity, which does not have a negative impact, to continue.[574]

Within 12 nautical miles (inshore) management measures to reduce the impact of fishing activities within MPAs are introduced through MMO or IFCA byelaws, which sets out the affected area within the MPA and the fishing activity restrictions.[575] The most restrictive level of management is the use of byelaws to prohibit any taking of marine life from an area (also known as no-take zones) and at the other end of the scale, monitoring and control plans are used where activity is occurring away from the vulnerable feature but within the MCZ.[576] Byelaws can also be used to control particular types of fishing activity throughout the region, not just within a protected area.[577]

IFCAs have been commended from a compliance perspective as their structure incorporates a bottom-up management approach which involves engagement with local communities.[578] They were created in 2011 as part of a reorganisation of inshore fisheries management in England. A key consideration during this process was the integration of conservation concerns.[579] The ten regional IFCAs in England are each governed by committee.[580] Approximately half of the committee members are appointed from the local community for their knowledge of marine matters (e.g. from fishing, aquaculture or marine science backgrounds), with the remaining membership

being composed of officers from other regulatory bodies (MMO, the Environment Agency and Natural England) and elected local Government Councillors who are nominated by coastal Local Authorities with jurisdictions relevant to the IFCA sea areas.[581] IFCAs have a wide range of powers available to them to manage MPAs, including voluntary and legislative measures.[582] Voluntary agreements (known as Codes of Conduct) can be used where appropriate. Where all parties comply and the conservation objectives of the site are met through a voluntary agreement, further statutory regulation is not usually deemed necessary.[583] While the IFCAs provide a good example of stakeholder engagement and the use of voluntary measures in the inshore region, the offshore region presents complex challenges for management such as remote, out of sight MPAs and industry (as opposed to local) stakeholders which are dispersed across wide geographical areas and countries.[584]

There is a requirement in Section 124 MCAA 2009 on the Secretary of State to report to Parliament every six years on the state of MPAs in England. The appropriate statutory conservation body may be asked to carry out monitoring for the purposes of this report, but it is not obligatory.[585] In offshore areas, JNCC carries out monitoring of species and seabed habitats in UK MPAs and coordinates with the conservation bodies in each territory with responsibility for monitoring MPAs in inshore waters.[586] JNCC uses the information gathered from monitoring surveys to inform MPA assessments and draw conclusions on feature condition, whether conservation objectives are being met and if management measures are effective.[587] The outcomes of these assessments may result in a conservation objective or management approach being modified.[588] However, due to the large scale of the UK marine area and insufficient resources available for direct onsite observation, it has been pointed out that the conservation advice provided by the JNCC is largely based on "expert judgement" given that it is impossible to monitor the condition of every protected feature.[589] The most recent Section 124 report for the period 2012—2018 concluded that either some or all features in 29 of the 50 MCZs listed were considered to be in unfavourable condition and it was stated explicitly that "direct feature condition monitoring information would increase confidence in this assessment".[590] The UK Government's 25-year Environment Plan states that it plans to develop new techniques to help with MPA management, which may include remote sensing, earth observation satellites and the use of autonomous vehicles.[591]

SSSIs: Sites of Special Scientific Interest (SSSI) are managed under the Wildlife and Countryside Act 1981, with improved provisions for their protection and management provided by the Countryside and Rights of Way Act 2000 (England and Wales).[592] Natural England advises on the management of proposed activities close to or inside an SSSI, and users will need to apply to get consent for certain activities.[593] Management schemes are not mandatory for SSSIs, [594] however, if a user of a SSSI applies a management scheme to conserve or restore the area, it may receive a grant.[595]

Enforcement

Common enforcement powers[596] as well as specific powers for enforcement of nature conservation legislation[597] are provided under the MCAA 2009. Article 140 makes it an offence to damage the protected features of MCZs, punishable by a fine. Article 129 states that the MMO may make byelaws for the purpose of furthering the conservation objectives of an MCZ in England. These byelaws may restrict activities in MCZs such as entry, vessel speed and/or ban fishing.[598] Non-compliance with a bye law made under this section is an offence,[599] punishable by a fine.[600] The IFCAs are also empowered to issue bye laws under the Act.[601]

According to Clark and Humphreys (2020), no systematic assessment of fisheries enforcement has been conducted in England since 2003, with the authors positing that the clandestine nature of illegal fishing activity is not well suited to quantitative analysis.[602] They note that the enforcement challenge for English MPAs is significant given the remote location of most MPAs, the complexity of regulations not designed with detection of illegal activity in mind and the fact that patrol vessels have significant sea area to cover with limited capacity.[603] A general review of fisheries offences[604] found that the overall number of fisheries prosecutions in England in recent years is relatively low and where prosecutions do occur, fines are set at a low rate.[605] There is no central database of fisheries infringements and therefore no database recording infringements in MPAs.[606] The authors conclude that a national system to monitor compliance and crime detection in English inshore MPAs is urgently needed in order to assess the effectiveness of current management, compliance and enforcement.[607]

SSSIs: Natural England is empowered to take enforcement action in the following circumstances:[608]

- **The SSSI is intentionally or recklessly damaged.**
- **Any of the features of special interest are destroyed.**
- **The wildlife for which the site was identified is disturbed.**
- **Activities requiring Natural England's consent, are carried out without consent.**

Skomer Island, Wales

4.1.2 Wales

Section 158 of the Government of Wales Act 2006 provides that 'Wales' includes the sea adjacent to Wales as far out as 12 nautical miles measured from coastal baselines (known as the 'Inshore Region'), therefore within the Inshore Region the Welsh Parliament has legislative competence, subject to section 108A of this Act.[609] Responsibility for Welsh offshore waters was passed to the Welsh Government via the Wales Act 2017 and through amendments in the Conservation of Offshore Habitats and Species Regulations 2017. Most changes introduced by the Wales Act 2017 came into force on 1 April 2018.[610]

Spectrum of Protection

There are 139 MPAs in Wales, covering 69% of Welsh inshore waters and 50% of all Welsh waters.[611] The Welsh MPA network is made up of the following designations:[612]

- **15 SACs**
- **13 SPAs**
- **1 MCZ**
- **107 SSSIs**
- **3 Ramsar sites**

Ramsar sites, as a matter of Welsh Government policy, are treated in the same way as if designated under the Habitats and Birds Directives.[613]

Designation

European sites: SACs and SPAs are designated under the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017. These regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019,[614] so that they remain operable post Brexit.[615] This means that the UK Government and devolved administrations may continue to designate SACs and SPAs as a contribution to the UK MPA network.[616]

MCZs: Section 123(2) of the Marine and Coastal Access Act (MCAA) 2009 requires Welsh Ministers to designate Marine Conservation Zones (MCZs) which together with any other MCZs, Special Areas of Conservation, Special Protection Areas (European Marine Sites), Sites of Special Scientific Interest and Ramsar sites form a network across the UK marine area.[617] Sites are selected to protect not just the rare and threatened, but the range of marine wildlife found in UK waters.[618] Powers to designate derive from Section 116 of the MCAA 2009. The first MCZ in Wales was designated in 2014 around the island of Skomer and the Marloes Peninsula in Pembrokeshire, southwest Wales, which had previously been the only marine nature reserve in Wales for 24 years.[619] The Skomer MCZ contains species and habitats of national importance, including the grey seal and

algal communities and has byelaws which restrict activities such as dumping and the taking, killing or causing disturbance to wildlife, as well as speed restrictions and specific fishery byelaws.[620] The Welsh MPA Completion project is currently seeking to identify other possible MCZs.[621]

SSSIs: In Wales, the responsible body for the selection and identification of SSSIs is Natural Resources Wales (NRW).[622] It chooses sites after a detailed survey and evaluation against criteria put forward by the JNCC.[623] SSSIs are primarily a terrestrial designation, although they can cover the seashore down to the lowest tide and the seabed of estuary channels.[624] When notifying a new SSSI, the proposal is discussed with the occupiers of the area, which is followed by a formal consultation process.[625]

Management

Although the Welsh Government has overall responsibility for ensuring Wales's network of MPAs is effectively managed, the delivery of management is a shared responsibility across a number of organisations.[626] Within territorial waters, NRW[627] is responsible for providing conservation objectives and advice for Welsh SACs and SPAs.[628] NRW and Natural England work together to provide this information for cross-border sites and JNCC produces similar information for offshore sites.[629] The Welsh Government is also responsible for offshore sites since the legislative changes mentioned above came into force in 2018.

In 2014 the Welsh Government established the MPA Management Steering Group, which brings together representatives from the main management authorities in Wales and aims to secure effective management of the MPA network.[630] In 2018 the Steering Group published the *MPA Network Management Framework for Wales 2018—2023*. This document sets out how MPAs are currently managed as well as future plans. It also shares its vision, goals and principles for management of the network, which include sustainable management, effective leadership, participative and engaged communities, clear governance structures and adaptive management (which means that management of the network will incorporate change as new information becomes available).[631]

With regard to activities requiring consent, the MPA Network Management Framework states that management authorities such as the Welsh Government, NRW and local authorities principally manage MPAs through the regulatory consenting process.[632] There are a range of mechanisms for issuing consents for activities in the marine environment, such as the Conservation of Habitats and Species Regulations (2017) and the Harbours Act (1964).[633] Many activities require a marine licence under the Marine and Coastal Access Act (2009). Marine licensing is carried out by NRW with approximately 60—70 licence applications determined annually for activities occurring within or near to MPAs in Wales.[634]

The MPA Network Management Framework is accompanied by an Action Plan, which identifies key management actions and is updated annually.[635] Some examples of specified actions include a project to reduce seabird bycatch in UK fisheries, the development of a UK Dolphin and Harbour Porpoise Conservation Strategy and a project to assess and manage the impact of commercial fishing activities on European marine sites, which specifically investigates interactions between species and habitats and different types of fishing gear. [636] These actions are intended to inform the current management approach and determine whether future management measures are necessary.

Management depends upon the type of designation. Some management applies to activities or users across the network, and some management activity is carried out at individual sites. [637] SSSIs are protected through working partnerships and agreements with occupiers that manage the sites.[638] SSSIs have a Site Management Statement (SMS) prepared by NRW which informs the landowner/occupier of the aspirations for the site and information on potentially damaging operations.[639]

Specific examples of MPA management cited by the Welsh Government include:[640]

- **Working with landowners through management agreements (e.g., SSSIs).**
- **Orders to control speed limits.**

In 2014 the Welsh Government established the MPA Management Steering Group, which brings together representatives from the main management authorities in Wales.

The Welsh Government also cites management activities such as targeted awareness-raising, the control and management of invasive non-native species and wider activities such as:

- **Public education and general awareness raising of MPAs e.g., school visits, beach cleans and shore safaris.**
- **Local engagement with stakeholders on plans and developments.**
- **Zoning of activities to reduce impacts.**
- **Provision of signage, e.g., information boards and exclusion notices relating to marine protected areas.**
- **Assessment of local pressures.**
- **Working with stakeholders to tackle local issues.**
- **Monitoring compliance with codes of conduct.** [641]

Section 124 of the MCAA 2009 requires Welsh Ministers to lay a report before the National Assembly for Wales every six years to set out how the objectives of the MPA network have been met and identify any further steps which need to be taken. An assessment by JNCC of the Welsh network was completed in November 2016 and concluded that the MPA network in Wales is well connected with the majority of habitats and species being represented and where possible, replicated to provide resilience in the network. [642] However, the assessment did identify gaps in the Welsh contribution to the ecological coherence of the wider UK network, both inshore and offshore, including a lack of protected habitats in deeper waters.[643] In January 2018, NRW published indicative site level feature condition assessments for all inshore SACs and SPAs. [644] The report found that 46% of all features are in favourable condition, 45% are in unfavourable condition and 9% are in unknown condition.

In its 2019 report to the Welsh Parliament, the Welsh Government acknowledged that additional MPAs are required to meet obligations under the MCAA 2009 and to satisfy OSPAR commitments.[645] It committed to working in partnership with NRW, JNCC and stakeholders to identify additional MCZs to address the gaps identified and consider whether there is a need for MCZs for highly mobile species within the MPA network.[646] It also promised to develop a new marine biodiversity monitoring programme for Wales which will build on existing monitoring activities and cover existing MPAs and any designated in the future.[647]

Enforcement

The enforcement provisions of the MCAA 2009 apply in Wales.[648] The MPA Network Management Action Plan for 2020—21 contains specific actions regarding enforcement. One action intends to use data from existing inshore vessel monitoring systems (VMS) when making vulnerability assessments of protected features to fishing.[649] Another enforcement action cited in the current MPA Action Plan is "Operate a risk-based approach to fisheries enforcement".[650] The goal of this action, which includes enforcement and prosecution within the Welsh zone and its MPAs, is to operate a risk-based and intelligence-led approach to marine enforcement, using technological improvements, to maintain a focus on high-risk fisheries activities. [651]

4.1.3 Northern Ireland

While nature conservation is a devolved matter, certain parts of the Northern Ireland marine environment remain under the legislative competence of the UK Government, including the foreshore and the seabed.[652] Section 20 of the Marine Act (Northern Ireland) 2013 requires the Department of Agriculture, Environment and Rural Affairs (DAERA) to establish a network of MPAs in the Northern Ireland inshore region that, together with MPAs designated by the other UK administrations, contributes to the conservation and improvement of the marine environment in the UK marine area.

Spectrum of Protection

Five MPA categories exist in Northern Ireland's inshore waters:

- **SACs**
- **SPAs**
- **MCZs**
- **ASSIs – which are the equivalent of the SSSIs in England, Scotland and Wales.**
- **Ramsar sites**

The current network of MPAs in Northern Ireland contains 48 sites occupying 38% of the Northern Ireland inshore region.[653] It should be noted that the 48 MPAs comprise multiple designations within the same sites. For example, Strangford Lough, which became the first MCZ in Northern Ireland upon enactment of the Marine Act 2013,[654] is also designated as an SAC, SPA, ASSI and Ramsar site.[655] It is also worth highlighting the Wildlife (Northern Ireland) Order 1985, as amended by the Wildlife and Natural Environment Act (Northern Ireland) 2011, which contains powers for the protection of wild animals and plants within Northern Ireland.[656] Schedules of listed species contain reference to coastal and marine birds and also to seals and cetaceans.[657] A review of the Northern Ireland MPA Strategy is currently ongoing, which will consider *inter alia*, the ecological coherence of the existing network, management options and gaps, HPMAs, OCEMs and the possibility of including climate considerations into MPA network design principles.

Designation

European sites: The Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended) implemented the Habitats and Birds Directives in Northern Ireland and enables designation of SACs and SPAs.[658] European site protection provisions include management schemes and byelaws and measures to give protection to species of European importance.[659] The Conservation Regulations were amended by the Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 to ensure that they remain operable post Brexit.[660] There are no policy changes, rather the changes are largely procedural and include the transfer of functions from the European Commission to DAERA.[661] Existing and future SACs and SPAs will retain their protected status and continue to function as a part of the UK MPA network.[662]

MCZs: The Marine Act (Northern Ireland) 2013 makes provisions for MCZs in Northern Irish territorial waters. [663] The Act builds on the provisions set out in the Marine and Coastal Access Act 2009 and establishes a system of marine planning in Northern Ireland's inshore region, streamlines the marine licensing system and contributes to the delivery of an MPA network in the UK marine area.[664]

Section 13(1) states that DAERA may "by order designate any area of sea falling within the Northern Ireland inshore region as a marine conservation zone" with agreement of the Secretary of State.[665] DAERA has stated that the aim of a MCZ designation is to protect nationally important marine habitats and species in the inshore region as well as enabling the protection of a wide range of marine biodiversity in Northern Ireland's waters including rare and threatened habitats and species and features of particular geological and geomorphological interest which are considered of national importance.[666]

In response to the new powers to designate MCZs under the Marine Act (Northern Ireland) 2013, the Department of the Environment published *Guidance on selection and designation of Marine Conservation Zones (MCZs) in the Northern Ireland inshore region*, which was used to underpin the selection and designation of MCZs in the Northern Ireland inshore region.[667] It sets out the process to be followed and how the OSPAR principles are to be applied in relation to establishing an ecologically coherent network of well managed MPAs.[668]

The Guidance states that the focus is on protecting a range of representative and threatened, rare or declining species and habitats, referred to collectively as Priority Marine Features (PMF).[669] Those PMFs identified as benefiting from spatial protection in the Northern Ireland inshore region are referred to as proposed MCZ (pMCZ) features and underpin the initial identification of Areas of Search.[670]

Strangford Lough, Co. Down, Northern Ireland

Preference will be given to the selection of MCZs with multiple features, including those of interest for both biodiversity and geodiversity, as these are of high intrinsic value, but sites with single features will also be considered to ensure adequate representation of all features, particularly those that are important in a Northern Ireland context.[671] It is advised that features be described in sufficient detail to make conservation objectives and management advice as achievable as possible.[672]

The guidelines propose a five-stage selection process to identify and select potential sites for designation as MCZs.[673]

1. **Identify Area of Search.**
2. **Prioritise Area of Search based on quality of PMF.**
3. **Assess size of the area of search to ensure it is sufficient to maintain the integrity of features protected.**
4. **Assess the effectiveness of managing features within the proposed area of search (this stage involves considering potential management measures needed to deliver the site objectives and examining social cultural and economic considerations in this context).**
5. **Assess ecological coherence to prioritise between different areas based on the contribution to the MPA network.**

Section 14(7) of the Marine Act (Northern Ireland) 2013 makes provision for the economic, cultural and social impacts of designating a MCZ to be taken into account when deciding which sites to designate.[674] In particular, it states that regard must be had to the extent to which any licensable marine activity or fishing are likely to be prohibited or significantly restricted within that area if it is designated and the likely impact on the environment if that area is not designated as an MCZ. The Act requires that the impact of displacement of these activities be considered during the designation process.[675]

The Department of the Environment confirmed in its Guidance document that best available evidence will be the primary consideration in the selection of MCZs although economic, cultural and social information will be taken into account throughout the designation process.[676] The guidance document also states that the Department will, where possible, avoid designating MCZs if that would conflict with ongoing/planned economic, cultural or social activities and will consider suitable alternative sites.[677] Where this is not possible, for example due to the rarity of a feature, the aim would be to reduce any conflict between the activity and the conservation objectives to a minimum.[678]

