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Baseline analysis of the existing capacities and needs for capacity building for Marine Strategy Framework Directive implementation in the Celtic Seas sub-region.

Organisation name of contractor: Coastal and Marine Research Centre

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Summary

The Celtic Seas Partnership is a pioneering project being delivered for and by the stakeholders of the Celtic Sea. WWF-UK, SeaWeb, University of Liverpool, Dublin Regional Authority (DRA) and the Natural Environment Research Council (NERC) are working in partnership to coordinate and facilitate the project which is bringing together sea users, industry, governments and the scientific community across the Celtic Seas to find ways of working together that will help achieve healthy and sustainable seas. The project is building on the success of a previous WWF-led project, PISCES. PISCES empowered stakeholders in the Celtic Sea to develop a set of guidelines for delivering the ecosystem approach.

The Celtic Seas Partnership aims to feed lessons learnt and best practice directly into marine management at a national and European level, offering marine stakeholders the opportunity to help shape and influence how their seas will be managed in the years to come. The focus of the project will be key European legislation that aims to conserve and protect Europe's seas while allowing sustainable use of our natural marine resources.

On behalf of WWF-UK, University College Cork's Coastal and Marine Research Centre (CMRC) has been contracted to undertake a formal scoping exercise to clarify the needs and specific areas of capacity development for MSFD implementation across three Member States in the Celtic Seas sub-region as defined by the Directive. The primary focus of this desk top study was to provide a comprehensive review of law, policy and institutional frameworks, as well as documents and academic literature referencing MSFD implementation. Accordingly, this review identifies and analyses requirements such as the legal, procedural and the necessary informational support of actions and indicators for successful implementation.

This report evaluates the existing situation in the Celtic Seas sub-region[1] and determines the current state of preparedness for transboundary management of marine ecosystems and MSFD implementation. Recommendations for capacity building are provided through the analysis of the existing conflicts and potential synergies between relevant policies, institutions and information resources for MSFD implementation across the region. This report strives to empower stakeholders through the provision of a sound baseline with accurate and up-to-date information on the current status of MSFD implementation, potential opportunities and suggested approaches for building capacities in their region and across the Celtic Seas.

It is evident that there are a number of national marine planning processes currently underway and at different stages throughout the United Kingdom and the pre-planning context for MSP in Ireland. On a similar note, this evaluation of MSFD implementation progress to-date in the United Kingdom, Ireland and France highlights that each Member State has implemented the legal and procedural requirements of preparatory steps in differing manners and using different time scales. This variance across the sub-region has the potential to impact the achievement of GES by 2020 across the Celtic Seas.

[1] The term *Celtic Seas sub-region* is used interchangeably with the *Celtic Seas* throughout this report.

Acronyms

CBD	Convention on Biological Diversity
CFP	Common Fisheries Policy
CMRC	Coastal and Marine Research Centre
CSD	Commission on Sustainable Development
CSP	Celtic Seas Partnership
DECLG	Department of Environment, Community and Local Government (Ireland)
DEFRA	Department of Environment, Food and Rural Affairs (United Kingdom)
DOENI	Department of Environment, Northern Ireland
DRA	Dublin Regional Authority
EA	Ecosystem Approach
EBM	Ecosystem-based management
EC	European Commission
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EEZ	Exclusive Economic Zone
EMODNET	European Marine Observation and Data Network
eNGO	Environmental Non Governmental Organisation
EU	European Union
GES	Good Environmental Status
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
HWM	High Water Mark
ICES	International Council for the Exploration of the Sea
IC[Z]M	Integrated Coastal [Zone] Management
IMO	International Maritime Organization
IMP	Integrated Maritime Policy
ISMF	Irish Sea Maritime Forum
JPOI	Johannesburg Plan of Implementation
LOSC	Law of the Sea Convention
MARINEXUS	*Mechanisms of Ecosystem Change in the Western Channel*
MARPOL	International Convention for the Prevention of Pollution from ships
MHW	Mean High Water

MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
MSY	Maximum Sustainable Yield
NERC	Natural Environment Research Council
OSPAR	Oslo and Paris Conventions for the Protection of the Marine Environment of the North-East Atlantic.
PISCES	Partnership Involving Stakeholders in the Celtic Sea
RAC	Regional Advisory Council
RFMOs	Regional Fisheries Management Organisations
RBMP	River Basin Management Plan
REZ	Renewable Energy Zone
SAC	Special Area of Conservation (Habitats Directive)
SEA	Strategic Environmental Assessment
SPA	Special Protection Area (Birds Directive)
TPEA	Transboundary Planning in the European Atlantic
UNCLOS	United Nations Convention on the Law of the Sea
UK	United Kingdom
WFD	Water Framework Directive
Wise	Water Information System for Europe