Consideration will be given to the potential of co-locating MCZs within licensed and/or planned activities.[679]

This guidance document states that MCZs will form the main elements of the Northern Ireland MPA network and will be used to protect those features that cannot be protected under existing designations.[680] While the Northern Ireland Marine Act 2013 allows for overlap of sites designated under different legislation, the Department intends MCZs to complement existing European sites.[681]

During the MCZ designation process in Northern Ireland, after a number of stakeholder workshops and data collation, MCZ proposals were subject to public consultation[682] before being designated.[683] Stakeholders from all marine sectors were involved including angling, fishing, renewable energy, ports and harbours, and environmental groups.[684]

ASSIs: Areas of Special Scientific Interest (ASSIs) are designated under the Environment (Northern Ireland) Order 2002 for nationally important habitats and species.[685] Many are in coastal areas and have marine features. Some ASSIs are also subject to other designations, for example, they can also be part of the Natura 2000 network.[686]

Management

Within territorial waters, DAERA is responsible for MPAs.[687]

MCZs: After designation, MCZs are actively managed in consultation with other Departments and stakeholders to achieve the site's conservation objectives.[688] The Department of the Environment describes conservation objectives act as the starting point for developing management and monitoring progress.[689] The Guidance document describes a conservation objective as "a statement describing the desired ecological/ geological state (quality) of a feature (habitat, species or geological) for which a MCZ is designated."[690] Favourable condition is the overall aim. [691] The conservation objective establishes whether the feature meets the desired state and should be maintained or falls below it and should be recovered to favourable condition. [692] The Guidance recommends that conservation objectives should specify, where possible, the timeframe by which they will be achieved. [693]

There is a presumption of sustainable use within a MCZ so long as the conservation objectives of a site can be furthered or least hindered.[694] Only activities adversely affecting the condition of a feature will be managed to ensure the conservation objectives are met.[695]

The Guidance document emphasises the important role of stakeholders in influencing site management.[696] It has stated that it will work with

stakeholders when developing recommendations about any management actions[697] and is open to a range of management options including the use of voluntary options.[698]

Management measures are to be determined on a site-specific basis. There are three levels of management available:[699]

- **The removal of pressure: This entails management measures which prohibit activities in an MCZ, which may be through voluntary or regulatory mechanisms. This level of management is for situations where the vulnerability of the site is considered to be moderate to high.**
- **The reduction or limiting of pressures: In this instance, activities are allowed within the MCZ but they are subject to certain management measures for example such as gear restrictions and seasonal closures. This level of management is for situations where the vulnerability of the site is considered to be low.**
- **No additional management is required: No restrictions are put in place other than general regulations (quotas, technical measures, etc.) that are not site specific.**

DAERA will monitor the condition of each MCZ to determine whether the conservation objectives for the designated features are being achieved. [700] Monitoring and surveillance reporting activities are coordinated by the UK Marine Monitoring and Assessment Strategy (UKMMAS).[701]

Section 21 of the Marine Act (Northern Ireland) 2013 requires DAERA to report to the Northern Ireland Assembly on the Northern Irish MPA network. The report must contain the following:

- **Information on MCZs designated,**
- **On the extent to which the aims of the Northern Irish inshore MPA network have been achieved, and**
- **Any further steps required in order to realise these aims.**

The first report submitted to the Northern Ireland Assembly was in 2018 and covers the period 2013—2018. Based on monitoring work carried out by JNCC, it concluded that the MPA network in Northern Ireland was close to reaching ecological coherence.[702] In terms of gaps identified in the network, a small number of features did not meet the range of benchmarks set by the network criteria. The report determined that this was likely related to issues of replication and the amount of habitat afforded protection, rather than representation in the MPA network.[703] At a biogeographic scale, some gaps remain in the wider MPA network for the area of broad-scale habitats protected and the representativity and replication of several PMF/proposed MCZ habitats and species in MPAs. [704] Given that designation was completed in 2016, detailed site condition assessments were not available for this report.[705] In the meantime, DAERA is focused on developing and implementing management plans. [706]

ASSIs: In Northern Ireland, if a user wishes to carry on an activity within an ASSI, they must apply to DAERA's Natural Environment Division who may grant consent if the activity is unlikely to cause adverse damage to the designated site.[707] If there is a chance that the proposed activity may affect marine features of the coastal ASSIs, then DAERA Marine & Fisheries Division will be consulted.[708]

Enforcement

The 2013 Act contains provisions which extend the 'common enforcement powers' in the Marine and Coastal Access Act 2009 to all designated MCZs.[709]

Under the 2013 Act, public authorities have a duty, when carrying out their functions and when permitting others to carry out regulated activities in relation to MCZs, to ensure that such activities are undertaken in a way that furthers the conservation objectives of a site, or where this is not possible least hinders the achievement of these objectives.[710] In the event of failure to do so, a public authority may be challenged by way of judicial review.[711]

All licensable activities are subject to appropriate regulatory regimes,[712] which according to the Department of Environment, complement the marine nature conservation regime.[713]

Byelaws (including emergency byelaws) can be used for unregulated activities until specific management measures are in place.[714]

In Northern Ireland, if a user wishes to carry on an activity within an ASSI, they must apply to DAERA's Natural Environment Division who may grant consent if the activity is unlikely to cause adverse damage.

Lough Carron, Scotland

The Department also has powers to make interim byelaws for protecting a feature(s) in an area if the Department considers there may be reasons to designate the area as an MCZ and there is an urgent need to protect the feature.[715]

Section 33 of the Act provides for a general offence of damaging the protected features of an MCZ, punishable by a fine.[716] This provides additional protection in cases where byelaws may not be adequate to control activities that risk serious damage to, or complete loss of, a feature.[717]

4.1.4 Scotland

Spectrum of Protection

The Scottish MPA network covers approximately 37% of its sea area[718] and consists of a broad range of MPA categories, designated under various legislative frameworks. In addition to SACs, SPAs, SSSIs, Ramsar sites and Nature Conservation MPAs (Scottish equivalent of an MCZ), the Scottish network also includes Other Area Based Measures,[719] Historic MPAs designed to protect sites of historical importance around the Scottish coast[720] and a Demonstration and Research MPA.[721] Lamlash Bay, which is home to one of the largest areas of maerl beds in Scotland, was the first No Take Zone created in Scotland in 2008 (and the second in the UK) as part of a successful community led initiative.[722] While small in size (2.67km^2) it had a significant influence on UK marine protection and now forms part of a larger MPA (greater than 250km^2) around the south of Arran, designated in 2016.[723] While most European States have been critiqued for clustering MPAs in inshore waters and not having enough in offshore waters, Scotland has been the exception with 36% of offshore waters protected.[724] 41% of Scottish inshore waters are protected.[725]

The Scottish MPA network was developed using a feature-based approach to site selection, whereby MPA sites were selected based on Priority Marine Features (PMFs) in line with OSPAR principles.[726] Hopkins et al have described the implementation of the Scottish MPA network as a complex process requiring the consideration of stakeholder values and perceptions, scientific evidence and political factors.[727]

Designation

European sites: The Habitats Directive was transposed into law in Scotland by the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)[728] and the Offshore Marine Conservation (Natural Habitats &c.) Regulations 2007 (as amended).[729] The Birds Directive was transposed largely through the Wildlife and Countryside Act 1981 (as amended by the Nature Conservation (Scotland) Act 2004) and also by elements of the Habitats Regulations.[730] In relation to the effect of Brexit on existing Natura 2000 sites, the Scottish

Parliament recently amended these Regulations in 2019 to ensure that Scotland will continue to apply the requirements of the Habitats and Birds Directives to how Natura sites are designated and protected.[731] Natura sites will become known as European sites.[732] NatureScot takes the lead in providing scientific advice to Scottish Ministers on the selection of sites within territorial waters, while JNCC fulfils this role in offshore waters.[733]

Nature Conservation MPAs: Under Section 67 of the Marine (Scotland) Act 2010,[734] Scottish Ministers have the power to designate MPAs in territorial waters.[735] Three categories of MPA may be designated under this section: Nature Conservation MPA, Demonstration and Research MPA and Historic MPA. Section 116 of the UK Marine and Coastal Access Act 2009, which deals with designation of MCZs, gives Scottish Ministers powers to designate MPAs in offshore waters. MCZs are referred to as Nature Conservation MPAs (NC MPAs) in Scotland.[736]

Sites are identified by Marine Scotland in partnership with NatureScot[737] (previously Scottish Natural Heritage), JNCC, Historic Environment Scotland, and the Scotland Environmental Protection Agency.[738] JNCC is responsible for identifying and recommending Nature Conservation MPAs in Scottish offshore waters.[739]

JNCC and NatureScot apply Site Selection Guidelines to identify NC MPAs.[740] The first stage of the Nature Conservation MPA designation process is to identify search locations containing features considered to be of conservation value at either a national or international level.[741] Key stakeholders are involved with the development of initial proposals.[742] Scientific advice is provided by Marine Scotland (informed by NatureScot and JNCC) and then considered by Scottish Ministers who select sites to progress to public consultation.[743] The consultation responses are analysed by NatureScot and JNCC, who provide post-consultation advice to Marine Scotland and the Ministers who decide on the final sites to be designated. [744]

The Marine (Scotland) Act 2010 contains powers which enable Ministers to designate urgent MPAs if necessary.[745] These powers have been used twice so far. The first was to protect flame bed shells in Loch Carron in 2017 and the second was designated in March 2021 to protect the critically endangered flapper skate within the Inner Sound of Skye.[746] Management measures prohibiting a number of activities such as fishing, diving and construction within the site will initially last for a period of 12 months and if after this time permanent protection is deemed necessary, then a full stakeholder engagement process, public consultation and impact assessment will be undertaken.[747]

SSSIs: In Scotland, the SSSIs are a statutory designation made by NatureScot (Scottish Natural Heritage) under the Nature Conservation (Scotland) Act 2004.[748] SSSIs with marine components include land and foreshore generally only down to the mean low water spring tide level.[749] Sites are chosen carefully after a detailed survey and evaluation against the JNCC criteria using the Guidelines for the selection of biological SSSIs.[750]

Management

The need for management is determined on the basis of the features present, the risk that each activity may have for the MPA and the achievement of conservation objectives.[751] Only activities considered to have a negative impact will require management and stakeholders can be engaged in the development of management options.[752]

Nature conservation MPAs: All public authorities must exercise their functions in a way which furthers the conservation objectives of a NC MPA, or if this is not possible act in a manner that least hinders their achievement.[753] Every NC MPA shall have a management plan, to further the achievement of the conservation objectives, with Marine Scotland having responsibility for its development and implementation, unless a marine management scheme or other form of local agreement is established.[754] More detailed formal marine management schemes may be developed where there are multiple interests and/or complex management issues. These can be developed by any public authority subject to approval from Scottish Ministers.[755] For example, in Scotland, management schemes have been developed for Natura 2000 marine sites in busy areas, such as estuaries.[756] According to the most recent report by the Scottish Government on its MPA network, no management schemes have yet been established for MPAs designated under the Marine (Scotland) Act 2010.[757]

Within territorial waters, Marine Conservation Orders (MCOs) may be made by Scottish Ministers to regulate activities that take place within a designated MPA, which may prohibit or restrict certain activities, may cover certain parts of an MPA, be seasonal or prescribe certain ways of carrying out an activity. [758] Ministers must consult on proposals before making any MCO and assess and minimise the impact of any prohibition imposed by an MCO on socio-economic interests, the environmental impact within the MPA and any displacement effect caused by relocation of the prohibited activity.[759] Permits can be issued by Scottish Ministers carry out otherwise prohibited activities.[760] If necessary, there is an option to issue an interim urgent MCO which means that no consultation is required.[761]

Within territorial waters, NatureScot is responsible for advising on management measures and conservation

objectives for MPAs, and monitors European sites and SSSIs.[762] Offshore, Marine Scotland[763] is the lead authority regarding the implementation of, and compliance with, any measures implemented for the management of fishing activity.[764] The potential impacts of licensed activities are assessed through the Environmental Impact Assessment process, on a case-by-case basis.[765] The Scottish Government states that the potential impact of activities that require consent is taken into account for all MPAs before they are designated, given that it is the responsibility of all public authorities to ensure MPAs are not placed at risk via their decision making.[766] It acknowledges that this location specific approach does not work for fisheries however, given that licences are issued for activity on a broader geographic scale.[767] Therefore specific fisheries management measures can be implemented in MPAs via MCOs and Inshore Fisheries Orders.[768] As of early 2018, all offshore MPAs in Scotland and 37% of inshore MPAs remain without fisheries management.[769] No new fisheries management measures have been implemented since 2018 but remain under development for both inshore and offshore MPAs.[770]

Marine Scotland developed a Scottish MPA monitoring strategy, which was published in 2017, setting out the Scottish Government's approach to monitoring the Scottish MPA network. [771] The Strategy encompasses NC MPAs, SACs, SPAs, Ramsar sites, SSSIs and other area based measures but not Historic MPAs and Demonstration and Research MPAs.[772]

The Strategy identifies four types of MPA-related feature monitoring: [773]

- **Monitoring to determine the continued presence of a feature in a site.**
- **Monitoring designed to assess the condition of a protected feature at a site.**
- **Monitoring or analyses undertaken to explore pressure-state relationships.**
- **Monitoring or analyses undertaken to explore the effectiveness of MPA management measures.**

Where possible, monitoring should cover the pressures exerted on MPA features together with monitoring the change in status of features over time, to determine whether current management is effective.[774] Monitoring of the Scottish MPA network includes collaboration with other stakeholders and citizen science.[775] For example, a recent project engaged the fishing industry in the surveying and monitoring of seabed habitats and Priority Marine Features located within the Scottish MPA network and adjacent waters.[776]

Scotland reports to Parliament every six years on the state of MPAs in accordance with the Marine (Scotland) Act 2010[777] and MCAA 2009.[778] It submitted its most recent report in December 2018 and found that 9 MPAs had achieved their conservation objectives, while 15 had partially achieved them. [779] There was not sufficient data to assess the others.

SSSIs: NatureScot establishes management processes and grants permission for operations requiring consent that are proposed to be carried out within sites[780] and is responsible for monitoring SSSIs.[781]

Enforcement

Marine Scotland Compliance is responsible for enforcing compliance with MPA management measures and for monitoring activity across the MPA network.[782] They use a risk-based approach which assesses the likelihood of a breach or lack of compliance and the resulting likely level of impact.[783] A risk rating is then assigned for MPAs, which is used to determine the level of resources allocated to monitor fishing vessel activities within or around the MPAs.[784] Enforcement activities include intelligence gathering through Marine Scotland Coastal Fisheries Offices and from the public, remote tracking of seagoing vessels; and routine patrols. [785] A 2016 MPA monitoring report by Marine Scotland found that breaches of compliance with MPA management measures were not common, despite risks being assessed as high.[786] However, informants interviewed as part of this research questioned this finding based on their perception that the Scottish Government had insufficient technology to monitor vessel activity around MPAs.[787] Recent footage obtained by environmental campaigners in Scotland has provided evidence of damage to protected features caused by scallop dredging in the Small Isles MPA, an activity which is legally permitted inside the MPA.[788] The Scottish government responded by stating that it will deliver fisheries management

Marine Scotland Compliance is responsible for enforcing compliance with MPA management measures and for monitoring activity across the MPA network.

measures by 2024 and is committed to increasing protection via the use of HPMAs in 10% of Scottish waters by 2026.[789]

The 2010 Act contains provisions conferring common enforcement powers for the enforcement of marine protection and nature conservation legislation in the Scottish marine area. [790] Several specific offences are provided for in the 2010 Act. It is an offence to intentionally or recklessly damage the protected features of a NC MPA[791] and a historic MPA.[792] Failure to comply with a MCO is also an offence. [793]

4.2 FRANCE

Under the Marine Strategy Framework Directive (MSFD), France, the Republic of Ireland, and the UK are required to work together to ensure coordinated development of marine strategies in the Celtic Seas, a subregion of the Northeast Atlantic Ocean.[794] The Celtic Seas subregion is made up of the full EEZ of Ireland, a portion of the French EEZ (7%) and a portion of the UK EEZ.[795] Foster et al (2017) carried out the first assessment of the ecological coherence of the MPA network in the Celtic Seas and concluded that a number of gaps remain, in particular a lack of MPAs in offshore and deeper areas. The MPA network in these seas is mostly made up of Natura sites as well as UK and French national designations.[796] While it is accepted that these States need to cooperate to protect the marine environment in their shared seas, the planning processes, conservation objectives and management approaches for MPAs still differ in each country. There have been calls for more progress towards transboundary agreements and coordination of the MPA designation processes in order to connect and protect marine biodiversity in shared marine areas.[797] Regional approaches at the supranational level, such as the EU and OSPAR, have a key role to play in harmonization of such policies. France, the UK and the Republic of Ireland are all parties to OSPAR.[798] With the withdrawal of the UK from the European Union and the uncertain future of European derived conservation laws in the UK, OSPAR may become an increasingly important vehicle for regional cooperation to protect the marine environment in this region.

Spectrum of Protection

Including its overseas territories, France has the second largest maritime area in the world, covering more than 10 million square kilometres.[799] In 2009, France adopted the 'Grenelle de la mer' law, which aimed to designate 20% of French waters as MPAs by 2020.[800] As of 2022, 32.5% of French waters (including overseas territories) are currently protected by MPAs.[801] In January 2021, the French Government launched a new National Strategy for Protected Areas for the period 2020—2030, covering both terrestrial and maritime areas, where, in line with international developments, it committed to protecting 30% of national territory (land and sea) by 2022, of which 10% will be highly protected, with the aim to have these areas effectively managed by 2030.[802] The strategy defines a **highly protected area** as "a geographic zone in which human caused pressures compromising the conservation of protected ecological features are removed or significantly limited, and subject to an effective management, through a protection regime or specific regulation."[803] Highly protected areas must meet the following criteria:[804]

- **Protect 'priority' ecological features.**
- **Are primarily put in place within an existing MPA.**
- **Regulate activities to reduce or remove principal pressures on the ecological features requiring a high level of protection.**
- **Supported by a management plan, prepared by the MPA's governing authority, which defines conservation objectives, and a system to evaluate management efficiency.**
- **Has a system for monitoring activities.**

Highly protected areas were defined in law in 2022.[805] France is known for its wide variety of tools for the protection of natural areas, which may be established and managed by various stakeholders and different Government levels.[806] The French Environment Code recognizes 15 different types of MPA, the majority of which allow sustainable use.[807] Some categories apply specifically to the marine environment while others can be used independently of the type of area.[808] The Law of 14 April 2006 on national parks, marine protected areas and regional natural parks provides for the following six categories: [809]

National Parks with a marine component. The objective of this category is to protect large ecosystems, as well as cultural heritage and landscapes.[810] National parks seek to maintain a delicate balance between biodiversity protection and sustainable development via the use of a zoning process.[811] Sites are divided into two components, a 'core zone' and a 'partnership area'.[812] A Core Zone is an area of strict protection, of scientific reference, and of national and international importance.[813] Strict nature reserves may be established within the core zone.[814] These are not to be confused with the separate MPA category of Nature Reserve; they are simply a particular area within the national park with specific aims and protection measures; they have no specific legal status.[815]A Partnership Area is an area that allows sustainable development, and acts as a buffer to the core zone.[816]

Six-Fours-les-Plages, France

Nature Reserves with a marine component. This is a broad category where the goal is to provide long-term protection for unique, functional and ecologically representative habitats, as well as species of exceptional heritage value.[817] Its regulation takes the local context into account.[818] To date the use of this category has been limited in the marine environment but the Government intends to increase their number as part of the new National Strategy for Protected Areas 2030, given they offer a high level of protection.[819]

Biotope Protection Orders with a marine component. The purpose of this category is to conserve habitats of protected species such as feeding, resting or breeding sites, as well as sites deemed critical for the survival of key protected species.[820]

Marine Nature Parks are a new category of MPA created by the 2006 law in order to respond to the need for specific protection of the marine environment.[821] Marine parks aim to balance protection of natural resources with the development of activities that depend on it.[822] In contrast to other MPA categories, no specific criteria are specified for establishment.[823] The Iroise Marine Nature Park was the first such park to be created in 2007 and is located in the Celtic Sea.[824] Its designation decree provides an insight into the kind of criteria required for the establishment of a marine park: the presence of a unique character deriving from exceptional, rare or important elements, such as the occurrence of rare species of national and European importance; exceptional productivity of the marine environment; outstanding habitat diversity or the exceptional nature of particular habitats.[825] France now has nine marine parks.[826]

Natura 2000 marine sites. In France, Natura 2000 sites cover 35% of its EEZ.[827]

Public maritime spaces coming under the Coastal and Lake Shore Conservation Authority.[828]

A 2011 decree added the following nine categories, principally to reflect existing international obligations:[829]

- **UNESCO World Heritage sites having a marine part.**
- **National biosphere reserves having a marine part.**
- **Ramsar sites with a marine element.**
- **MPAs under the Barcelona Convention.**
- **MPAs under the OSPAR Convention.**
- **MPAs under the Cartagena convention.**
- **MPAs under the Nairobi Convention.**
- **MPAs under the Antarctic Treaty.**
- **Marine elements of national hunting and wildlife reserves.**

Designation
In the French maritime domain, the State has overall responsibility for designating different categories of MPAs.[830]

National Parks are designated by a decree signed by the Prime Minister after consultation with the Conseil d'Etat, the highest administrative Court in France, which has a role in advising the Government on draft laws and certain decrees.[831] They may be established on State owned or private land.[832] The signing of the decree follows a consultation phase where the opinion of municipalities likely to be included in the park's core area is sought as well as a broader public consultation.[833] While this process enables landowners to express their opinions, their agreement is not mandatory for the park's creation.[834] Specific regulations can be directly stipulated in the legal text for designation, especially for the core area which requires stricter protection measures.[835] Regulations may differ between the core and partnership areas. In general, human activities are very limited or restricted in the core area.[836]

Nature reserves: Many factors are taken into account for designation, such as the preservation of animal or plant species that are endangered in all parts of the national territory, the protection of outstanding biotopes and geological formations.[837] They may be established on public or private property.[838] Nature reserves are designated by ministerial decree or where the owner is not in agreement, a decree issued after mandatory consultation with the Conseil d'Etat.[839] Decrees may include the establishment of a buffer zone.[840] The designation document specifies the applicable protection and management measures, and may also set up a specific regime or prohibit damaging activities.[841]

Marine parks are designated, and their boundaries set by decree after a public consultation with concerned local communities.[842] The designating order does not contain any specific provision limiting or banning activities within that area.[843] This is up to the Management Board who proposes regulations in a collaborative process with stakeholders.[844] Zoning does not occur during the designation process; rather the management plan defines a variety of zones and specifies the uses permitted therein.[845]

Biotope Protection Order: The State designates Biotope Protection Orders, which come under the responsibility of the Prefect of the concerned region.[846] The Biotope Protection Order can regulate activities that may have a negative impact on biotope conservation and also provide for ecological restoration measures.[847] They may be issued on public or private land.[848] While this category was previously not subject to a public consultation process, this has now changed and technical advice issued in 2020 states that local consultations are obligatory.[849]

Natura 2000 sites are designated by Ministerial Order. A section of the Environment Code is dedicated to Natura sites and sets out a general framework for their designation and management.[850]

Management
The 2006 law created a National Agency for MPAs, "Agence des aires marines protégées" which was responsible for the management of MPAs between 2006 to 2016.[851] Under a new 2016 law for the "Reclaiming of Biodiversity, Nature and Landscapes,"[852] which aimed to respond to biodiversity challenges and consolidate the law in this area, the MPA Agency was subsumed under a newly created Agency for Biodiversity, along with several other public bodies. This Agency has now been taken over by the recently created French Biodiversity Office (FBO),[853] which is a public body dedicated to safeguarding biodiversity. The FBO had a budget of 433 million euros in 2020.[854] The FBO directly manages most MPAs while some are managed by other public bodies, collectives, federations and associations. [855]

The French system for MPA management has as its basis, the National Strategy for MPAs,[856] which is integrated with the *National Strategy for the Seas and Coasts*,[857] thus providing a good example of coherence between conservation policies and maritime spatial planning (MSP).[858] The French Government also decided to implement the MSFD and the MSP Directives simultaneously in order to have a joint approach.[859] In its 2021 National Strategy for Protected Areas, the Government highlighted four areas where it wished to strengthen management:[860]

- **Management planning and evaluation of results.**
- **Management stewardship: governance, consultation methods, project development, financing.**
- **The socio-economic context, accompanying uses and interaction with other public policies.**
- **Adaptation of protected area management to climate change.**

In France, a dedicated manager is assigned for every marine site and can be from an NGO, or directly from the responsible State Agency (e.g., French Biodiversity Office).[861] The State plays a major role in management via Maritime Prefects (central Government representatives), who have ultimate authority.[862] Regional and Department Prefects also have regulatory powers relating to several activities, including fishing and activities affecting the seabed. [863]

National Parks: The designation decree establishes the administrative public entity in charge of park management.[864] Each park has

a management board and a director.[865] The management board includes representatives of the central Government, the regional or local Governments and members chosen for their national or local relevance (e.g. landowners, residents, environmental NGO representatives or sectoral representatives).[866] The management board is assisted by a scientific committee and an economic, social and cultural committee.[867] The main management document is the National Park Charter, which establishes a partnership between State and local stakeholders for a minimum of 15 years.[868] This charter has been described as a major innovation in national park reform, which aims to achieve greater local involvement.[869] For the core area, this document establishes the conservation objectives for the natural and cultural heritage of the area, and for the partnership area, it sets out guidelines for conservation and sustainable development.[870]

Nature reserves: Management plans are mandatory for each nature reserve in France, which must be drafted by the manager of the reserve no later than three years after designation.[871] It defines the conservation, maintenance or restoration measures required. Activities that may affect the environmental integrity of the reserve are prohibited.[872] The plan must be approved by the relevant Prefectures (representatives of central Government in the area), taking into consideration the recommendations of the advisory committee and scientific advice for the particular area.[873] The advisory committee is composed of representatives of civil society, local authorities and representatives of registered organisations and its main task is to advise on the implementation of the management plan. The management of a nature reserve can be entrusted to public entities, public interest groups, conservation NGOs, owners of protected land or to local Government.[874] The Prefect appoints the manager.[875] Each nature reserve must have a scientific council whose function is to conduct scientific studies in order to ensure conservation and protection of natural habitats.[876] The management plan is adopted for a five-year period after which it can be reviewed and if necessary amended.[877]

Marine Parks: The French Biodiversity Agency is in charge of management.[878] Each marine park has a management board which develops a management plan determining protection measures,[879] which is accompanied by an action plan for implementation, monitoring and evaluation of the management plan.[880] The management plan is reviewed every 15 years.[881] The management board consists of local Government representatives, the management body of any adjacent MPA, sectoral representatives, user organizations, NGOs and qualified individuals.[882] The idea is to ensure all relevant stakeholders are represented while minimising the State's involvement.[883]

The Iroise Marine Nature Park provides an example of a large MPA with sub zones within its boundaries to address different issues in different areas. Its management approach has been cited as a good example of MPA governance given its level of stakeholder engagement.[884] The Management Board decides on the management priorities for each sub-zone of the Park and carries out a participative mapping process, akin to MSP at a local scale.[885] The Park achieved IUCN Green List status in 2014.[886]

Biotope Protection Orders: The Environment Code does not provide for management measures or a management board for this category of MPA.[887] In practice, Prefects set up monitoring committees made up of regional representatives of the Ministry for Environment, NGOs and local authorities.[888] However, recent technical guidance issued in 2020 states that in order to facilitate dialogue between concerned stakeholders, an advisory body can be put in place, with its mission and composition defined by the Prefect.[889] However the Prefect may not delegate any power to this body.[890]

Natura sites: The management of Natura 2000 sites is defined by the Environmental Code which specifies different types of management measures that may be applied to conserve the habitats and species of community interest present at each site. [891] France opted for a contractual approach to management of Natura sites.[892] A document of objectives (equivalent to a management plan) is established for each site, which provides management guidelines, conservation or restoration measures, mode of implementation and financial support measures.[893] Stakeholders (such as local Government, landowner representatives, commercial and other users of the site) are involved in defining the document of objectives, however the ultimate responsibility for the Natura 2000 site management plan is with the Prefecture.[894] A recent study by Oceana (2020) found that not all Natura sites in France have management plans.[895]

Voluntary conservation measures may also be used in France, which include contracts and charters. The contracts are agreed between the State and various local organisations (often local authorities, stakeholder organisations and NGOs) and bring financial support to enforce measures or actions needed to achieve the conservation objectives of the site.[896] A charter is a document that is drawn up containing all the undertakings and recommendations that may apply to the site; signing it indicates a voluntary commitment to respect the conservation objectives of the site.[897]

Enforcement

Offences carried out in national parks, nature reserves, protected biotopes, natural marine parks and the public maritime spaces coming under the Coastal and Lake Shore Conservation Authority are subject to criminal law and special policing established under the Environmental Code.[898] Certain offences fall within the jurisdiction of the administrative courts.[899]

Under the MSFD, France reported management measures aimed at reducing pressures in MPAs. The activities targeted are fisheries and, particularly in the Mediterranean, recreational activities.[900] For example, to reduce pressure on overexploited fish stocks, France has introduced targeted temporal/spatial restrictions or bans.[901] It has also restricted the use of certain fishing techniques in order to reduce bycatch.[902] France has also reported measures that target destructive fishing practices (trawling), within and outside spatially protected areas[903] and measures to prevent seabed damage which may occur through recreational activities, such as the anchoring of recreational boats or recreational fishing.[904]

In their study of the Celtic Seas MPA network, Foster et al (2017) noted that protection is not spread evenly throughout the four MSFD marine regions that France's waters fall within.[905] In 2018, the European Commission critiqued France's MPA network in the following way:[906]

- **Its MPAs do not always provide clear and specific information on management efforts in place (or to be implemented in the future).**
- **Information gaps include the representation of species and habitats within MPAs, the size, number, and location of MPAs and the conservation objectives of the MPAs.**
- **The results of impact assessments for new measures do not explain to what extent the relevant pressure will be addressed.**
- **France should provide better information on existing MPAs and the level of protection they provide for fish (commercial and non-commercial), in relation to where fish species occur within territorial waters, and how they are protected.**

A recent Oceana report (2020) revealed that France is one of the EU Member States with highest numbers of fished MPA sites (154 MPAs)[907] and also faces significant seabed threats (in 120 MPAs).[908] In its *2021 National Strategy for Protected Areas*, the Government states that it will take a two-pronged approach to monitoring and enforcement based on the category of MPA and the type of territory being protected; for example regard will be had to difficulty in site access and those sites facing multiple pressures.[909] Priority will be given to highly protected areas and Natura 2000 sites where emphasis should be placed on compliance with requirements resulting from environmental impact assessments and strengthening the regulation of human activities.[910] The use of maritime monitoring and enforcement means at the disposal of the State will be increased.[911]

Management plans are mandatory for each nature reserve in France, which must be drafted by the manager of the reserve no later than three years after designation. It defines the conservation, maintenance or restoration measures required.

5 Recommendations

Spectrum of Protection

- Targets agreed at international and European level require 30% of Irish waters to be protected by 2030, with 10% under strict protection. This is the minimum the Government should be aiming for, with an emphasis on areas under strict protection. Under the EU Biodiversity Strategy for 2030, Member States have until the end of 2023 to demonstrate progress in legally designating new protected areas and integrating ecological corridors.

- In order to enable the formation of a network of MPAs in accordance with international and European legal requirements, a diversity of MPA types should be made available under legislation, which would include options for single and multiple use MPAs, MPAs of different sizes, including large reserves, and different levels of protection (e.g., no take MPAs, highly protected MPAs and MPAs which permit sustainable use).

- New legislation should contain clear definitions of all types of MPAs which may be designated in Ireland.

- Provision should be made for the establishment of ecological corridors between MPAs, where necessary for the maintenance of ecological connectivity, and coherence of the network.

- Provision should also be made for the establishment of transboundary MPAs between Ireland and neighbouring jurisdictions for the purposes of protecting ecological connectivity, and to contribute to MPA networks at a wider regional scale.

- 'Other effective area-based conservation measures' (OECMs) may be integrated into the MPA network to complement and contribute to the coherence and connectivity of the network but should be defined clearly in legislation and explicitly distinguished from MPAs. Caution should be exercised given that OECMs are a relatively recent concept and were only defined by the CBD in 2018. EU guidance was issued in 2022 stating that OECMs may only count as MPAs if they meet certain criteria, including long term conservation goals.

- Size matters. While smaller sites may be suitable for conservation of single features or vulnerable habitats, larger scale MPAs have the potential to protect entire ecosystems, particularly offshore habitats, such as the deep sea, seamounts, and pelagic realms. Wider ecosystem protection builds ecosystem resilience and thus helps to mitigate against the effects of climate change.

- Dynamic or mobile MPAs, which have boundaries that vary across space and time, can be more effective than static MPAs at protecting dynamic habitats and species with changing distributions, either due to their migratory nature and/or the impact of climate change.

- Provision should be made for the designation of 'urgent MPAs', where a feature is at serious risk, which would enable the immediate application of management measures for a temporary period. If after the initial period, permanent protection is deemed necessary, then a full stakeholder engagement process and public consultation exercise can be carried out.

Designation

- MPAs should be designed and designated based on best available science and ecosystem-based, precautionary approaches.

- Key areas of importance for biodiversity should be protected as a priority.

- Given that MPAs are a proven tool to bolster resilience of the oceans to climate change and absorb carbon emissions, 'blue carbon habitats' should be identified as priority areas for protection.

- A 'whole site' approach is recommended for MPAs of greatest biodiversity interest, which recognises the interdependence of many species and habitats and as a result extends protection to the wider ecosystem within a protected area. Such an approach may entail management measures which apply across the whole site.

- Ecological connectivity needs to be integrated into the design and management of Ireland's MPA network. This would entail providing a legal basis enabling authorities to design integrated networks of MPAs whose locations, size and shape are informed by patterns of ecological connectivity. Linkages between marine ecosystems and the dependence of some species and habitats on processes that occur outside the MPA, should be considered during the design of an MPA network. This is particularly important for highly mobile species, such as certain birds, mammals, and fish, to safeguard critical stages and areas of their life cycle (such as breeding, nursery and feeding areas).

- The majority of MPA sites in Ireland remain coastal. More designations are needed in offshore areas and for deep sea ecosystems.

- Industrial scale activities (e.g., industrial fishing, mining, energy extraction) are not compatible with MPAs and should be prohibited.

- Account should also be taken of anthropogenic activities occurring outside or near an MPA which may adversely impact the site.

- Fisheries management should be included in the designation process to improve compliance.

Management

- All MPAs need a management plan, which should be created as part of the designation process, or as soon as practicable thereafter.

- Management should be transparent and inclusive. Along with a diversity of MPA types, a diversity of stakeholder inclusive management options should be made available (e.g., State managed, locally managed, co-management, voluntary management options).

- There must be clarity on roles and responsibilities for monitoring and managing MPAs, especially regarding the regulation of human activities in MPAs.

- Clear guidance should be issued on permitted activities within MPAs.

- More human and financial resources need to be allocated to NPWS for management and monitoring of MPAs.

- MPAs should be considered during any marine spatial planning process under the new national framework.

- The Irish MPA network should be climate proofed, which would entail the use of flexible, adaptive and dynamic management strategies to address shifting species and ecosystems due to warming waters.

- A regular national reporting system should be established by new legislation, which would feed into and sync with existing reporting obligations under European and international law. Timely and accurate reporting to all relevant MPA authorities helps to increase transparency surrounding protection of the marine environment.

- The MSFD allows for the counting of SACs and SPAs towards MPA obligations under the Directive, however the European Commission has acknowledged the limitations of the Natura 2000 sites and recommended that Member States establish management measures outside Natura 2000 sites in order to adequately cover the full diversity of marine ecosystems under the MSFD. The scope of management measures within Natura 2000 sites may also need to be broadened in this regard.

Enforcement

- Responsibilities for management of the marine environment and marine conservation are spread out amongst different Government departments and agencies in Ireland. Cross sectoral cooperation is therefore essential.