Introduction

The Challenge

Like oceans and seas globally, the health of the marine ecosystem in the Celtic Seas is under significant threat due to a variety of external pressures. The decline in the health of our seas and the species that depend on them is also having an impact on the livelihoods of communities and industries which rely on the sea and coastline. The European Seas cover an area that is larger than the European land mass, with a coastline three times that of Africa (Thiel, 2013)[2]. Many of the threats facing Europe's seas require cooperation between member states to tackle them effectively. The European Commission (EC) has developed its own marine policy framework in parallel to a set of international conventions that cover all Europeans seas. The Marine Strategy Framework Directive[3] (MSFD) was introduced by the EC to address this challenge and came into force in 2008 with the overall aim to promote sustainable use of the seas. The main goal is to achieve or maintain 'Good Environmental Status' (GES) in Europe's waters by 2020.

Through the contribution of the LIFE+ financial instrument of the EC, WWF-UK are working in partnership with University of Liverpool and the Natural Environment Research Council (NERC) in the UK, Dublin Regional Authority (DRA) in Ireland, and SeaWeb in France to deliver the Celtic Seas Partnership. It aims to support the implementation of European Union (EU) environmental and maritime policy, using a stakeholder-led approach to contribute to the development of marine strategies, particularly those that can contribute to the MSFD for the achievement of GES of marine waters.

The Celtic Seas Partnership project will improve policy and governance through testing, evaluating and disseminating actions and methodologies to offer best practice approaches for effective transboundary engagement based on an ecosystem approach to deliver the MSFD. The project actions will be developed by key marine stakeholders, in close collaboration with the scientific community and governments across the region. The project's overall objective is to *demonstrate successful approaches and best practice through multi-stakeholder collaboration to guide practical implementation of the MSFD and contribute to GES of the Celtic Seas sub-region*.

Wider context

Europe has been experiencing many of the inevitable negative impacts of the global down- turn since 2008. Over five years on, Member States are still implementing radical cuts in public spending and reform of public administration procedures. In the Celtic Seas sub-region, Ireland has been particularly impacted by the recession and has been adhering to strict conditions under an EU-IMF[4] bailout since 2010. Meanwhile, in the United Kingdom, Scotland is preparing for a national referendum is to be held in 2014 to decide whether or not Scotland is to become an independent country.

[2] Thiel, A. (2013). Scalar reorganisation of marine governance in Europe? The implementation of the MSFD in Spain, Portugal and Germany. Marine Policy (Vol 39) 322-332. http://www.sciencedirect.com/science/article/pii/S0308597X12002217

[3] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF

[4] European Union- International Monetary Fund. For more information see: http://www.imf.org/external/about.htm

The prevailing economic and political climate of the Celtic Seas sub-region is arguably more of a priority over environmental issues for the relevant Governments at this time. Delivering maximum results with limited means is therefore crucial. Increased cooperation and coordination will facilitate more cost-efficient operations at sea and optimise data usage. As new uses of the sea are being developed, it is crucial that Member States put in place stable planning systems favouring long-term sustainability and transboundary coherence. The Celtic Seas Partnership is timely in that it seems sensible to incorporate as much voluntary effort as possible by utilising the skills and knowledge of stakeholders (or interested parties) as a contribution to the successful implementation of the MSFD.

Aims and objectives

On behalf of WWF-UK, University College Cork's Coastal and Marine Research Centre (CMRC) has been contracted to undertake a formal scoping exercise to clarify the needs and specific areas of capacity development for MSFD implementation across three Member States in the Celtic Seas sub-region as defined by the Directive. The primary focus of this desk top study was to provide a comprehensive review of law, policy and institutional frameworks, as well as documents and academic literature referencing MSFD implementation. Accordingly, this review identifies and analyses requirements such as the legal, procedural and the necessary informational support of actions and indicators for successful implementation.

This report evaluates the existing situation in the Celtic Seas sub-region and determines the current state of preparedness for transboundary management of marine ecosystems and MSFD implementation. Recommendations for capacity building are provided through the analysis of the existing conflicts and potential synergies between relevant policies, institutions and information resources for MSFD implementation across the region. This report strives to empower stakeholders through the provision of a sound baseline with accurate and up-to-date information on the current status of MSFD implementation, potential opportunities and suggested approaches for building capacities in their region and across the Celtic Seas.

The Celtic Seas

Introduction

Located in the north-east Atlantic Ocean (see Figure 1), the Celtic Seas has a rich maritime heritage and supports a host of economically significant industries and activities. Like the Bay of Biscay, the Celtic Seas are widely exposed to the strong winter swells of the Atlantic Ocean. The European Atlas of the Seas[5] describes the region as a very windy stretch of water that has long been a busy shipping area, with intensive fishing activity- small scale in the south, and deep-sea fishing in the north. The Celtic Seas includes the English Channel, the Irish Sea, the Celtic Sea and the waters west of the British Isles. In terms of governance, this region basically corresponds to the Exclusive Economic Zones (EEZs) of the United Kingdom, Ireland and France.