- Adequate resources must be allocated to surveillance and enforcement activities, especially in light of a significant expansion of MPA coverage.

- There must be clarity on roles and responsibilities for enforcing compliance with MPA regulations.

- Specific MPA offences and sanctions need to be legislated for. Fines should be of a sufficient amount to act as a deterrent.

- A central database for monitoring compliance and recording infringements in MPAs is recommended.

- Inclusion of affected stakeholders at the outset of the MPA design and designation process leads to better compliance and is a cost-effective way to reduce enforcement costs.

- Use of surveillance technology, such as vessel monitoring systems, satellite data and real time data tools, is a cost-effective means of improving enforcement.

Selected References

Agnesi, S, A. Annunziatellis, P. Chaniotis, G. Mo, S. Korpinen, L. Snoj, L. Tunesi, J. Reker (2020) *Spatial Analysis of Marine Protected Area Networks in Europe's Seas III.* ETC/ ICM Technical Report 3/2020: European Topic Centre on Inland, Coastal and Marine waters.

Benyon Review into Highly Protected Marine Areas. Final Report. June 2020.

Biodiversity Working Group (2020) *Interim Review of the Implementation of the National Biodiversity Action Plan 2017-2021.*

Clark, R.W. E. and J. Humphreys (2020). "Chapter 25 - Enforcement capabilities and compliance in English Marine Protected Areas: The art of the possible." In Humphreys and Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier).

Classen, R. (2020) *Marine Protected Areas – Restoring Ireland's Ocean Wildlife II. Report on Ireland's Failure to Protect Marine Natura 2000 Sites.* Irish Wildlife Trust.

Client Earth (2020) *Legal Toolkit for Challenging Unlawful Management of Natura 2000 Marine Protected Areas* October 2020.

Client Earth (2014) *Article 11 of the EU Common Fisheries Policy* July 2014.

Cummins, S., C. Lauder, A. Lauder & T.D. Tierney (2019) *The Status of Ireland's Breeding Seabirds: Birds Directive Article 12 Reporting 2013 – 2018.* Irish Wildlife Manuals, No. 114. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

De Santo, E.M. (2016) "Assessing public "participation" in environmental decision-making: Lessons learned from the UK Marine Conservation Zone (MCZ) site selection process." *Marine Policy* 64: 91-101.

Dureuil, M., K. Boerder, K. A. Burnett, R. Froese and B. Worm (2018) "Elevated trawling inside protected areas undermines conservation outcomes in a global fishing hotspot" *Science* 362 (6421), 1403-1407.

Edgar, G. J., R. D. Stuart-Smith, T. J. Willis, S. Kininmonth, S. C. Baker, S. Banks, N. S. Barrett, M. A. Becerro, A. TF Bernard, and J. Berkhout (2014) "Global conservation outcomes depend on marine protected areas with five key features." *Nature* 506 (7487): 216-220.

European Court of Auditors (2020) Marine Environment: *EU protection is wide but not deep.* Special Report 26. EN 2020.

European Commission *EU Biodiversity Strategy for 2030. Bringing nature back into our live*s COM (2020) 380 final.

European Commission (2015) *Report from the Commission to the European Parliament and the Council on the progress in establishing marine protected areas (as required by Article 21 of the Marine Strategy Framework Directive 2008/56/EC)* Brussels.

European Commission (2016) Commission Staff Working Document *Fitness Check of the EU Nature Legislation (Birds and Habitats Directives)* SWD (2016) 472 final.

European Commission (2018a) *Report from the Commission to the European Parliament and the Council assessing Member States' Programmes of Measures under the Marine Strategy Framework Directive* COM (2018) 562, final.

European Commission (2018b) Commission Staff Working Document accompanying the *Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive*, SWD (2018) 393 final.

European Commission (2018c) *Commission Staff Working Document on the establishment of conservation measures under the Common Fisheries Policy for Natura 2000 sites and for Marine Strategy Framework Directive purposes.* SWD (2018) 288 final.

European Commission (2020a), *Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive* (Directive 2008/56/EC), COM (2020) 259 final.

European Commission (2020b), Commission Staff Working Document. *Key stages and progress up to 2019. Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive* (Directive 2008/56/EC), SWD (2020) 60 final.

European Commission, Commission Staff Working Document, *Criteria and guidance for protected area designations*, SWD (2022) 23 final

European Environment Agency (2020a) *The European Environment – State and Outlook 2020*.

European Environment Agency (2020b) *Natura 2000 State of Nature in the EU* EEA Report No 10/2020.

European Environment Agency (2020c) *Management Effectiveness in the EU's Natura 2000 Network of Protected Areas* Briefing no. 11/2020.

Foster, N.L., S. Rees, O. Langmead, C. Griffiths, J. Oates, and M. J. Attrill. (2017). Assessing the ecological coherence of a marine protected area network in the Celtic Seas. Ecosphere 8(2), 2.

Government of Ireland (2017) *National Biodiversity Action Plan 2017-2021.*

Government of Ireland (2019) *Marine Strategy Framework Directive 2008/56/EC. Article 18 Interim Progress report on the implementation of the Programme of Measures*, prepared by the Department of Housing, Planning and Local Government. September 2019.

Government of Ireland (2021) *Project Ireland 2040. National Marine Planning Framework.* Prepared by the Department of Housing, Local Government and Heritage.

Hopkins, C.R., D.M. Bailey, and T. Potts (2018) "Navigating future uncertainty in marine protected area governance: Lessons from the Scottish MPA network." E*stuarine, Coastal and Shelf Science* 207.

IUCN World Commission on Protected Areas (IUCN-WCPA) (2008) E*stablishing Marine Protected Area Networks—Making It Happen.* Washington, D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy.

IUCN (2008) *Guidelines for Applying Protected Area Management Categories.* Gland, Switzerland.

IUCN (2012) *Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas.* Gland, Switzerland.

IUCN France (2013) *Protected Areas in France: A diversity of tools for the conservation of biodiversity,* Paris.

IUCN (2019) *Recognising and reporting other effective area-based conservation measures.* IUCN WCPA Task Force on OECMs.

Jones P. and E.M. de Santo (2016) "Viewpoint - Is the race for remote, very large marine protected areas (VLMPAs) taking us down the wrong track?" *Marine Policy* 73, 231-234.

Jones, P., (2014). *Governing marine protected areas: resilience through diversity.* Routledge.

Marine Protected Area Advisory Group (2020). E*xpanding Ireland's Marine Protected Area Network: A report by the Marine Protected Area Advisory Group.* Report for the Department of Housing, Local Government and Heritage, Ireland.

Maxwell, S. M., E. L. Hazen, L. Hazen, R. L. Lewison, D. C. Dunn, H. Bailey, S. J. Bograd, D. K. Briscoe, S. Fossette, A. J. Hobday, M. Bennett, S. Benson, M. R. Caldwell, D. P. Costa, H. Dewar, T. Eguchi, S. Kohin, T. Sippel, and L. B. Crowder (2015) "Dynamic Ocean management: Defining and conceptualizing real-time management of the ocean." *Marine Policy* 58: 42-50.

National Parks and Wildlife Service (2021) *Prioritised Action Framework (PAF) for Natura 2000 in Ireland* March 2021.

National Parks and Wildlife Service (2019) T*he Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview.* Unpublished NPWS report.

National Parks and Wildlife Service (2017) *Stages in the Site Designation Process* October 2017.

Puritz-Evans, Alice S. J., and A. Hill (2020). "Chapter 11 - The law and marine protected areas: Different regimes and their practical impacts in England." In J. Humphreys and R.W.E. Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier).

Olsen E.M, D. Johnson, P. Weaver, R. Goñi, M.C. Ribeiro, M. Rabaut, E. Macpherson, D. Pelletier, L. Fonseca, S. Katsanevakis, T. Zaharia (2013) *Achieving Ecologically Coherent MPA Networks in Europe: Science Needs and Priorities.* Marine Board Position Paper 18. Larkin, KE and McDonough N (Eds.). European Marine Board, Ostend, Belgium.

Perry, A.L., J. Blanco, N. Fournier, S. Garcia and P. Marín (2020) *Unmanaged = Unprotected: Europe's marine paper parks.* Oceana, Brussels.

Rees, S. E., E. V. Sheehan, B. D. Stewart, R. Clark, T. Appleby, M. J. Attrill, P.J.S. Jones, D. Johnson, N. Bradshaw and S. Pittman. (2020). "Emerging themes to support ambitious UK marine biodiversity conservation." *Marine Policy* 117: 103864.

Sala, E., J. Lubchenco, K. Grorud-Colvert, C. Novelli, C. Roberts, U. R Sumaila (2018) "Assessing real progress towards effective ocean protection" *Marine Policy* 91, 11–13.

Secretariat of the Convention on Biological Diversity (2020) *Global Biodiversity Outlook 5.* Montreal.

Scally, L., N. Pfeiffer and E. Hewitt (2020) T*he monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats.* Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Scannell, Y., R. Cannon, M. Clarke, O. Doyle (1999) *The Habitats Directive in Ireland.* Trinity College Dublin, Centre for Environmental Law and Policy.

Solandt, J-L, T. Mullier, S. Elliott, and E. Sheehan (2020) "Chapter 9 - Managing marine protected areas in Europe: Moving from 'feature-based' to 'whole-site' management of sites." In J Humphreys and R.W.E. Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier).

Stewart, B.D., L.M. Howarth, H. Wood, K. Whiteside, W. Carney, É. Crimmins, B. C. O'Leary, J. P. Hawkins, and C. M. Roberts (2020) "Marine conservation begins at home: how a local community and protection of a small bay sent waves of change around the UK and beyond." *Frontiers in Marine Science* 7: 76.

Wilson, E.O. (2016) H*alf Earth. Our Planet's Fight for Life* W.W. Norton and Company Inc.

WWF (2020) *Living Planet Report 2020 - Bending the curve of biodiversity loss.* Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland.

Zupan, M., E. Fragkopoulou, J. Claudet, K. Erzini, B. Horta e Costa, and E. J. Gonçalves (2018) "Marine partially protected areas: drivers of ecological effectiveness." *Frontiers in Ecology and the Environment* 16 (7): 381-387.

Endnotes

1 In simple terms, ecosystem services are the benefits humans obtain from ecosystems such as clean air, water, food, fuel, climate regulation, and recreation. See further the *Millennium Ecosystem Assessment 2005*, which provides a typology of four categories of ecosystem services: supporting, provisioning, regulating, and cultural services. **https://www.millenniumassessment.org/en/index.html**

2 See generally United Nations *World Ocean Assessments* I (2015) and II (2021), available at **https://www.un.org/regularprocess/**

3 WWF (2018) *Living Planet Report - 2018: Aiming Higher.* Gland, Switzerland, p. 5.

4 European Environment Agency (EEA) (2020a) *The European Environment – State and Outlook 2020.* Available at **https://www.eea.europa.eu/publications/soer-2020**

5 EEA (2015a) *State of the Environment Report.* Available at **http://www.eea.europa.eu/soer-2015/europe/marine-and-coastal**

6 Government of Ireland (2017) N*ational Biodiversity Action Plan* 2017-2021.

7 **https://www.rte.ie/news/environment/2019/0509/1048525-climate-emergency/**

8 **https://www.irishtimes.com/opinion/2022/10/20/the-battle-to-save-irelands-biodiversity-will-take-place-at-sea/**

9 **https://www.citizensassembly.ie/en/assembly-on-biodiversity-loss/about/**

10 Government of Ireland (2022) *Ireland's 4th National Biodiversity Action Plan*, Department of Housing, Local Government and Heritage, 1. Available at **https://www.npws.ie/sites/default/files/files/nbap-overview-for-conference.pdf**

11 **https://www.marine.ie/Home/site-area/news-events/news/map-ireland-bigger-you-think**

12 Government of Ireland (2018) *National Marine Planning Framework Baseline Report*, 2018, p. 71.

13 Ibid. For a more detailed overview of Ireland's marine biological diversity, see Marine Protected Area Advisory Group (2020). E*xpanding Ireland's Marine Protected Area Network: A report by the Marine Protected Area Advisory Group*. Report for the Department of Housing, Local Government and Heritage, Ireland, Section 1.1.2.

14 Government of Ireland (2012) *Harnessing our Ocean Wealth. An Integrated Marine Plan for Ireland*. 2012.

15 In a recent interview on 28 June 2021 with the Irish Times, Malcolm Noonan, Minister of State for Heritage & Electoral Reform explained that "Decades of poor planning and under-investment in our marine and coastal areas have resulted in unsustainable outcomes for our marine environment and the coastal communities that depend on it". **https://www.irishtimes.com/news/science/radical-overhaul-of-marine-planning-to-begin-with-draft-bill-this-week-1.4606182**

16 Environmental Protection Authority (EPA) (2020) *Ireland's Environment. An Integrated Assessment*. 2020.

17 *National Biodiversity Action Plan 2017—2021*.

18 Ibid.

19 EPA (2020), p. 198.

20 DCHG (2019). *Ireland's 6th National Report to the Convention on Biological Diversity.* Department of Culture, Heritage and the Gaeltacht 2019, p. 6-7.

21 Ibid.

22 EPA (2020), p. 218.

23 Ibid.

24 P. Fogarty (2017) *Protecting Our Ocean's Wealth – A Proposal for Legal Protection of Threatened Marine Species*. Irish Wildlife Trust. Version 1 – December 2017.

25 G. Gilbert, A. Stanbury & L. Lewis (2021) Birds of Conservation Concern in Ireland 4: 2020–2026. Irish Birds, 43, 1-22.

26 Objective 6.

27 See generally e.g., D. Laffoley et al (2019) 'Marine protected areas' in *World Seas: an Environmental Evaluation* (Elsevier), pp. 551-552.

28 F Simard, (2016) *Marine Protected Areas and climate change: Adaptation and mitigation synergies, opportunities and challenges*. IUCN.

29 IPCC (2022), Summary for Policymakers In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, p. 34.

30 N Dudley (2008) *Guidelines for Applying Protected Area Management Categories*. IUCN. Gland, Switzerland, p. 10.

31 E.g., SM Maxwell et al (2020) 'Mobile protected areas for biodiversity on the high seas' Science 367 (6475): 252-254.; E. L. Hazen et al (2018) 'A dynamic ocean management tool to reduce bycatch and support sustainable fisheries'. *Sci. Adv*. 4, eaar3001.

32 JA Smith et al (2021) 'Comparing Dynamic and Static Time-Area Closures for Bycatch Mitigation: A Management Strategy Evaluation of a Swordfish Fishery' *Front. Mar. Sci.* 8:630607, p. 2.

33 See for example, *Ecocast*, a real time data tool first deployed on the western US coast, designed to help fishers and managers allocate fishing effort to optimize the harvest of target fish while minimizing bycatch of protected species. **https://coastwatch.pfeg.noaa.gov/ecocast/about.html**

34 EJ Graham et al (2014) "Global conservation outcomes depend on marine protected areas with five key features." *Nature* 506 (7487): 216-220.

35 EM Olsen et al (2013). A*chieving Ecologically Coherent MPA Networks in Europe: Science Needs and Priorities.* European Marine Board, Position Paper No. 18, p. 51.

36 E.g., E Sala and S Giakoumi (2018). "No-take marine reserves are the most effective protected areas in the ocean." *ICES Journal of Marine Science* 75 (3): 1166-1168.

37 E Sala et al, 'Assessing real progress towards effective ocean protection' (2018) 91 Marine Policy 11, 12-13.

38 L H Pendleton et al, 'Debating the effectiveness of marine protected areas' (2018) 75 ICES Journal of Marine Science 1156, 2.

39 On the effectiveness of partially protected areas, see M Zupan et al (2018) "'Marine partially protected areas: drivers of ecological effectiveness." Frontiers in Ecology and the Environment 16 (7): 381-387.

40 E.g., SE Lester and BS Halpern (2008) 'Biological responses in marine no-take reserves versus partially protected areas', Marine Ecology Progress Series 367, 49–56, cited in P Jones (2014) *Governing marine protected areas: resilience through diversity* (Routledge), p. 42.

41 A E Bates and others, 'Climate resilience in marine protected areas and the 'Protection Paradox'' (2019) 236 Biological Conservation 305; C Hopkins et al, 'Perceptions of practitioners: Managing marine protected areas for climate change resilience' (2016) 128 Ocean & Coastal Management 18, 26.

42 See e.g., European Commission, Commission Staff Working Document, *Criteria and guidance for protected area designations,* SWD (2022) 23 final, 2.

43 F Micheli and others, 'Evidence that marine reserves enhance resilience to climatic impacts' (2012) 7 PloS one e40832

44 European Commission *EU Biodiversity Strategy for 2030. Bringing nature back into our lives* COM (2020) 380 final, 4. However, the EU has not yet defined precisely what it means by 'strictly protected' in this context.

45 Benyon Review into Highly Protected Marine Areas. Final Report. June 2020. Available at **https://www.gov.uk/government/publications/highly-protected-marine-areas-hpmas-review-2019**

46 Target 2 of the Zero Draft of the Post 2020 Global Biodiversity Framework, CBD/WG2020/2/3, 6 January 2020, available at: **https://www.cbd.int/conferences/post2020/post2020-prep-01/documents**

47 Target 3, First Draft of the post 2020 global biodiversity framework CBD/WG2020/2/3, available here: **https://www.cbd.int/conferences/post2020/wg2020-03/documents**

48 European Commission (2022), 19.

49 P Christie et al (2017) "Why people matter in ocean governance: Incorporating human dimensions into large-scale marine protected areas" *Marine Policy* 84, 273–284, p. 274.

50 Ibid.

51 B C O'Leary and others (2018) 'Addressing criticisms of large-scale marine protected areas' 68 Bioscience 359.

52 D Smith (2020) 'A global network of MPAs: an important tool in addressing climate change', *Research Handbook on Climate Change, Oceans and Coasts* (Edward Elgar Publishing), 434; IUCN-WCPA, Establishing Marine Protected Area Networks-Making It Happen, 10.

53 R Devillers et al (2020), 'Residual marine protected areas five years on: Are we still favouring ease of establishment over need for protection?' 30 Aquatic conservation 1758.

54 **https://www.iucn.org/our-union/commissions/world-commission-protected-areas**

55 Dudley (2008), p. 8.

56 This table is a summary of information contained in J Day and others (2019) 'Guidelines for applying the IUCN protected area management categories to marine protected areas' IUCN, pp. 14- 16.

57 Dudley (2008).

58 This table merges information contained in Dudley (2008), J Day et al (2012), *Guidelines for applying the IUCN protected area management categories to marine protected areas* IUCN and Day et al (2019).

59 Dudley (2008), p. 8.

60 A zone within an MPA must be clearly mapped, recognised by legal or other effective means, and have clear management aims that can be assigned to a particular category. Day (2012), p. 9.

61 Dudley (2008), pp. 35-36.

62 Ibid, p. 10

63 Ibid.

64 IUCN World Commission on Protected Areas (WCPA). (2018). *Applying IUCN's Global Conservation Standards to Marine Protected Areas (MPA). Delivering effective conservation action through MPAs, to secure ocean health & sustainable development.* Version 1.0. Gland, Switzerland, p. 2. See also Dudley (2008), p. 59.

65 IUCN (2018), p. 2; AL Perry, J Blanco, N Fournier, S Garcia & P Marín (2020). *Unmanaged = Unprotected: Europe's marine paper parks.* Oceana, Brussels, p. 37.

66 Day (2012), p. 11.

67 B Horta e Costa, J Claudet, G Franco, K Erzini, A Caro, and E J. Gonçalves (2016) "A regulation-based classification system for marine protected areas (MPAs)" *Marine Policy* 72 192–198, p. 193.

68 This is one of a series of attempts to provide new approaches to classifying MPAs. See also D Al-Abdulrazzak, S.C. Trombulak (2012) "Classifying levels of protection in Marine Protected Areas" *Mar. Policy* 36 (2012) 576–582.

69 Sala et al (2018), 11–13.

70 The MPA Guide (2019), available at **https://www.protectedplanet.net/en/resources/mpa-guide**

71 Deltares (2015) *Proposal for an assessment method of the ecological coherence of networks of marine protected areas in Europe*, Ares (2015)2065339, p. 13.

72 IUCN (2007) Establishing networks of marine protected areas. *Making it happen. A guide for developing national and regional capacity for building MPA networks*. Non-technical summary report, p. 3.

73 C Toropova, I. Meliane, D. Laffoley, E. Matthews, and M. Spalding, (Eds.). (2010). *Global ocean protection: present status and future possibilities*. IUCN, Gland, Switzerland.

74 NL Foster, S. Rees, O. Langmead, C. Griffiths, J. Oates, and M. J. Attrill. (2017). Assessing the ecological coherence of a marine protected area network in the Celtic Seas. *Ecosphere* 8(2), 2.

75 IUCN World Commission on Protected Areas (IUCN-WCPA) (2008). *Establishing Marine Protected Area Networks—Making It Happen*. Washington, D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy. 118 p.

76 P Jones and EM de Santo (2016) "Viewpoint - Is the race for remote, very large marine protected areas (VLMPAs) taking us down the wrong track?" *Marine Policy* 73, pp. 231-234.

77 Olsen et al (2013), p. 49.

78 Convention on Migratory Species (CMS) Resolution 12.26 (Rev.13) "Improving Ways of Addressing Connectivity Conservation of Migratory Species" adopted 22 February 2020. **https://www.cms.int/sites/default/files/document/cms_cop13_res.12.26_rev.cop13_e.pdf**

79 Available at **https://marineprotectedareas.noaa.gov/**, p. 1.

80 Ibid.

81 Ibid.

82 EU Biodiversity Strategy for 2030, p. 4.

83 Ibid.

84 Foster et al (2017), p. 15-16.

85 Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. p. 83.

86 AC Balbar and A Metaxas (2019) The current application of ecological connectivity in the design of marine protected areas. *Global Ecology and Conservation* 17: e00569, p. 16.

87 **https://wildlife.ca.gov/Conservation/Marine/MPAs/MLPA**

88 NOAA (2020), p. 4.

89 **https://wildlife.ca.gov/Conservation/Marine/MPAs/MLPA**. For definitions of each designation, see **https://wildlife.ca.gov/Conservation/Marine/MPAs/Definitions#smr**

90 PM Dupuy and J Viñuales *International Environmental Law* Cambridge University Press 2015, p. 172.

91 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 996 UNTS 245, 2 February 1971.

92 Convention for the Protection of the World Cultural and Natural Heritage, 1037 UNTS 151, 16 November 1972.

93 This was the UN's first major conference on international environmental issues and marked a turning point in the development of international environmental politics. https://sustainabledevelopment.un.org/milestones/humanenvironment

94 https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas

95 G Kelleher (1999). *Guidelines for Marine Protected Areas*. IUCN, Gland, Switzerland and Cambridge, UK.

96 United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397. Articles 192 and 194 (5).

97 The US Coastal Zone Management Act 1972 was a milestone for the management of MPAs around the world and an important precursor to ICZM.

98 Convention on Biological Diversity 1760 UNTS 79 (1992).

99 https://sustainabledevelopment.un.org/milesstones/wssd

100 Johannesburg Plan of implementation of the World Summit on Sustainable Development, UN Doc. A/CONF.199/20, para. 31 c.

101 https://www.uicnmed.org/web2007/CDMURCIA/pdf/durban/recommendations_en.pdf

102 CBD COP Decision VII/5 (2004), para 12.

103 Ibid, para 18.

104 CBD COP Decision X/2, available at https://www.cbd.int/decision/cop/?id=12268

105 Secretariat of the Convention on Biological Diversity (2020) *Global Biodiversity Outlook 5.* Montreal, p. 191. See also https://www.protectedplanet.net/en/thematic-areas/oecms?tab=OECMs

106 CBD COP Decision 14/8, para. 2, available at https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-08-en.pdf

107 CBD COP Decision 14/8, available at https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-08-en.pdf

108 Ibid, Annex III, A. (b), p. 10.

109 Ibid, Annex III, A. (c), p. 10.

110 IUCN (2019). *Recognising and reporting other effective area-based conservation measures.* IUCN WCPA Task Force on OECMs. DOI: https://doi.org/10.2305/IUCN.CH.2019.PATRS.3.en

111 D Diz, D Johnson, M Riddell, S Rees, J Battle, K Gjerde, S Hennige, and J. M Roberts. Mainstreaming biodiversity into the SDGs: The role of other effective area-based conservation measures (SDG 14.5) *Marine Policy* 93 (2018), 251-261, p. 252.

112 See further https://lmmanetwork.org/

113 Diz et al (2018), p. 252.

114 IUCN (2018), p. 2.

115 D. Johnson, M.A. Ferreira, E. Kenchington, 'Climate change is likely to severely limit the effectiveness of deep-sea ABMTs in the North Atlantic', *Marine Policy* 87 (2018) 111–122; E de Santo (2018) Implementation challenges of area-based management tools (ABMTs) for biodiversity beyond national jurisdiction (BBNJ) *Marine Policy* 97, 34–43.

116 European Commission (2022), p. 15.

117 Secretariat of the CBD (2020), available at www.cbd.int/GBO5.

118 Ibid, p. 82.

119 Ibid.

120 https://sdgs.un.org/goals

121 https://unstats.un.org/sdgs/report/2020/goal-14/

122 E.g., IUCN (2018); Sala et al (2018).

123 See E.O. Wilson (2016) *Half Earth. Our Planet's Fight for Life* W.W. Norton and Company Inc.

124 https://enb.iisd.org/events/6th-international-union-conservation-nature-iucn-world-parks-congress-wpc/summary-report-12

125 The Alliance currently has 71 members. See https://www.gov.uk/government/topical-events/global-ocean-alliance-30by30-initiative

126 Kunming-Montreal Global biodiversity framework. Draft decision submitted by the President. CBD/COP/15/L.25, 18 December 2022.

127 https://www.cbd.int/meetings/COP-15

128 EU Biodiversity Strategy for 2030, p. 4.

129 Protected Planet (2023). https://www.protectedplanet.net/en/thematic-areas/marine-protected-areas areas
[Accessed January 2023]

130 United Nations Convention on the Law of the Sea 1833 UNTS 397 (1982)

131 Convention on Biological Diversity 1760 UNTS 79 (5 June 1992)

132 www.unenvironment.org/explore-topics/oceans-seas/what-we-do/regional-seas-programme.

133 *Chagos Marine Protected Area Arbitration* (Mauritius v. United Kingdom), Award of 18 March 2015; https://pca-cpa.org/en/cases/11/

134 T Henriksen, *Challenges of Integrating Newer Environmental Law into Law of the Sea*, Presentation given at Workshop Tendencies in Legal Approaches and Instruments for the Protection of Ecological Systems, 25-26 October 2018, Aarhus University, Denmark.

135 Article 17 UNCLOS.

136 Article 56(2) UNCLOS states that "In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State shall have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention."

137 Article 58 UNCLOS.

138 Ingvild Ulrikke Jakobsen (2016), *Marine protected areas in international law: An arctic perspective*. Brill, 50.

139 Article 87 UNCLOS.

140 Protected Planet (2021).

141 A/RES/72/249 - International legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 2017; see https://www.un.org/bbnj/. The package of issues for negotiation is limited to marine genetic resources, including benefit-sharing, area-based management tools, including Marine Protected Areas; Environmental Impact Assessments; and capacity-building and marine technology transfer.

142 See further https://www.un.org/bbnj/

143 CBD Decision IX/20, Annex II. Scientific guidance for selecting areas to establish a representative network of Marine Protected Areas, including in open ocean water and deep-sea habitats UNEP/CBD/COP/DEC/IX/20.

144 EBSAs are defined as geographically or oceanographically discrete areas that provide important services to one or more species/populations of an ecosystem or to the ecosystem as a whole, compared to other surrounding areas or areas of similar ecological characteristics. See CBD Decision IX/20, Annex II. Site considerations include: Uniqueness or rarity, Special importance for life history stages of species, Importance for threatened, endangered or declining species and/or habitats, Vulnerability, fragility, sensitivity or slow recovery, Biological productivity, Biological diversity, Naturalness.

145 CBD Decision IX/20, Annex II.

146 D Diz et al (2018), p. 253.

147 Convention for the Protection of the Marine Environment of the North-East Atlantic (1992) 2354 UNTS 67.

148 OSPAR Recommendation 2003/3 on a Network of Marine Protected Areas, as amended by Recommendation 2010/2.

149 OSPAR's Contracting Parties are Belgium, Denmark, the EU, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom. See https://www.ospar.org/organisation/contracting-parties

150 Article 2(1)(a) OSPAR Convention.

151 Article 3(1) Annex V on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area, adopted in 1998, entered into force in 2000.

152 Article 1(a) OSPAR Convention.

153 Status of the OSPAR Network of MPAs in 2021. Available at https://oap.ospar.org/en/ospar-assessments/committee-assessments/biodiversity-committee/status-ospar-network-marine-protected-areas/assessment-sheets-mpa/mpa-status-2021/

154 Article 1.1 of OSPAR Commission Recommendation 2003-3 on a Network of Marine Protected Areas, as amended by OSPAR Recommendation 2010/2.

155 N Matz-Lück and J Fuchs (2014) "The impact of OSPAR on protected area management beyond national jurisdiction: Effective regional cooperation or a network of paper parks?" *Marine Policy* 49: 155-166, p. 156.

156 MPA Advisory Group (2020), Section 1.2.1.3.

157 OSPAR Guidelines for the identification and selection of Marine Protected Areas in the OSPAR Maritime Area (Agreement 2003-17), p.1.

158 The list can be accessed here: https://www.ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats

159 MPA Advisory Group (2020), p. 51.

160 OSPAR 2003-17, p. 2.

161 OSPAR Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas (Agreement 2006/3).

162 Ibid, p. 1.

163 Ibid, pp. 1-2.

164 OSPAR Guidelines for the Management of Marine Protected Areas in the OSPAR Maritime Area (Reference Number: 2003-18).

165 See full list of OSPAR MPAs at https://www.npws.ie/sites/default/files/general/OSPAR%20MPAs.pdf

166 United Nations Educational, Scientific and Cultural Organization (UNESCO) (1972). Convention for the Protection of the World Cultural and Natural Heritage, 1037 UNTS 151.

167 Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) 996 UNTS 245.

168 https://whc.unesco.org/en/statesparties/ie/

169 https://www.ramsar.org/wetland/ireland

170 https://en.unesco.org/biosphere

171 Ibid; UNESCO Technical Guidelines for Biosphere Reserves 2021, MAB Programme, Division of Ecological and Earth Sciences UNESCO, 51-52.

172 https://en.unesco.org/biosphere/designation; see Article 5 Statutory Framework of the World Network of Biosphere Reserves on Designation Procedure and UNESCO Technical Guidelines for Biosphere Reserves 2021.

173 https://www.dublinbaybiosphere.ie and https://kerrybiosphere.ie

174 https://en.unesco.org/node/314143

175 https://en.unesco.org/biosphere/about

176 Ibid.

177 Ibid.

178 Dudley (2008), p. 39

179 Ibid.

180 https://www.cms.int/

181 https://www.coe.int/en/web/bern-convention

182 EU Biodiversity Strategy for 2030, pp. 3, 5.

183 Ibid, p. 5.

184 European Commission The European Green Deal COM/2019/640 final, p. 13.

185 AL Perry, J Blanco, N Fournier, S Garcia & P Marín (2020). *Unmanaged = Unprotected: Europe's marine paper parks.* Oceana, Brussels. 52 pp.

186 European Court of Auditors (2020) *Marine Environment: EU protection is wide but not deep.* Special Report 26. EN 2020. Available at https://op.europa.eu/webpub/eca/special-reports/marine-environment-26-2020/en/

187 Ibid, p. 4.

188 Ibid, p. 5.

189 EEA (2018) *Marine Protected Areas* ISSN 24678-3196, p. 6.

190 S Agnesi, A Annunziatellis, P Chaniotis, G Mo, S Korpinen, L Snoj, L Tunesi, J Reker, (2020), *Spatial Analysis of Marine Protected Area Networks in Europe's Seas* III. ETC/ ICM Technical Report 3/2020: European Topic Centre on Inland, Coastal and Marine waters, p. 6; 18; 32.

191 Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). Originally published as Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds.

192 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992).

193 Clarified by the European Court of Justice in C-6/04 *Commission v UK* [2005] ECR 1-9017.

194 European Commission (2015) *Report from the Commission to the European Parliament and the Council on the progress in establishing marine protected areas (as required by Article 21 of the Marine Strategy Framework Directive* 2008/56/EC) Brussels, Annex 1, p.1.

195 Article 2 (1) Habitats Directive.

196 Article 2(2).

197 See further Article 1(e).

198 European Commission (2007) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive* 92/43/EEC, p. 9.

199 Ibid, pp. 9-10.

200 Ibid, p. 10.

201 A Trouwborst, L Boitani, J. D. C. Linnell "Interpreting 'favourable conservation status' for large carnivores in Europe: how many are needed and how many are wanted?" *Biodiversity Conservation* (2017) 26:37–61, p. 38.

202 Article 1(l) Habitats Directive.

203 See Annex I of the Habitats Directive.

204 See Annexes II, IV and V of the Habitats Directive.

205 See Annexes I-III of the codified Birds Directive.

206 http://ec.europa.eu/environment/nature/natura2000/marine/index_en.htm

207 Article 1(d) Habitats Directive.

208 European Court of Auditors (2020), p. 23.

209 EEA (2015b), *Marine Protected Areas in Europe's seas. An overview and perspectives for the future*. EEA Report No. 3/2015, p. 15.

210 EEA (2020a), p. 148.

211 Trouwborst et al (2017), p. 38.

212 K Bastmeijer (2018) "The ecosystem approach for the marine environment and the position of humans: Lessons from the EU natura 2000 regime." In Langlet, David, and Rosemary Rayfuse (Eds.) *The Ecosystem Approach in Ocean Planning and Governance* (Brill Nijhoff), p. 213.

213 European Commission (2016) Commission Staff Working Document *Fitness Check of the EU Nature Legislation (Birds and Habitats Directives)* SWD (2016) 472 final, available at https://ec.europa.eu/environment/nature/legislation/fitness_check/docs/nature_fitness_check.pdf

214 EU Biodiversity Strategy for 2030, p. 15.

215 Ibid, citing mid-term review of the EU Biodiversity Strategy to 2020 COM (2015) 478 and Fitness Check of the EU Nature Legislation 2016.

216 https://www.eea.europa.eu/data-and-maps/indicators/species-of-european-interest-3/assessment

217 EEA (2020b) *Natura 2000 State of Nature in the EU*, EEA Report No 10/2020, p. 15. Available at https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020. See further EEA (2020c) M*anagement Effectiveness in the EU's Natura 2000 Network of Protected Areas*, Briefing no. 11/2020, available at https://www.eea.europa.eu/publications/management-effectiveness-in-the-eus/management-effectiveness-in-the-eu

218 Ibid.

219 EU Biodiversity Strategy for 2030, p. 16

220 EEA (2015b), pp. 12, 15.

221 European Court of Auditors (2020), p. 31.

222 Ibid, 17.

223 Ibid, 15. Deltares (2015), p. 16.

224 EEA (2015b), p. 12.

225 Ibid, p. 17.

226 Ibid.

227 Ibid, pp. 17, 25.

228 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), OJ L 164, 25.6.2008.

229 Articles 2 and 3 (1).

230 Article 1(1).

231 European Commission (2014) Commission Staff Working Document. Annex Accompanying the document Commission Report to the Council and European Parliament T*he first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC) - The European Commission's assessment and guidance*, SWD (2014) 49 final, p. 79.

232 Articles 1(2), 3(3) and 5 MSFD.

233 Article 5(2) (a) and (b) MSFD. See also **http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-frame-work-directive/index_en.htm**

234 Preamble to MSFD, Recital 5. Regarding management of human activities, see also Article 13(5).

235 Preamble to MSFD, Recital 39.

236 Preamble to MSFD, Recital 6.

237 Article 13(4) MSFD.

238 European Commission (2012) *Links between the Marine Strategy Framework Directive (MSFD 2008/56/EC) and the Nature Directives (Birds Directive 2009/147/EEC (BD) and Habitats Directive 92/43/EEC (HD)). Interactions, overlaps and potential areas for closer coordination*, 27 July 2012, p. 12.