Figure 1: Map illustrating the location of the Celtic Seas (as defined by the European Atlas of the Seas).

Marine Regions and sub-regions in the context of the MSFD

For the purpose of facilitating implementation of this Directive, marine regions and their sub-regions have been determined and designated by taking into account their specific hydrological, oceanographic and biogeographic features. According to the MSFD, there are four Marine Regions (North-East Atlantic Ocean, the Baltic Sea, the Mediterranean Sea and the Black Sea) and eight sub-regions in the EU. Wide variations exist between the semi-enclosed Baltic Sea and Mediterranean Sea to the open coasts of the North East Atlantic Ocean. While environmental challenges might be similar, the solutions are often different from region to region. Some regional seas are almost totally under the control of EU Member States whereas others like the Mediterranean, is shared with non-EU countries. The North-east Atlantic Marine Region is divided into four sub-regions; ***the Celtic Seas***, the Greater North Sea, Bay of Biscay and the Iberian Coast, and Macaronesia (Figure 2).

[5] http://ec.europa.eu/maritimeaffairs/atlas/seabasins/celticseas/long/index_en.htm

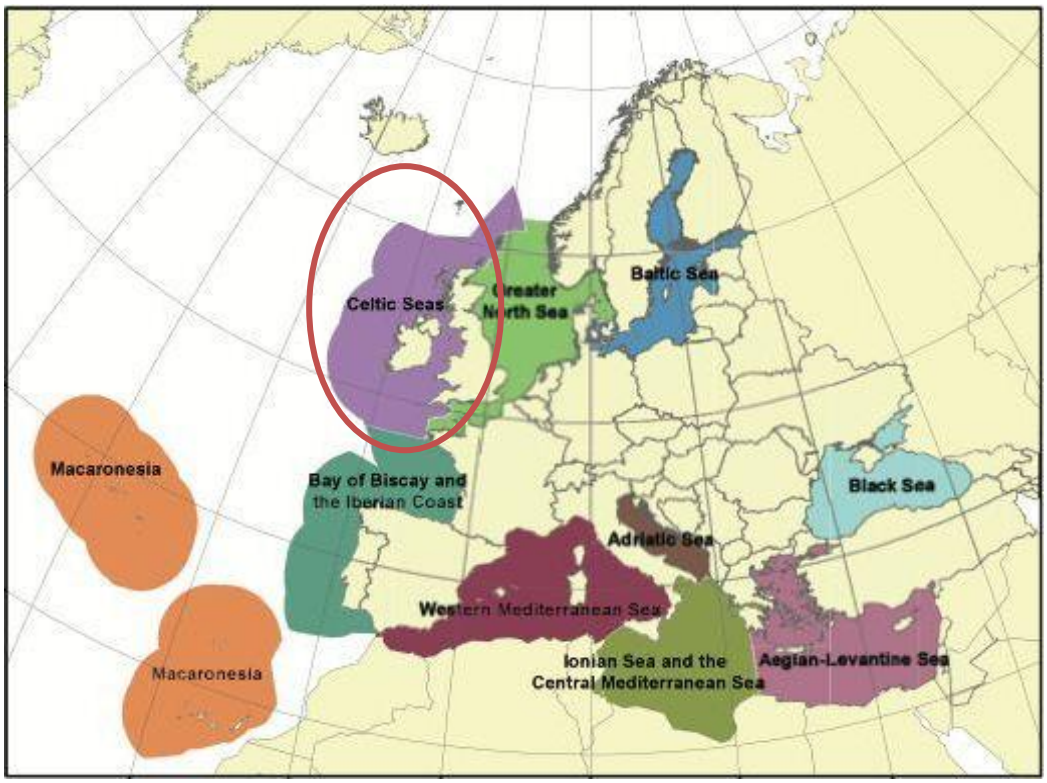


Figure 2: Map illustrating the location of the Celtic Seas sub-region (as defined by the MSFD).

The concept of the Celtic Seas MSFD sub-region

The Celtic Seas as defined under the MSFD is a relatively new concept for many stakeholders. The Celtics Seas MSFD sub-region differs greatly in geographical extent from the widely accepted view that it is the marine waters separating the south- east of Ireland from the south- west of England. To add to the confusion, according to the International Council for Exploration of the Sea (ICES, 2008)[6], the Celtic Seas comprise the shelf area west of Scotland (ICES Sub area VIa), the Irish Sea (VIIa), west of Ireland (VIIb), as well as the Celtic Sea proper (VIIf-k) and western Channel (VIIe) as depicted in Figure 3.