239 See for example, the United Kingdom and Portugal, EEA (2015b), pp. 21-23, 31.

240 European Commission (2015), Annex 1.

241 European Commission (2020b), Commission Staff Working Document. *Key stages and progress up to 2019. Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive* (Directive 2008/56/EC), SWD (2020) 60 final, p. 38.

242 Work is ongoing in this regard, however. See for example, Deltares (2015).

243 EC SWD 60 (2020b), p. 40.

244 See J Verschuuren, "Connectivity: is Natura 2000 only an ecological network on paper?" in Born, Charles-Hubert, An Cliquet, Hendrik Schoukens, Delphine Misonne, and Geert van Hoorick. (2015) (Eds.) *The Habitats Directive in its environmental context: European Nature's Best Hope* (Routledge), 285-302, p. 301.

245 EC SWD 60 (2020b), p. 40

246 Ibid.

247 See European Commission (2014a) Commission Report to the Council and European Parliament *The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC)—The European Commission's assessment and guidance* COM (2014) 97 final.

248 Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment and repealing Decision 2010/477/EU.

249 European Commission (2018b) Commission Staff Working Document accompanying the document *Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive*, SWD (2018) 393 final, p.73.

250 European Commission (2018a) *Report from the Commission to the European Parliament and the Council assessing Member States' Programmes of Measures under the Marine Strategy Framework Directive* COM (2018) 562, final.

251 Ibid, p. 39.

252 European Commission (2020a), *Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive* (Directive 2008/56/EC), COM (2020) 259 final, p. 23.

253 EC SWD 60, (2020b), p. 38.

254 EEA (2018), p. 5.

255 EC (2015), p. 7.

256 EC (2020a), p. 23.

257 EC SWD 60 (2020b), p. 38.

258 WWF (2019) P*rotecting our ocean: Europe's challenges to meet the 2020 deadlines*, available at **https://www.wwf.eu/?352798/Protecting-Our-Ocean-Europes-challenges-to-meet-the-2020-deadlines**

259 M Dureuil, K Boerder, K. A. Burnett, R Froese and B Worm (2018) "Elevated trawling inside protected areas undermines conservation outcomes in a global fishing hotspot" *Science* 362 (6421), 1403-1407.

260 Ibid.

261 EC (2020), p. 23.

262 EEA (2018), p. 8.

263 A consolidated version of the Act, updated to 9 September 2020, is available on the Law Reform Commission website. **https://revisedacts.lawreform.ie/eli/1976/act/39/revised/en/htm**

264 NPWS (2021) PAF, p. 8.

265 Section 15(1) of the Act.

266 MPA Advisory Group (2020), p. 63.

267 **https://www.gov.ie/en/press-release/51bf2-ministers-noonan-and-mcconalogue-announce-that-the-basking-shark-has-been-given-the-status-of-protected-wild-animal-under-the-wildlife-act/**

268 See Section 23(2)(a) Wildlife Act 1976, as amended by Wildlife Act 1976 (Protection of Wild Animals) Regulations 2022, which have legal effect from 3 October 2022.

269 **https://www.bbc.com/news/articles/ce7y-78dj41jo**

270 **https://www.gov.ie/en/press-release/51bf2-ministers-noonan-and-mcconalogue-announce-that-the-basking-shark-has-been-given-the-status-of-protected-wild-animal-under-the-wildlife-act/**

271 Ibid. See also **https://www.npws.ie/legislation/irish-law/wildlife-amendment-act-2000; https://www.npws.ie/legislation**

272 **https://www.npws.ie/legislation/irish-law/wildlife-amendment-act-2000**

273 Ibid.

274 The functions of the NPWS previously came under the Department of Culture, Heritage and the Gaeltacht but were transferred to the Department of Housing, Planning and Local Government, now known as Department of Housing, Local Government and Heritage (S.I. No. 408/2020 - Housing, Planning and Local Government (Alteration of Name of Department and Title of Minister) Order 2020), in September 2020 via S.I. No. 339/2020 - Heritage (Transfer of Departmental Administration and Ministerial Functions) Order 2020.

275 **https://www.npws.ie/protected-sites**; SIMCelt (2018), p. 39.

276 NPWS (2017) *Stages in the Site Designation Process* October 2017, available at **https://www.npws.ie/faq/site-designation**

277 Note that the sites designated as OSPAR sites are underpinned by European designations due to the lack of a legislative basis for OSPAR sites. See further Section 2.1.2.3.

278 See NPWS (2021) *Prioritised Action Framework (PAF) for Natura 2000 in Ireland* March 2021, p. 7.

279 L Scally, N Pfeiffer and E Hewitt (2020). *The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats*. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland, p. 7.

280 **https://www.gov.ie/en/press-release/11656-ireland-announces-major-boost-in-marine-environmental-protection-at-cop15/**

281 S.I. No. 477 of 2011, as amended by S.I. No. 290 of 2013, S.I. No. 499 of 2013, S.I. No. 355 of 2015.

282 Annex 1 Habitats Directive. Lists of SACs per habitat type can be downloaded on the NPWS website here: **https://www.npws.ie/marine/marine-habitats**

283 Government of Ireland (2018) Baseline Report p.71; MPA Advisory Group (2020), p. 46.

284 Annex II Habitats Directive.

285 Government of Ireland (2018) *Baseline Report*, p. 72.

286 **https://www.npws.ie/protected-sites/sac**

287 C 117/03.

288 C-244/05.

289 Article 4(5) Habitats Directive.

290 NPWS (2017), p. 2.

291 Birds and Natural Habitats Regulations, Part 3, 12 (2). For more information see **https://www.npws.ie/faq/site-designation#faq-5595** and NPWS (2021), PAF, p. 16.

292 Ibid, Part 3, 13 (1).

293 Wildlife Amendment Act 2000; **https://www.npws.ie/legislation/irish-law/wildlife-amendment-act-2000**

294 See SAC datasheets at **https://www.npws.ie/protected-sites/sac**

295 **https://ec.europa.eu/ireland/news/commission-decides-to-refer-ireland-to-the-court-of-justice-of-the-eu-over-failure-to-take-appropriate-conservation-measures_en**

296 **https://ec.europa.eu/commission/presscorner/detail/en/inf_20_1212**

297 MPA Advisory Group (2020), p. 166.

298 Ibid, p. 85.

299 European Commission (2018), *Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive* 92/43/EEC (2018) 7621 final, p. 15.

300 Ibid, p. 17.

301 Part 4, 26(2).

302 MPA Advisory Group, p. 48. Conservation objectives for SACs and SPAs can be viewed here: **https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives**

303 See NPWS (2021) PAF, p. 13.

304 **https://www.npws.ie/protected-sites/conservation-management-planning**

305 See NPWS (2021) PAF, p. 45 for a discussion on conservation measures delivered to date in marine and coastal waters.

306 **https://ec.europa.eu/environment/nature/natura2000/faq_en.htm#3-0; SIMCelt** (2018), p. 24.

307 Art 6(1) Habitats Directive.

308 European Commission (2013), *Commission Notice on Establishing Conservation Measures for Natura 2000 sites*, Doc. Hab. 13-04/05, September 2013, p5. Available at **https://ec.europa.eu/environment/nature/natura2000/management/docs/commission_note/comNote%20conservation%20measures_EN.pdf**

309 Ibid, p. 22.

310 Ibid, pp. 22-23.

311 Email communication with NPWS, 1 June 2021. See also R Classen (2020) *Marine Protected Areas – Restoring Ireland's Ocean Wildlife II. Report on Ireland's Failure to Protect Marine Natura 2000 Sites*. Irish Wildlife Trust, p. 7; Irish Wildlife Trust (2012), Marine protected areas in Ireland – a brief review of current status and future potential, p. 4.

312 See further **https://www.npws.ie/protected-sites**

313 NPWS (2021) PAF, p. 16; 45.

314 Article 6(4) Habitats Directive.

315 **https://ec.europa.eu/environment/nature/natura2000/faq_en.htm#**

316 Sandbanks which are slightly covered by sea water all the time, Estuaries, Mudflats and sandflats not covered by seawater at low tide, Large shallow inlets and bays, Reefs and Submerged or partially submerged sea caves.

317 L Scally et al, (2020), i.

318 **https://www.dccae.ie/en-ie/natural-resources/topics/Oil-Gas-Exploration-Production/observe-programme/Pages/ObSERVE-Programme.aspx**

319 **https://www.infomar.ie/**

320 Article 17 Habitats Directive.

321 NPWS (2019) *The Status of EU Protected Habitats and Species in Ireland.* Volume 1: Summary Overview. Unpublished NPWS report.

322 EPA (2020), p. 198.

323 NPWS (2019), p. 12.

324 Ibid, p. 14.

325 Scally et al (2020), p. 40.

326 NPWS (2013) *The Status of EU Protected Habitats and Species in Ireland*.

327 See further EPA (2020), p. 199.

328 SIMCelt (2018), p. 25.

329 SI No. 294 of 2019 EUROPEAN UNION HABITATS (LAMBAY ISLAND SPECIAL AREA OF CONSERVATION 000204) REGULATIONS 2019, Schedule 4 and paragraph 6.

330 SIMCelt (2018), p. 25.

331 MPA Advisory Group (2020), Section 3.3.1.

332 NPWS (2021) PAF, p. 45.

333 Biodiversity Working Group (2020). *Interim Review of the Implementation of the National Biodiversity Action Plan* 2017—2021, p. 52.

334 MPA Advisory Group (2020), Section 3.3.1.

335 **https://www.sfpa.ie/Who-We-Are/About-Us/Our-Work**

336 **https://www.military.ie/en/who-we-are/naval-service/specialist-units/fisheries-monitoring-centre/**

337 Ibid.

338 MPA Advisory Group (2020), Section 3.3.1.

339 Email communication with Irish Naval Service, 4 June 2021.

340 Biodiversity Working Group (2020), p. 51.

341 Ibid.

342 **https://www.gov.ie/en/press-release/57bea-launch-of-joint-protocol-between-national-parks-wildlife-service-an-garda-siochana-on-wildlife-crime/**

343 **https://www.independent.ie/news/environment/decision-to-drop-wildlife-crime-unit-described-as-u-turn-on-clear-promise-41796743.html**

344 Biodiversity Working Group (2020), p. 52.

345 MPA Advisory Group (2020), Section 3.3.5.5.

346 See e.g., Submission to the Review of the National Parks and Wildlife Service - Irish Wildlife Trust (2021), available at **https://iwt.ie/iwt-submission-npws-review/**

347 Terms of Reference available here: **https://npws.ie/sites/default/files/files/Terms-of-Reference-NPWS-Review.pdf**

348 Report available here: **https://www.gov.ie/en/publication/fbb81-national-parks-and-wildlife-service-strategic-action-plan-and-review/**

349 **https://www.irishtimes.com/news/environment/a-day-of-hope-for-nature-55m-plan-for-wildlife-service-announced-1.4869521**

350 See Annexes I-III of the codified Birds Directive. MPA Advisory Group (2020), p. 44.

351 MPA Advisory Group (2020), p. 44.

352 Article 4 (1) and (2) Birds Directive.

353 Article 4 (2). See also Client Earth (2020) Legal *Toolkit for Challenging Unlawful Management of Natura 2000 Marine Protected Areas* October 2020, p. 15.

354 EPA (2020), p. 214; Client Earth (2020), p. 15.

355 NPWS (2017), p 2.

356 SIMCelt (2018), p. 28.

357 **https://www.npws.ie/protected-sites/spa**

358 See SPA datasheets at **https://www.npws.ie/protected-sites/spa**

359 Government of Ireland (2017) *Baseline Report* p. 72; **https://www.npws.ie/protected-sites/spa**

360 EPA (2020), p. 214.

361 EC (2018), *Managing Natura 2000 sites*, p. 11—12.

362 Biodiversity Working Group (2020), p.11; Conservation objectives for SACs and SPAs can be viewed here: **https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives**

363 S Cummins, C Lauder, A Lauder & TD Tierney (2019) *The Status of Ireland's Breeding Seabirds: Birds Directive Article 12 Reporting 2013 – 2018.* Irish Wildlife Manuals, No. 114. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland, i.

364 EPA (2020), p. 198.

365 Ibid.

366 NPWS (2021) PAF, p. 27.

367 Ibid, p. 47

368 Ibid.

369 S.I. No. 249 of 2011 – European Communities (Marine Strategy Framework) Regulations 2011.

370 Government of Ireland (2018) *Baseline Report*, p. 67.

371 Ibid. See further Client Earth (2014) *Article 11 of the EU Common Fisheries Policy* July 2014.

372 EPA (2020), p. 193.

373 European Commission (2014b) Commission Staff Working Document accompanying the Commission Report *The first phase of implementation of the Marine Strategy Framework Directive* (2008/56/EC) - The European Commission's assessment and guidance, SWD (2014) 49 final, p. 19.

374 Ibid, 17.

375 Ibid, 133.

376 Ibid, 135.

377 EC SWD (2018b), p. 111.

378 Ibid, pp. 111-112

379 Ibid, p. 115

380 Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning *OJ L 257, 28.8.2014*. Art 1(1).

381 Article 4; Article 15(3) MSP Directive.

382 European Commission (2015), Annex 1, p. 3.

383 Biodiversity Working Group (2020), p. 54.

384 Government of Ireland (2021) *Project Ireland 2040. National Marine Planning Framework*. Prepared by the Department of Housing, Local Government and Heritage. Available at: **https://www.gov.ie/en/publication/60e57-national-marine-planning-framework/**

385 Available at **https://www.irishstatutebook.ie/eli/2021/act/50/enacted/en/print**

386 **https://www.gov.ie/en/press-release/d13b0-maritime-area-planning-bill-2021-passes-through-all-stages-of-the-oireachtas/**

387 Ibid.

388 **https://www.algoodbody.com/insights-publications/maritime-area-planning-legislation-on-track-to-be-finalised-by-christmas-2021**

389 Section 21 (2)(c), Maritime Area Planning Act 2021.

390 **https://www.gov.ie/en/press-release/3835a-campaign-to-appoint-board-members-of-maritime-area-regulatory-authority-mara-gets-underway/**

391 Ibid.

392 **https://swanireland.ie/2022/05/mistakes-of-poor-planning-on-land-risk-being-repeated-at-sea-with-irelands-first-marine-plan-swan-commissioned-report-finds/**

393 C Walsh (2022) An Evaluation of Ireland's Marine Spatial Plan – The National Marine Planning Framework. Available at **https://swanireland.ie/wp-content/uploads/2022/05/An-Evaluation-of-Irelands-Marine-Spatial-Plan-The-National-Marine-Planning-Framework.pdf**

394 **https://swanireland.ie/2022/05/mistakes-of-poor-planning-on-land-risk-being-repeated-at-sea-with-irelands-first-marine-plan-swan-commissioned-report-finds/**

395 WWF (2022) Assessing the Balance Between Nature and People in European Seas: Maritime Spatial Planning in the North-East Atlantic Ocean, WWF European Policy Office, p. 15.

396 This means that only the EU can act in this field.

397 For more detail, see MPA Advisory Group (2020), Section 1.2.2.2.

398 S.I. No. 290/2013 – European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013.

399 Government of Ireland (2019) *Marine Strategy Framework Directive 2008/56/EC. Article 18 Interim Progress report on the implementation of the Programme of Measures*, prepared by the Department of Housing, Planning and Local Government. September 2019, p. 22

400 Ibid, p. 28.

401 MPA Advisory Group (2020), p. 55.

402 EC Regulation 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy.

403 See further European Commission (2018c) *Commission Staff Working Document on the establishment of conservation measures under the Common Fisheries Policy for Natura 2000 sites and for Marine Strategy Framework Directive purposes*. SWD (2018) 288 final.

404 European Court of Auditors (2020), p. 28.

405 SIMCelt (2018), p. 40.

406 Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, OJ L 354/22, 28.12.2013

407 European Commission (2022), p. 9.

408 COUNCIL REGULATION (EC) No 1954/2003 of 4 November 2003 on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EC) No 2847/93 and repealing Regulations (EC) No 685/95 and (EC) No 2027/95

409 EPA (2020), p. 210.

410 Regulation 2016/2336 of the European Parliament and of the Council of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002.

411 Annex II, EU Regulation 2019/1241 of the European Parliament and of the Council on the conservation of fisheries resources and the protection of marine ecosystems through technical measures.

412 **https://oceans-and-fisheries.ec.europa.eu/news/fisheries-end-bottom-fishing-protected-deep-sea-ecosystems-eu-waters-2022-09-15_en**

413 **https://fairseas.ie/2022/09/16/eu-commission-closes-sensitive-areas-to-bottom-fishing-including-nearly-9000-km2-in-irish-waters/**

414 ADDs send out a low frequency signal to sea mammals to warn and alert them from approaching fishing nets.

415 Commission Implementing Regulation (EU) 2020/967 of 3 July 2020 lays down the detailed rules on the signal and implementation characteristics of acoustic deterrent devices as referred to in Part A of Annex XIII of Regulation (EU) 2019/1241 of the European Parliament and of the Council on the conservation of fisheries resources and the protection of marine ecosystems through technical measures. See further **https://www.sfpa.ie/Who-We-Are/News/Details/sfpa-programme-to-support-protection-of-porpoises-whales-and-dolphins**

416 **https://www.npws.ie/nature-reserves**

417 Part I, Section 2 of the Act, Definitions.

418 MPA Advisory Group (2020), Section 1.2.3.11.

419 S.I. No. 206/1981 - Nature Reserve (Lough Hyne) Establishment Order, 1981 and S.I. No. 207/1981 - Nature Reserve (Lough Hyne) Regulations, 1981.