Unlike other Marine Regions such as the Baltic Sea, the Celtic Seas lack a cultural identity or emotional attachment amongst stakeholders due to the revised boundaries as designated by the MSFD. The Irish Sea in contrast, has a much more established identity and maritime history. There is also a clear lack of data and information readily available at this new scale, although progress has been made as a result of the preparatory phases of MSFD implementation from 2011-2012.

[6] ICES Advice 2008, Book 5. http://info.ices.dk/products/icesadvice/2008/ICES%20ADVICE%202008%20Book%205.pdf

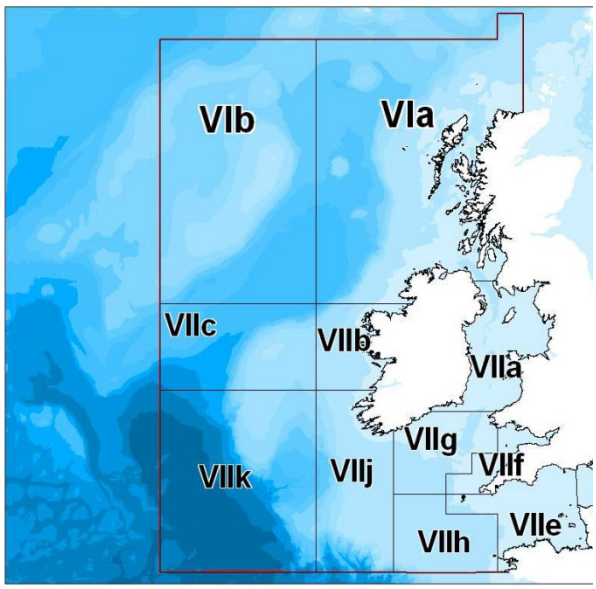


Figure 3: Map illustrating the location of the ICES Celtic Seas sub-divisions (Nolan et al., 2012)[7]

Ecoregion overview

An ecoregion is chosen as an individual regional area for which ecological objectives can be defined. The boundaries should be defined in terms of the biogeographical and oceanographic characteristics of the area but should also take into account the political, social, economic and management divisions. As a result there is still uncertainty as to whether the western part of the English Channel should be included in the Celtic Sea or North Sea ecoregions.

Throughout the Celtic Seas ecoregion the continental shelf is of variable width. The Celtic Sea south of Ireland is an extended shelf within which most of the area is shallower than 100 m. It is limited to the west by the slope of the Porcupine seabight and the Goban Spur. To the west of Ireland, the Porcupine Bank forms a large extension of the shelf limited to the west by the Rockall Trough. The transition between the Porcupine Bank and the trough is a steep and rocky slope along which reefs of deep-water corals occur. Further north to West of Scotland the slope of the Rockall Trough is closer to the coast line, particularly off NW Ireland, and the Hebrides. West of the shelf break is the Rockall Plateau with depths of less than 200 m. The shelf area itself contains mixed substrates, generally with soft sediments (sand and mud) in the west and tending to rockier pinnacle areas to the east. The Irish Sea is shallow (less than 100 m deep in most places) and largely sheltered from the winds and currents of the North Atlantic. The English Channel is a shallow (40 100 m) part of the continental shelf; its hydrology is marked by a west to east general circulation disrupted by a strong tidal current (ICES, 2008)[8].

Background to the Marine Strategy Framework Directive (2008/56/EC)

The EU's 6th Environmental Action Programme[9] (2002-2012) identified the protection of the marine environment as a key policy concern. Following the publication of the Thematic Strategy on the Protection and Conservation of the Marine Environment[10] in 2005, the EU initiated a process of transition towards a more strategic approach to protection of the marine environment. However, in

[7] Nolan, C. Kelly, E., Dransfeld, L., Connolly, P.1, van Hoof, L., Hegland, T., Aanesen, M., Armstrong, C.4 & Raakjaer, J. (2012). Making European Fisheries Ecosystem Plans Operational (MEFEPO). A technical review document on the ecological, social and economic features of the North Western Waters region. http://vbn.aau.dk/files/44028431/Technical_Report.pdf

[8] ICES (2008). Ices Advice Book 5: Celtic Sea and West of Scotland http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2008/2008/5.1-5.2%20Celtic%20Sea%20Ecosystem%20overview.pdf

[9] http://ec.europa.eu/environment/newprg/index.htm

[10] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0504:FIN:EN:PDF

order to achieve the objectives of this strategic approach, it was considered essential that a binding legal instrument was required, ambitious in its scope but not overly prescriptive in its tools (Marine Board- ESF, 2011)[11].