420 MPA Advisory Group (2020), p. 65.

421 S.I. No. 207/1981 - Nature Reserve (Lough Hyne) Regulations, 1981.

422 Sections 15(5) 16(3A) of the Act.

423 **https://www.npws.ie/about-npws/np-ws-regional-management**

424 Section 16 (b)(c) of the Act.

425 MPA Advisory Group (2020), p. 64.

426 Section 17(2) of the Act.

427 Section 17(6).

428 Section 17 (4).

429 Section 17(10).

430 **https://www.npws.ie/protected-sites/nha**

431 Part I, Section 2 of the Act, as amended by the 2000 Act.

432 **https://www.npws.ie/marine/marine-habitats**

433 MPA Advisory Group (2020), p. 65.

434 Irish Wildlife Trust (2012), p. 3.

435 **https://www.npws.ie/farmers-and-land-owners/activities-requiring-consent**

436 NPWS (2017), p. 1.

437 Wildlife Amendment Act (2000), Sections 16 and 18.

438 NPWS (2017), p. 3.

439 Ibid.

440 Ibid.

441 Wildlife Amendment Act (2000), Section 19 (2); **https://www.npws.ie/protected-sites/nha**

442 Section 19.

443 **https://www.npws.ie/farmers-and-land-owners/activities-requiring-consent**

444 Ibid.

445 Ibid.

446 **https://www.npws.ie/protected-sites/wild-fowl-sanctuaries**. See Wildlife (Wild Birds) (Open Seasons) Orders 1979 to 2012.

447 MPA Advisory Group (2020), p. 66.

448 Irish Whale and Dolphin Group. *Ireland - a Sanctuary for Whales and Dolphins: A Discussion Document Prepared by the Irish Whale and Dolphin Group*.; 1993:17, p.7.

449 MPA Advisory Group (2020), p. 67.

450 Section 3, Whale Fisheries Act 1937. **https://www.npws.ie/whale-fisheries-act-1937**

451 Section 5, Whale Fisheries Act 1937.

452 **https://www.npws.ie/national-parks**

453 Bourn Vincent Memorial Park Act, 1932 and related statutory instrument. MPA Advisory Group (2020), p. 66.

454 Programme for Government. Our Shared Future, October 2020, p. 70.

455 P. 21.

456 **https://jncc.gov.uk/our-work/uk-marine-protected-area-network-statistics/**. Last updated February 2022. Note that the JNCC statistics do not include the contribution of A/SSSIs and Ramsar sites, however this does not affect the figure of 38%. Email communication with JNCC, 27 July 2021. For a more visual representation, see **https://map.mpa-reality-check.org/**

457 **https://jncc.gov.uk/our-role/the-uk/**

458 Section 42 MCAA 2009 defines the 'UK marine area' as consisting of:

"(a) the area of sea within the seaward limits of the territorial sea adjacent to the United Kingdom,

(b) any area of sea within the limits of the exclusive economic zone,

(c) the area of sea within the limits of the UK sector of the continental shelf..."

459 Section 123(3) MCAA 2009; **https://www.legislation.gov.uk/ukpga/2009/23/section/123?view=extent**

460 SIMCelt (2018), p. 42.

461 Section 123 (4) MCAA 2009. Department for Environment, Food & Rural Affairs (DEFRA) (2018) *Marine Protected Areas Network Report* 2012-2018, p. 12. Available at **https://www.gov.uk/Government/publications/marine-protected-areas-network-report-2012-to-2018**

462 DEFRA (2018), p. 14.

463 Department of Agriculture, Environment and Rural Affairs (DAERA) (2019) *Report on the creation of a Network of Conservation Sites in the Northern Ireland inshore region: Progress toward establishing an ecologically coherent network of well managed Marine Protected Areas*, January 2019, p.7, available at **https://www.daera-ni.gov.uk/publications/report-creation-network-conservation-sites-northern-ireland-inshore-region-progress-toward**

464 SIMCelt (2018), p. 49.

465 **https://jncc.gov.uk**

466 Ibid.

467 Ibid.

468 Email communication with JNCC, 27 July 2021.

469 **https://www.gov.uk/government/organisations/marine-management-organisation**

470 Email communication with JNCC, 27 July 2021.

471 DEFRA (2018), p. 22; J-L Solandt, T Mullier, S Elliott, and E Sheehan (2020). "Managing marine protected areas in Europe: Moving from 'feature-based' to 'whole-site' management of sites." In J Humphries and R W.E. Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier), 157-181, p. 158-159.

472 UK Government (2018) *A Green Future: Our 25 Year Plan to Improve the Environment* DEFRA. Available at: **https://www.gov.uk/government/publications/25-year-environment-plan**

473 DEFRA (2018), p. 22; UK Government (2018), p. 107.

474 Ibid. For more discussion on the 'whole site' approach, see S.E. Rees, E. V. Sheehan, B. D. Stewart, R. Clark, T. Appleby, M. J. Attrill, P.J.S. Jones, D. Johnson, N. Bradshaw and S. Pittman. (2020). "Emerging themes to support ambitious UK marine biodiversity conservation." *Marine Policy* 117: 103864 and Solandt et al (2020).

475 DEFRA (2018), p. 10.

476 Clark, R. W. E., and Humphreys, J. (2020). "Chapter 25 - Enforcement capabilities and compliance in English Marine Protected Areas: The art of the possible." In Humphreys and Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier), 489-505, p. 490 – 491.

477 **https://www.gov.uk/government/publications/government-response-to-the-highly-protected-marine-areas-hpmas-review** Accessed 15 July 2021

478 See Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Puritz-Evans, Alice S. J., and Amy Hill (2020). "Chapter 11 - The law and marine protected areas: Different regimes and their practical impacts in England." In J Humphreys and RW.E. Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier), 195-215, p. 212.

479 Clark and Humphreys (2020), p. 491.

480 **https://jncc.gov.uk/our-work/sacs-with-marine-components/**

481 **https://jncc.gov.uk/our-work/spas-with-marine-components/**

482 **https://jncc.gov.uk/our-work/marine-conservation-zones/**

483 Section 117 MCAA 2009.

484 JNCC *Marine Conservation Zone Project – Ecological Network Guidance* 2010, available at **https://hub.jncc.gov.uk/assets/94f961af-0bfc-4787-92d7-0c3bcf0fd083**

485 **https://jncc.gov.uk/our-work/marine-conservation-zones/** Accessed 21 October 2022.

486 Flamborough Head, Lundy Island and the Medway Estuary. Cited in Benyon Review into Highly Protected Marine Areas, Final Report. June 2020, p. 6. Available at **https://www.gov.uk/government/publications/highly-protected-marine-areas-hpmas-review-2019**

487 DEFRA (2018), pp. 13-14.

488 SIMCelt (2018), p. 43.

489 Ibid.

490 Ibid.

491 DEFRA (2018), pp. 13-14.

492 Ibid.

493 Benyon Review (2020), p. 2.

494 **https://europe.oceana.org/en/press-center/press-releases/oceana-calls-urgent-action-uk-Government-end-bottom-trawling-britains**. There are plans to ban bottom trawling in some protected sites, including Dogger Bank. **https://www.bbc.com/news/science-environment-55894608**

495 Benyon Review (2020), p. 2

496 Ibid.

497 Guardian (2021), UK to trial *'highly protected marine areas' in win for ocean campaigner,* 9 June 2021.

498 Annex 1, Benyon Review 2020.

499 For the full list of recommendations, see pp. viii – xv of the report.

500 Recommendation 1

501 Recommendation 4.

502 Recommendations 11 and 13.

503 Recommendation 13.

504 Recommendation 14.

505 Recommendations 15 and 17.

506 xiii

507 **https://www.gov.uk/government/publications/government-response-to-the-highly-protected-marine-areas-hpmas-review**

508 Natural England is a public body which advises the Government regarding the natural environment in England. See further **https://www.gov.uk/government/organisations/natural-england**

509 **https://www.gov.uk/government/publications/highly-protected-marine-areas/highly-protected-marine-areas-hpmas#:~:text=HPMAs%20are%20areas%20of%20the,allowing%20the%20ecosystem%20to%20thrive**

510 Ibid.

511 Ibid and **https://www.gov.uk/government/publications/government-response-to-the-highly-protected-marine-areas-hpmas-review**

512 Ibid.

513 **https://www.legislation.gov.uk/uksi/2017/1012/contents**

514 **https://www.legislation.gov.uk/uksi/2017/1013/contents**

515 SIMCelt (2018), p. 19.

516 Email communication with JNCC, 27 July 2021.

517 **https://www.legislation.gov.uk/uksi/2019/579/contents/made**

518 Puritz-Evans and Hill (2020), p. 212.

519 **https://jncc.gov.uk/our-work/sacs-with-marine-components/**

520 UK Government (2021) Changes to the Habitats Regulations 2017 Policy Paper.

521 Ibid.

522 *Client Earth Brexit and the Habitats Regulations* Briefing 30 July 2020.

523 Section 119 MCAA 2009. The Secretary of State must consult anyone likely to be interested in, or affected by, the establishment of the MCZ

(Section 119(4)).

524 DEFRA (2013), *Marine Conservation Zones Designation. Explanatory Note.* November 2013, p. 2.

525 DEFRA (2018), p. 16. For more information on what is meant by 'favourable condition', see DEFRA (2013), pp. 2-3.

526 Ibid.

527 Article 119 MCAA 2009.

528 Puritz-Evans and Hill (2020), pp.203-204.

529 Ibid, p. 204.

530 Ibid, p. 205.

531 SIMCelt (2018), p. 45.

532 LM Lieberknecht and JS Jones (2016) 'From stormy seas to the doldrums: the challenges of navigating towards an ecologically coherent marine protected area network through England's Marine Conservation Zone process.' *Marine Policy* 71, 275.

533 **https://jncc.gov.uk/our-work/marine-conservation-zones**. Guidance documents that aided this process are available here: **https://jncc.gov.uk/our-work/marine-conservation-zones/**

534 Ibid.

535 Ibid.

536 Puritz-Evans and Hill (2020), p. 204.

537 See generally E.M. De Santo (2016). "Assessing public "participation" in environmental decision-making: Lessons learned from the UK Marine Conservation Zone (MCZ) site selection process." *Marine Policy* 64: 91-101.

538 Puritz-Evans and Hill (2020) p. 205.

539 Email communication with JNCC, 27 July 2021.

540 Article 117 (7) MCAA 2009.

541 Puritz-Evans and Hill (2020), p. 210.

542 Section 28. **https://www.legislation.gov.uk/ukpga/1981/69/section/28**

543 JNCC (2019) Guidelines for selection of biological SSSIs, available at **https://jncc.gov.uk/our-work/guidelines-for-selection-of-sssis/#part-1-rationale-operational-approach-and-criteria-for-site-selection**

544 SIMCelt (2018), p. 43.

545 Ibid, p. 44.

546 Ibid, pp. 20-22

547 Section 39. **https://www.legislation.gov.uk/uksi/2017/1012/regulation/39/made**

548 European Commission (2018b), pp. 179; 181.

549 Ibid, p. 179.

550 Section 125.

551 Section 125(2)(b) MCAA 2009.

552 Puritz-Evans and Hill (2020), p. 206.

553 Section 125(3) MCAA 2009.

554 Sections 125(12); 126 (10) MCAA 2009. See also Section 127.

555 Puritz-Evans and Hill (2020), p. 210.

556 Section 126 MCAA 2009.

557 Section 126(6) MCAA 2009.

558 Section 126 (7) MCAA 2009.

559 Puritz-Evans and Hill (2020), 207; 209.

560 DEFRA (2018), p. 16.

561 Ibid, p. 17. See further Marine Management Organization *Marine Conservation Zones and Licensing* April 2013.

562 **https://www.legislation.gov.uk/uksi/2017/1013/contents/made**, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

563 DEFRA (2018), pp. 16-17

564 **https://jncc.gov.uk/our-work/about-marine-protected-areas/**

565 DEFRA (2018), p. 14;

566 This has now changed with the introduction of the Fisheries Act 2020

567 **http://www.association-ifca.org.uk/**

568 Clark and Humphreys (2020), p. 493.

569 Ibid, p. 491.

570 Ibid, p. 503.

571 **https://www.gov.uk/government/collections/managing-fisheries-in-marine-protected-areas#:~:text=If%20the%20MPA%20fisheries%20assessment%20finds%20that%20the%20fishing%20activity,the%20site%20will%20be%20monitored**

572 Clark and Humphreys (2020), p. 492.

573 **https://www.gov.uk/government/collections/managing-fisheries-in-marine-protected-areas#:~:text=If%20the%20MPA%20fisheries%20assessment%20finds%20that%20the%20fishing%20activity,the%20site%20will%20be%20monitored**

574 Ibid.

575 **https://jncc.gov.uk/our-work/marine-conservation-zones/** All permanent byelaws are subject to public consultation before they are introduced. See Annex B DEFRA (2018) which lists byelaws and voluntary agreements used to regulate fisheries in inshore MCZs.

576 DEFRA (2018), p. 15; See further Section 156 MCCA 2009.

577 Ibid.

578 Clark and Humphreys (2020), p. 497.

579 Ibid, 498.

580 **http://www.association-ifca.org.uk/about-us**

581 Clark and Humphreys (2020), p. 498.

582 Ibid, p. 493.

583 DEFRA (2018), p. 15.

584 Email communication with JNCC, 27 July 2021.

585 Section 124(3) MCAA 2009.

586 **https://jncc.gov.uk/our-work/mpa-monitoring/**

587 **https://jncc.gov.uk/our-work/about-marine-protected-areas/**

588 Ibid.

589 Solandt et al (2020), p. 159.

590 DEFRA (2018).

591 UK Government (2018), p. 108.

592 SIMCelt (2018), p. 43.

593 **https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest#manage-sssi-land-effectively**

594 Section 28 (1) of the Wildlife and Countryside Act 1981 states that Natural England "may" formulate a management scheme for all of part of a SSSI.

595 **https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest#manage-sssi-land-effectively**

596 Chapter 2 MCAA 2009.

597 Section 237 MCAA 2009.

598 Section 129 (3) MCAA 2009.

599 Section 139 MCAA 2009.

600 Section 139(2) MCAA 2009.

601 Sections 155-156 MCAA 2009.

602 Clark and Humphreys (2020), p. 500.

603 Ibid, p. 498.

604 E Druel and L Veitch (2016), *The Control and Enforcement of Fisheries in England* Client Earth. Cited in Clark and Humphreys (2020).

605 Clark and Humphreys (2020), p. 502.

606 Ibid.

607 Ibid, p. 503.

608 **https://www.gov.uk/guidance/protected-areas-sites-of-special-scientific-interest#manage-sssi-land-effectively**

609 **https://law.gov.wales/constitution-and-government/constitution-and-devolution/wales-act-2017**

610 Email communication with staff from JNCC, dated 26 July 2021.

611 **https://gov.wales/marine-protected-areas-0**; Welsh Government (2019) *Report to the National Assembly for Wales on Marine Protected Areas in Wales* January 2019, p. 5.

612 Welsh Government (2019), p. 6; See also **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/marine-protected-areas/?lang=en** updated 4 August 2022.

613 Welsh Government (2018) *MPA Network Management Framework for Wales* 2018-2023, p. 16. Available at **https://gov.wales/marine-protected-area-network-management-framework-wales**

614 **https://www.legislation.gov.uk/ukdsi/2019/9780111179512/contents**

615 Puritz-Evans and Hill (2020), p. 212.

616 **https://jncc.gov.uk/our-work/sacs-with-marine-components/**

617 Welsh Government (2019), p. 3.

618 **https://jncc.gov.uk/our-work/marine-conservation-zones/#designation-process-welsh-inshore-mczs**

619 **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/skomer-marine-conservation-zone/?lang=en**

620 Ibid.

621 Email communication with JNCC, dated 26 July 2021.

622 **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/sites-of-special-scientific-interest-responsibilities-of-owners-and-occupiers/?lang=en**

623 SIMCelt (2018), p. 43.

624 Welsh Government (2019), p. 6.

625 Ibid and **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/sites-of-special-scientific-interest-responsibilities-of-owners-and-occupiers/?lang=en**

626 See Annex 3 of Welsh Government (2018) and Conservation of Habitats and Species Regulations 2017.

627 **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/marine-protected-areas/?lang=en**

628 Welsh Government (2018), p. 18.

629 Ibid.

630 Ibid, p. 12.

631 Ibid, p. 9-11.

632 Ibid, p. 16.

633 Ibid.

634 Ibid, p .17

635 Welsh Government (2020) *MPA Network Management Action Plan for Wales* 2020-2021. Available here: **https://gov.wales/marine-protected-area-network-management-action-plan-2020-2021**. This is the third MPA Network Management Action Plan for Wales.

636 Ibid, p. 15-16

637 Welsh Government (2018), p. 13

638 SIMCelt (2018), p. 44.

639 Ibid and **https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/sites-of-special-scientific-interest-responsibilities-of-owners-and-occupiers/?lang=en**

640 Welsh Government (2018), p. 14.

641 Ibid, p. 19-20.

642 JNCC (2016) Assessing the contribution of Welsh MPAs towards an ecologically coherent MPA Network in 2016, p. 42 available at **http://jncc.defra.gov.uk/pdf/JNCC_NetworkProgress-WelshWaters_Final.pdf**. See also DEFRA (2018), p. 19.

643 Ibid. For more on gaps in ecological coherence see Annex B Welsh Government (2019).

644 Welsh Government (2018), p. 11.

645 Ibid, p. 14.

646 Ibid.

647 Welsh Government (2018), p. 15.

648 See Section 237 of the Act. **https://www.legislation.gov.uk/ukpga/2009/23/section/237?view=extent**

649 Welsh Government (2020), p. 8.

650 Ibid, p. 17.

651 Ibid.

652 Department of the Environment Northern Ireland (DOENI) (2014) *A Strategy for MPAs in the Northern Ireland inshore region* November 2014, p. 6.

653 DEFRA (2018), p. 20; **https://www.daera-ni.gov.uk/articles/marine-protected-areas**

654 DAERA (2019) *Report on the creation of a Network of Conservation Sites in the Northern Ireland inshore region: Progress toward establishing an ecologically coherent network of well managed Marine Protected Areas*, January 2019, p. 6. Available at **https://www.daera-ni.gov.uk/publications/report-creation-network-conservation-sites-northern-ireland-inshore-region-progress-toward**

655 Ibid.

656 Department of the Environment Northern Ireland (DOENI) (2014) *Guidance on selection and designation of Marine Conservation Zones (MCZs) in the Northern Ireland Inshore Region*. December 2014, p. 15.

657 Ibid.

658 DOENI (2014) A Strategy for MPAs, p. 14.

659 Ibid.

660 **https://www.daera-ni.gov.uk/articles/biodiversity-and-eu-exit**

661 DAERA (2020) *Guidance explaining The Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations* 2019. December 2020 (Version 1). Available at Ibid.

662 **https://www.daera-ni.gov.uk/articles/biodiversity-and-eu-exit**

663 Section 13 Marine Act (NI) 2013, available at **https://www.legislation.gov.uk/nia/2013/10/contents**

664 DOENI (2014) *A Strategy for MPAs*, p. 14.

665 Section 13(5) Marine Act (NI) 2013.

666 DOENI (2014) *A Strategy for MPAs*, p. 14 – 15.

667 **https://jncc.gov.uk/our-work/marine-conservation-zones/**

668 DAERA (2019), p. 9.

669 DOENI (2014) *Guidance on MCZs*, p. 16.

670 Ibid.

671 Ibid. For more detail on how features are identified, and the creation of a PMF and MCZ feature lists, see DOENI (2014) *Guidance on MCZs*, pp. 17-21.

672 DOENI (2014) *Guidance on MCZs*, p. 16.

673 For more detail and a diagram see Ibid, p. 23.

674 DOENI (2014) *Guidance on MCZs*, p. 12.

675 Section 14(7).

676 DOENI (2014) *Guidance on MCZs*, p. 24

677 Ibid, p. 12.

678 Ibid.

679 DOENI (2014) *Guidance on MCZs*, p. 12.

680 Ibid, p. 11.

681 Ibid, p. 15.

682 **https://www.daera-ni.gov.uk/consultations/marine-conservation-zones-consultation**

683 **https://jncc.gov.uk/our-work/marine-conservation-zones/**

684 DAERA (2019), p. 9.

685 Ibid, p. 8.

686 SIMCelt (2018), p. 43.

687 See further **https://www.daera-ni.gov.uk/articles/marine-protected-areas**

688 DEFRA (2018), p. 20.

689 DOENI (2014) *Guidance on MCZs*, p. 28. See further DOENI (2015) *MCZs in the NI Inshore region. Guidance on development of conservation objectives and potential management options*.

690 DOENI (2014) *Guidance on MCZs*, p. 28.

691 Ibid.

692 Ibid.

693 DOENI (2014) Guidance on MCZs, p. 29.

694 Ibid, p. 30.

695 Ibid, p. 28.

696 Ibid, p. 30.

697 Ibid, p. 29.

698 Ibid, p. 30.

699 DAERA (2019), pp. 18-19. Details of management measures for each site can be found on DAERA's website.

700 DAERA (2019), p. 29.

701 http://www.defra.gov.uk/mscc/groups/uk-marine-monitoring-and-assessment-strategy/

702 DAERA (2019), p. 25. See further JNCC (2018). *Assessing progress towards an ecologically coherent network of Marine Protected Areas in the Northern Ireland inshore region*.

703 DAERA (2019), p. 30.

704 Ibid.

705 Ibid, p. 23.

706 Ibid.

707 SIMCelt (2018), p. 44.

708 Ibid.

709 Section 39 of the Act; DOENI (2014) A Strategy for MPAs, p. 23.

710 Ibid.

711 DOENI (2014) *Guidance on MCZs*, p. 31.

712 DEFRA (2018), p. 20

713 DOENI (2014) *A Strategy for MPAs*, p. 23.

714 Sections 26-30 Marine Act (NI) 2013; DEFRA (2018), p. 20.

715 DOENI (2014) *A Strategy for MPAs*, p. 23.

716 https://www.legislation.gov.uk/nia/2013/10/section/33

717 DOENI (2014) *Guidance on MCZs*, p. 31.

718 https://www.gov.scot/policies/marine-environment/marine-protected-areas/

719 Other Area Based Measures (OABMs) are considered to be part of the Scottish MPA network because they contribute to the protection of biodiversity but were not set up specifically for nature conservation purposes. There are currently five OABMs which protect species such as sandeels and blue ling, as well as vulnerable marine ecosystems. Ibid.

720 There are currently eight Historic MPAs protecting sites of historical importance around the Scottish coast. Ibid.

721 This is located around Fair Isle to investigate the factors affecting seabird populations and demonstrate the socio-economic benefits of protecting the marine environment. Ibid.

722 https://www.arrancoast.com/no-take-zone/

723 B.D. Stewart et al (2020) "Marine conservation begins at home: how a local community and protection of a small bay sent waves of change around the UK and beyond." *Frontiers in Marine Science* 7: 76.

724 Figure provided by Marine Scotland via email on 16 July 2021.

725 Figure provided by Marine Scotland via email on 20 July 2021.

726 C.R. Hopkins, D.M. Bailey, and T. Potts (2018) "Navigating future uncertainty in marine protected area governance: Lessons from the Scottish MPA network." *Estuarine, Coastal and Shelf Science* 207: 303-311, p. 304; Scottish Natural Heritage (2014) *Different Types of MPA in Scotland*.

727 Hopkins et al (2018), p. 303.

728 https://www.legislation.gov.uk/uksi/1994/2716/contents/made

729 https://www.legislation.gov.uk/uksi/2007/1842/contents/made

730 Scottish Natural Heritage (2014).

731 The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019.

732 https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/international-designations/european-sites#:~:text=The%20term%20'European%20site'%20is,originally%20designated%20under%20European%20legislation

733 Scottish Natural Heritage (2014) *Different Types of MPA in Scotland*.

734 https://www.legislation.gov.uk/asp/2010/5/section/67

735 Scottish Government *Scottish MPA network – Parliamentary Report* (2018). Available at https://www.gov.scot/publications/marine-protected-area-network-2018-report-scottish-parliament/pages/1/

736 Section 116(7) MCCA 2009.

737 NatureScot is a public body working to improve the natural environment in Scotland. https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/marine-protected-areas/scottish-marine-protected-area-advice

738 SIMCelt (2018), p. 46.

739 https://jncc.gov.uk/our-work/nature-conservation-mpas/

740 See further JNCC *Selection of Nature Conservation MPAs in Scotland* 2013.

741 https://jncc.gov.uk/our-work/nature-conservation-mpas/

742 Ibid.

743 Ibid.

744 See e.g., JNCC's advice on scientific questions raised in relation to offshore waters during the 2013 Marine Scotland consultation on Nature Conservation MPAs 2014. Available at https://hub.jncc.gov.uk/assets/8f5cff75-25f6-4e88-a977-e9d9452ca65f

745 Section 77. https://www.legislation.gov.uk/asp/2010/5/section/77

746 https://www.gov.scot/news/safeguarding-flapper-skate/

747 Ibid.

748 https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/national-designations/sites-special-scientific-interest-sssis

749 https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/marine-protected-areas/scotlands-marine-protected-area-network

750 Ibid.

751 SIMCelt (2018), p. 46.

752 Ibid, pp. 46-47.

753 Marine Scotland (2015) *Nature Conservation MPAs Draft Management Handbook*, 6; See Sections 82-83 of Marine (Scotland) Act 2010 and 125-126 MCAA 2009.

754 Marine Scotland (2015), p. 7.

755 Ibid; Section 99, Marine (Scotland) Act 2010.

756 SIMCelt (2018), p. 22

757 Scottish Government (2018) *Scottish MPA Network – Parliamentary Report* December 2018, p. 23. This remains the case as of 16 July 2021, confirmed by staff at Marine Scotland in email correspondence.

758 Marine Scotland (2015), p 24; Section 85, Marine (Scotland) Act 2010.

759 Ibid.

760 Ibid.

761 Section 88, Marine (Scotland) Act 2010.

762 https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/marine-protected-areas/scottish-marine-protected-area-advice

763 https://marine.gov.scot/

764 https://jncc.gov.uk/our-work/mpa-monitoring/

765 SIMCelt (2018), p. 47.

766 Scottish Government (2018), p. 23.

767 Ibid.

768 Ibid.

769 C. Williams, P. Taylor, and N. Underdown (2020). "A net positive effect? Assessing the impact on fishing opportunities within multiple-use MPAs. A case study from Scotland." In J Humphries and R.W.E. Clark (Eds.) *Marine Protected Areas, Science, Policy and Management* (Elsevier), 437-458, p. 440.

770 Email correspondence with staff at Marine Scotland, 16 July 2021.

771 Marine Scotland (2017) *Scottish MPA Monitoring Strategy*. Available at https://www.webarchive.org.uk/wayback/archive/20180528130830/http:/www.gov.scot/Topics/marine/marine-environment/mpanetwork/MPAmonitoring

772 Ibid, p. 6.

773 Ibid, p. 12.

774 Marine Scotland (2017), p. 10.

775 Scottish Government (2018) *Scottish MPA Network – Parliamentary Report* December 2018, p. 25.

776 https://www.gov.scot/policies/marine-environment/mpa-monitoring-strategy/

777 Section 103.

778 Section 124 MCAA 2009.

779 Scottish Government (2018), Annex 6.

780 Scottish Natural Heritage (2014); https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/national-designations/sites-special-scientific-interest-sssis

781 https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas

782 Scottish Government (2016) *Scottish MPA Socioeconomic Monitoring Report*. Marine Scotland Science, p. 14.

783 Ibid.

784 Ibid

785 Ibid

786 Ibid, p. 17

787 Ibid.

788 https://www.theguardian.com/environment/2022/oct/06/video-reveals-severe-dredging-damage-to-mpa-protected-area-of-scottish-seabed

789 Ibid.

790 Section 132.

791 Section 95.

792 Section 96.

793 Section 94.

794 See Articles 4 and 5 MSFD 2008 and Recital 13.

795 Foster, N. L., S. Rees, O. Langmead, C. Griffiths, J. Oates, and M. J. Attrill. (2017). Assessing the ecological coherence of a marine protected area network in the Celtic Seas. *Ecosphere* 8(2):e01688. 10.1002/ecs2.1688, p. 4.

796 Ibid, p. 3-4.

797 Ibid, p. 16.

798 https://www.ospar.org/organisation/contracting-parties

799 French Government (2021) *National Strategy for Protected Areas* 2030, January 2021.

800 Ministry of Ecology, Sustainable Development and Energy *National Strategy for the Creation and Management of MPAs*. Synthesis. Edition September 2015. Available at https://www.ecologie.gouv.fr/aires-protegees-en-france

801 https://ofb.gouv.fr/gerer-et-restaurer-les-espaces-proteges

802 *National Strategy for Protected Areas* (2021), p. 9; 17.

803 Ibid, p. 25.

804 Ibid, p. 65

805 Decree no. 2022-527 of 12 April 2022. Available at https://www.legifrance.gouv.fr/loda/id/JORFTEXT000045551000

806 IUCN France (2013) *Protected Areas in France: A diversity of tools for the conservation of biodiversity*, Paris, 44 pages, p. 14. Available at https://portals.iucn.org/library/sites/library/files/documents/2013-045.pdf

807 https://www.ecologie.gouv.fr/patrimoine-marin-et-aires-marines-protegees-francaises

808 A Guignier and M Prieur (2010) *Legal Framework for Protected Areas* IUCN-EPLP No. 81, p. 12.

809 Loi n° 2006-436 du 14 avril 2006 relative aux parcs nationaux, aux parcs naturels marins et aux parcs naturels régionaux, available at https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000609487/

810 Article L.331-1 Environment Code. For more information, see also http://www.parcsnationaux.fr/en

811 Guignier and Prieur (2010), p. 16.

812 SIMCelt (2018), p. 30.

813 Article 3, Order of 23 February 2007 on the fundamental principles applicable to natural parks. https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000274760/

814 Article L331-16 Environment Code; Guignier and Prieur (2010), p. 20.

815 Guignier and Prieur (2010), p. 20.

816 SIMCelt (2018), p. 30.

817 Article L332-1 Environment Code; https://ofb.gouv.fr/gerer-et-restaurer-les-espaces-proteges; Guignier and Prieur (2010), p. 29.

818 https://www.ecologie.gouv.fr/aires-protegees-en-france

819 *National Strategy for Protected Areas* (2021), p. 18; National MPA Strategy (2015), p. 14.

820 Article L411-1 Environment Code.

821 Article L334-3 Environment Code.

822 https://www.ecologie.gouv.fr/aires-protegees-en-france

823 Guignier and Prieur (2010), p. 26.

824 https://ofb.gouv.fr/les-reserves/la-reserve-naturelle-nationale-diroise; https://parc-marin-iroise.fr/

825 Guignier and Prieur (2010), p. 26-27.

826 https://ofb.gouv.fr/gerer-et-restaurer-les-espaces-proteges

827 https://www.ecologie.gouv.fr/aires-protegees-en-france

828 SIMCelt (2018), p. 30.

829 Arrêté du 3 juin 2011 portant identification des catégories d'aires marines protégées entrant dans le champ de compétence de l'Agence des aires marines protégées. Available at https://www.legifrance.gouv.fr/loda/id/JORFTEXT000024313030/

830 SIMCelt (2018), p. 35

831 Guignier and Prieur (2010), p. 16.

832 Ibid, p. 17.

833 Article R-331-4 Environment Code; Guignier and Prieur (2010), p. 16-17.

834 Guignier and Prieur (2010), p. 17.

835 SIMCELT (2018), 31; Guignier and Prieur (2010), p. 24.

836 See further Guignier and Prieur (2010), p. 24.

837 Article L-332-1 Environment Code.

838 Guignier and Prieur (2010), p. 30.

839 Ibid.

840 IUCN France (2013), p. 29.

841 Guignier and Prieur (2010), p. 31; 33.

842 SIMCelt (2018), p. 33.

843 Ibid, p. 34.

844 Ibid

845 Guignier and Prieur (2010), p. 29.

846 SIMCelt (2018), p. 34.

847 Ibid.

848 Guignier and Prieur (2010), p. 35.

849 See Technical Note of 8 January 2020 on Biotope Protection Orders, p. 7. https://www.ecologie.gouv.fr/sites/default/files/Note_technique_arretes_prefectoraux_protection_biotopes_et_habitats_naturels_8_janvier_2020.pdf

850 Environment Code, Articles L. 414-1 to L. 414.7 and R.414.1 to R.414-29.

851 Article L 334-1 Environment Code; https://www.ecologie.gouv.fr/patrimoine-marin-et-aires-marines-protegees-francaises

852 Loi n° 2016-1087 du 8 août 2016 pour la reconquête de la biodiversité, de la nature et des paysages, available at https://www.legifrance.gouv.fr/loda/id/JORFTEXT000033016237/

853 Created in January 2020 by Law no. 2019-773 of 24 July 2019.

854 https://ofb.gouv.fr/loffice-francais-de-la-biodiversite

855 https://ofb.gouv.fr/gerer-et-restaurer-les-espaces-proteges

856 First created in 2007, then updated in 2012. See generally Ministry for Ecology, Sustainable

Development, Transport and Housing *National Strategy for the Creation and Management of MPAs* March 2012. In January 2021, the Government created a new Strategy encompassing both terrestrial and marine protected areas.

857 *National Strategy for the Seas and Coast*, Decree 2017-222 of 23 February 2017, pp. 20-21. Available at **https://www.mer.gouv.fr/sites/default/files/2020-11/17094_National-Strategy-for-the-Sea-and-Coastal_EN_fev2017.pdf**

858 SIMCelt (2018), p. 56

859 Ibid and *National Strategy for the Seas and Coast* (2017).

860 P. 26.

861 SIMCelt (2018), p. 35.

862 Ibid

863 Ibid

864 Article L-331-8 of the Environment Code. Guignier and Prieur (2010), p. 17.

865 Guignier and Prieur (2010), p. 19.

866 Ibid.

867 Ibid.

868 IUCN France (2013), p. 29.

869 Guignier and Prieur (2010), p. 20.

870 SIMCelt (2018), p. 31.

871 Ibid, p. 32. See also Guignier and Prieur (2010), p. 32.

872 IUCN France (2013), p. 29.

873 SIMCelt (2018), p. 32.

874 Article 332-8 Environment Code.

875 Guignier and Prieur (2010), p. 31.

876 SIMCelt (2018), p. 32.

877 Guignier and Prieur (2010), p. 33.

878 Article L334-4 Environment Code.

879 Article L334-5 Environment Code.

880 Guignier and Prieur (2010), p. 27.

881 Article L334-5 Environment Code.

882 Ibid.

883 Guignier and Prieur (2010), p. 27.

884 SIMCelt (2018), p. 33.

885 Ibid.

886 **https://www.iucn.org/news/protected-areas/201706/iroise-jewel-frances-west-coast**

887 Article L411-1 Environment Code.

888 IUCN France (2013), p. 35.

889 Technical Note (2020), p. 15.

890 Ibid.

891 See Articles L414-1 to L414.7 and R414.1 to R414-29 of the Environment Code.

892 Guignier and Prieur (2010), p. 44.

893 Ibid.

894 Ibid; SIMCelt (2018), p. 34.

895 Oceana (2020), pp. 30; 34.

896 SIMCelt (2018), p. 25.

897 Ibid.

898 Guignier and Prieur (2010), p. 41.

899 Ibid.

900 Milieu Ltd Consortium (2018) *Article 16 Technical Assessment of the MSFD 2015 reporting on Programme of Measures France Report* February 2018, p. 163.

901 European Commission (2018a), p. 7.

902 Ibid, p. 14.

903 European Commission (2018b), p. 107.

904 European Commission (2018a), p. 17.

905 Foster et al (2017), p. 10.

906 European Commission (2018b), p. 103.

907 Oceana (2020), p. 12.

908 Ibid, p. 21

909 P. 32.

910 Ibid.

911 P. 33.

FAIR SEAS

At Fair Seas, we seek to protect, conserve and restore Ireland's unique marine environment. Our ambition is to see Ireland become a world leader in marine protection, giving our species, habitats and coastal communities the opportunity to thrive.

Fair Seas aims to build a movement of ocean stewardship across Ireland that energises and empowers people, to advocate for ambitious and robust legislation, provide impartial scientific data and research, and propose a network of effective well-managed marine protected areas.

The Fair Seas campaign is led by a coalition of Ireland's leading environmental non-governmental organisations and networks.

Irish Whale and Dolphin Group

Coastwatch

Coomhola Salmon Trust

BirdWatchIreland
protecting birds and biodiversity

Irish Wildlife Trust

Sustainable Water Network SWAN

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