After a long development and approval process, the Directive establishing a Framework for Community Action in the field of Marine Environmental Policy (Marine Strategy Framework Directive or MSFD) was adopted in June, 2008. One of the key objectives of the Directive is to contribute to the fulfilment of international commitments by both the EU and the Member States in the field of protection of marine waters. The Directive provides the legal impetus for the EU to protect its seas and oceans as part of an integrated strategy for the sustainable management and use of our seas. The Directive was due to be transposed into national legislation by the relevant Member States by 15 July 2010. It strives to establish an integrated approach to maritime activities and provide a long-term policy vision for Europe's marine environment. The key concepts of the MSFD are outlined in Figure 4.

Good Environmental Status (GES): The overarching goal is to achieve or maintain GES of the EU's marine waters by 2020, thus protecting the resources on which marine-related economic and social activities depend.

Ecosystem Approach: The Directive foresees an ecosystem-based approach to the management of all human activities that have an impact on the marine environment.

Regional Approach: The Directive foresees a regional approach to MSFD implementation and establishes European Marine Regions on the basis of geographical and environmental criteria. Member States must adopt *common approaches* by:

- Working to a common and ambitious timeline to meet GES by 2020,
- Developing Marine Strategies in cooperation with neighbouring countries using existing regional cooperation structures,
- Adopting an adaptive management approach so that strategies are kept up-to-date and reviewed on six year cyclical basis.

Figure 4: Key concepts of the MSFD (adapted from European Commission, 2011)[12].

These key concepts are also addressed or even originate from international agreements or political initiatives. These international instruments, to which the EU and Member States are Party, need to be implemented in the legal order of the EU and its Member States. Such international instruments can be of a global nature, such as the Convention on Biological Diversity (CBD) or of a regional nature, such as the relevant regional sea conventions (e.g. OSPAR, in the case of the Celtic Seas).

GES Descriptors

The MSFD lists 11 descriptors to guide evaluation of GES (Figure 5). GES is not necessarily a pristine state; it allows for the sustainable use of marine resources. The most relevant maritime and coastal activity pertaining to each respective descriptor is also included to help clarify their relevance to sectors and stakeholders operating in the Celtic Seas sub-region.

[11] Marine Board- ESF, (2011). Monitoring Chemical Pollution in Europe's Seas: Programmes, Practices and Priorities for Research. http://www.marineboard.eu/images/publications/Monitoring%20Chemical%20Pollution-71.pdf
[12] European Commission (2011) Seas for Life: Protected- Sustainable- Shared European Seas by 2020. http://bookshop.europa.eu/en/seas-for-life-pbKH3111249/

Descriptor No.	MSFD Descriptor Name	Relevant Maritime and Coastal Activities
1.	Biological diversity (species and habitats maintained	Shipping; ports; tourism and recreation;
2.	Non-indigenous species (levels are minimised)	Shipping; aquaculture; tourism and recreation;
3.	Population of commercial fish/shellfish (within safe biological limits - healthy stocks)	Fisheries
4.	Elements of marine food webs (all elements at normal abundance and diversity)	Fisheries
5.	Eutrophication (excessive nutrient input from human activities is minimised)	Shipping; tourism; oil and gas; waste water treatment
6.	Sea floor integrity (species, habitats and structures and functions are not adversely affected)	Fisheries; shipping and; tourism and recreation; coastal infrastructure; marine aggregates
7.	Alteration of hydrographical conditions (changes in physical conditions of waters does not affect marine ecosystems)	Coastal infrastructure
8.	Contaminants (levels do not give rise to pollution effects)	Shipping and ports
9.	Contaminants in fish and seafood for human consumption (levels do not exceed standards)	Shipping and ports; tourism and recreation
10.	Marine litter (quantities do not cause harm to the environment)	Shipping and ports; fisheries; aquaculture; tourism and recreation
11.	Introduction of energy, including underwater noise (levels do not affect the environment)	Shipping and ports; fisheries; offshore wind energy; oil and gas; dredging

Figure 5: Marine Strategy Framework Descriptors (Annex 1) and their related maritime and coastal activities (after Lago, 2012)[13] .

[13] Lago, M. (2012) in Spiteri, C. (2012: 37). Development of Marine & Maritime Indicators in support of MSFD Implementation. http://www.perseus-net.eu/assets/media/PDF/Chios%20Training/277.pdf

Building on existing legislation

International instruments

On an international level, the MSFD responds to the EU's international obligations as set out in a number of Conventions. The Directive specifically refers to the following instruments, namely:

- The World Summit on Sustainable Development,
- The Convention on Biological Diversity (CBD),
- United Nations Convention on the Law of the Sea (UNCLOS).

Milieu Ltd Consortium and DG Environment (2012)[14] provide a detailed critical analysis on the contribution of the MSFD to the implementation of existing international obligations, commitments and initiatives (including those of a sectoral nature) of the Member States in the sphere of environmental protection in marine waters. The key findings of this analysis of most relevance to the Celtic Seas Partnership are summarised in Figure 6.

International agreements with a global scope	International instruments of a sectoral nature
United Nations Convention on the Law of the Sea (UNCLOS)	International Convention for the Prevention of Pollution from Ships as amended by its 1987 Protocol (MARPOL)
Agenda 21- The United Nations Programme of Action from Rio (Chapter 17)	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)
Rio Declaration on Environment and Development	Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
Johannesburg Plan of Implementation (JPOI)	Convention on the Conservation of Migratory Species of Wild Animals
Commission on Sustainable Development (CSD)	Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)
General Assembly Resolution 65/37 on Oceans and the law of the sea	UNECE Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Kiev SEA Protocol)
Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)	UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matter (Aarhus Convention)
UN Regular Process for global reporting and assessment of the state of the marine environment, including socio-economic aspects.	
Convention on Biological Diversity (CBD) and its implementing COP Decisions dealing in particular with protection of the marine environment.	

[14] Milieu Ltd and DG ENV (2012). Summary database of EU-funded research projects on the marine environment. Presented at the Sixth Meeting of the Marine Strategy Coordination Group (MSCG/6/2012/5.a), 21-22 February 2012, Brussels.

Figure 6: *Summary of the key international instruments, agreements and conventions of most relevance to the Celtic Seas Partnership and the MSFD* (adapted from European Commission, 2013[15]; European Commission, 2012[16]).

Regional governance

The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) is a long established instrument whose history dates back to 1972. The OSPAR Commission, comprising representatives from 15 countries and the EU, cooperate to conserve marine ecosystems and safeguard human health in the North-East Atlantic by preventing pollution. The key objective of OSPAR is to protect the marine environment from the adverse effects of human activities and contribute to sustainable use of the seas. In 2010, OSPAR adopted the North-East Atlantic Strategy.

OSPAR is the legal instrument through which the MSFD will be regionally coordinated for the determination of GES, and for the establishment of environmental targets and indicators in the Celtic Seas Partnership project area. The OSPAR Quality Status Report (QSR) 2010[17], together with its underlying reports, provided the primary basis for coordination of national initial assessments across the North-East Atlantic OSPAR Contracting Parties which are also EU Member States. The QSR provides an overarching summary or environmental status across the Region and the five sub-regions:

- Region I: Arctic Waters,
- Region II: Greater North Sea,
- **Region III: Celtic Seas**,
- Region IV: Bay of Biscay and Iberian Coast, and
- Region V: Wider Atlantic.

European instruments

The MSFD builds on a host of existing EU instruments and covers specific elements of the marine environment not addressed in other policies. These instruments will also influence the achievement of GES as required by 2020. The key EU legislation and policies directly relevant to the MSFD are described in Figure 7.

EU Integrated Maritime Policy (IMP)

In an attempt to create a coherent and integrated regulatory and governance structure, the IMP was launched in 2007 setting out a framework for a holistic approach to address economic and sustainable development on a pan-European basis. A first aim of the IMP was to raise the visibility of Europe's maritime identity and economic potential among Europeans. The IMP strives to integrate a range of diverse sectoral policies including fisheries, aquaculture, energy, tourism, maritime transport, research as well as protection of the marine environment.

Blue Growth

The EU issued a Regulation in 2011[18] establishing a Programme to support the further development of the IMP. A Progress Report was published in 2012 concerning the progressive adoption of work

[15] International Issues http://ec.europa.eu/environment/international_issues/agreements_en.htm

[16] Contribution of the Marine Strategy Framework Directive (2008/56/EC) to the implementation of existing obligations, commitments and initiatives of the Member States or the EU at EU or international level in the sphere of environmental protection in marine waters.
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0662:FIN:EN:PDF

[17] OSPAR Quality Status Report (2010) http://qsr2010.ospar.org/en/index.html

[18] Regulation 1255/2011 http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:321:0001:0001:EN:PDF

programmes focussing on *Blue Growth* (European Union, 2012)[19]. *Blue Growth* promotes economic development through existing, emerging and potential activities such as short-sea shipping, coastal tourism, offshore wind energy, desalination and the use of marine resources in the pharmaceutical and cosmetic industries.

Integrated Maritime Policy and the MSFD

In terms of environmental objectives, the IMP emphasises the need for the Ecosystem Approach to aid fish stock recovery, moving towards multi-annual planning, implanting Maximum Sustainable Yield (MSY) approaches to management, and eliminating Illegal, Unregulated and Unreported (IUU) fishing. The MSFD is the environmental pillar of the cross-cutting IMP, which is aimed at ensuring the environmental sustainability of the economic pillar of the Policy. The Directive epitomises a milestone in European marine legislation in its endeavour to establish an ecosystem-based approach to marine environmental management in European waters, on both the national and regional levels. In combination with the IMP, this Directive aspires to join the ranks of overarching Ocean Plan type programs in Australia, the US, Canada, Japan and Norway (De Santo, 2010)[20].

EU Instrument	Key Objectives
Water Framework Directive (2000/60/EC2)	Adopted in 2000 and overlaps regionally and thematically with the MSFD, this Directive aims to achieve 'Good Ecological Status' for all EU surface and ground-waters by 2015.
Habitats and Birds Directive (92/43/EEC), (2009/147/EC)	Closely linked to the MSFD's Marine Protected Areas and aims to maintain or restore vulnerable habitats and species under the Natura 2000 network.
Environmental Impact Assessment (EIA) Directive (85/337/EEC as amended by Directive 97/11/EC)	Member States are required to assess the anticipated environmental effects of developments before they commence. An Appropriate Assessment and Natura Impact Statement are also required if a proposed project could have a significant effect on a designated site such as a Special Protected Area (SPA) or Special Area of Conservation (SAC).
Strategic Environmental Assessment (SEA) Directive (2001/42/EC)	SEA is the process of incorporating strategic environmental considerations in the preparation of plans and programmes prior to their final adoption. This Directive is particularly pertinent to hydrocarbon exploration and renewable energy developments in the marine environment.
Bathing Waters Directive (2006/7/EC)	This Directive establishes a new classification system for bathing water quality based on four classifications "poor", "sufficient", "good" and "excellent" and generally requires that a classification of 'sufficient' be achieved by 2015 for all bathing waters.
Shellfish Water Directive (2006/113/EC)	Along the same basis of the MSFD, this Directive was established to protect the habitats of shellfish and sets down physical, chemical and microbiological requirements

[19] European Union (2012). Progress of the EU's Integrated Maritime Policy. COM (2012) 491 final. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0491:FIN:EN:PDF

[20] De Santo, E.M. (2010). Whose science? Precaution and power-play in European marine environmental management. Marine Policy Volume 34, Issue 3, May 2010, Pages 414–420 http://dx.doi.org/10.1016/j.marpol.2009.09.004

	that designated waters must either comply with or improve by the establishment of pollution reduction programmes.
Urban Waste Water Treatment Directive (91/271/EEC)	The objective of this Directive is to protect the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors (see Annex III of the Directive) and concerns the collection, treatment and discharge of domestic waste water, mixture of waste water and waste water from these industrial sectors'.
Nitrates Directive (91/676/EEC)	Concerning the protection of waters against pollution by nitrates from agricultural sources – has the objective of reducing water pollution caused or induced by nitrates from agricultural sources.
Common Fisheries Policy (CFP)	Currently undergoing a process of reform, the main objective of the CFP is to ensure sustainable exploitation of Europe's fisheries resources. It aims to reduce the negative impacts of fisheries on the environment and develop an integrated approach for the protection of the ecological balance of our oceans as a sustainable source of wealth and well-being for future generations. Therefore, the CFP plays an important role in the implementation of the MSFD and particularly for Descriptor 3 regarding populations of commercially exploited fish and the objective that biologically safe populations of commercial fish species are established[21].
Recommendation on the implementation of Integrated Coastal Zone Management (ICZM) (2002/413/EC)	ICZM is a dynamic, multidisciplinary and interactive strategy that promotes sustainable management within coastal zone including waters and lands. The Recommendation formulated eight key principles for ICZM[22]; however, it completely relies on voluntary measures by Member States.
Proposal for a Directive establishing a framework for Maritime Spatial Planning and Integrated Coastal Management COM (2013) 133 final	Published earlier in 2013, the main purpose of the proposed Directive is to promote the sustainable growth of maritime and coastal activities and the sustainable use of coastal and marine resources by establishing a framework for the effective implementation of maritime spatial planning in EU waters and integrated coastal management in the coastal areas of Member States.

Figure 7: Summary of the key EU legislation and policies relevant to the Celtic Seas Partnership project and the MSFD.

Water Information System for Europe (WISE)

Under the MSFD, Member States are required to monitor the measures implemented to reach GES and report on each of the steps taken to establish the Marine Strategies. Sharing data on the state of marine waters and on the pressures and impacts from human activities, climate change, eutrophication, and physical, biological and chemical stressors will ensure there is no duplication of

[21] DEFRA (2012a). What the Marine Strategy Directive Means for the Fishing Industry. Factsheet 4. http://archive.defra.gov.uk/environment/marine/documents/legislation/msfd-factsheet4-fishing-industry.pdf

[22] For further details refer to European Commission (2006). Evaluation of ICZM in Europe. http://ec.europa.eu/environment/iczm/pdf/evaluation_iczm_summary.pdf

reporting effort and reduce the administrative burden. In 2007, the European Commission and the European Environment Agency launched the Water Information System for Europe (WISE)[23], a gateway to information on European water issues for the general public and stakeholders. This system has been extended to cover marine waters. WISE-Marine, currently in development, will offer Member States a common platform to facilitate their reporting. It will also allow other actors such as NGOs, intergovernmental organisations, researchers and universities and the general public to access this data.

Sea basin strategies

The IMP seeks to promote growth and development through the development of sea basin-specific strategies that exploit the strengths and address the weaknesses of each large sea region in the EU. Each sea region has or will have its own strategy In the Atlantic Area, for example, a separate Action Plan was adopted in May 2013[24]. This seeks to deliver the over-arching objectives of the strategy as well as contribute to the Blue Growth strategy in the participant countries: France, Ireland, Portugal, Spain and the United Kingdom (three of which are participating in the Celtic Seas Partnership project). To develop the Action Plan, consultations took place through the Atlantic Forum which enabled Member States, the European Parliament, regional and local authorities, civil society and industry to get involved. This was supplemented by a series of dedicated workshops, an online call for suggestions and contributions from the Member States and regional authorities.[25] The priority objectives for the Atlantic Area are:

- to promote entrepreneurship and innovation;
- to protect, secure and develop the potential of the Atlantic marine and coastal environment;
- to improve accessibility and connectivity; and,
- to create a socially inclusive and sustainable model of regional development.[26]

Within these priority areas specific objectives are detailed, many of which mirror other EU policy objectives, such as the achievement of GES, contribution to Maritime Spatial Planning (MSP) and Integrated Coastal Management (ICM) implementation through exchange of best practice and delivery of CFP objectives (O'Hagan, 2013)[27]. This Action Plan will allow the strategic use of EU structural funding to support maritime growth for the period 2014-2020. A key consideration of this Atlantic Strategy is that its proposed time-frame coincides with some of key milestones for successful implementation of the MSFD in to achieve or maintain GES in Europe's seas by 2020.

Existing status in the Celtic Seas sub-region

Introduction

The following section aims to evaluate the existing situation in the three Member States bordering the Celtic Seas sub-region, the United Kingdom, Ireland and France through a critical evaluation of their progress to-date in relation to the preparation of marine strategies in accordance with MSFD

[23] For further details refer to: http://water.europa.eu/
[24] Action Plan for a Maritime Strategy in the Atlantic area: delivering smart, sustainable and inclusive growth COM(2013) 279 final.
[25] COM(2013) 279 final, p.2.
[26] COM(2013) 279 final, pp.4-8.
[27] O'Hagan, A. (2013). Comprehensive review of law, policy and institutional frameworks that cover the current approaches to interactions between aquaculture, fisheries and other sectors and identifying barriers and opportunities for more efficient management. COEXIST (FP7) project deliverable.
http://www.coexistproject.eu/images/COEXIST/deliverables/WP2/COEXIST_245178_D2.5_FINAL.pdf

implementation process. By focusing on the procedural and reporting progress to-date, this analysis will identify the current state of preparedness for the application of the ecosystem approach and implementation of the MSFD at a sub-regional level.

Transposing regulations of the MSFD

The MSFD came into effect on 17 June, 2008. The deadline for its transposition into the domestic law of Member States was 15 July 2010. Two of the three Member States in the Celtic Seas sub-region namely Ireland and France, failed to achieve this deadline.

United Kingdom

The UK transposed the MSFD into national law through the Marine Strategy Regulations (2010)[28], which apply to whole of the UK marine area (includes the territorial seas and offshore area adjacent to the UK). The devolved administrations[29] in Scotland, Wales and Northern Ireland participated in the transposition process which was led by the UK Department of Environment, Food and Rural Affairs (DEFRA). It is also important to note that the UK Government and Devolved Administrations have already committed to taking measures which will improve the state of the UK's marine environment, most notably through the Marine and Coastal Access Act (2009)[30] (also referred to as the Marine Act), the Marine (Scotland) Act (2010)[31], and the recently transposed Northern Ireland Marine Bill (2013)[32].

Ireland

Following a formal notice from the European Commission to the Irish Government in November 2010 and a Reasoned Opinion in April 2011, the MSFD was finally transposed into Irish law through the European Communities (Marine Strategy Framework) Regulations 2011[33] on 31 May, 2011.

France

Similarly, having failed to meet the MSFD transposition deadline, France received a formal notice from the European Commission in November 2010 and a reasoned opinion on 6 April 2011. The Directive was transposed into French law on 6 May 2011 under Decree No. 2011-492 on the action plan for the marine environment through the Environmental Code (articles L. 219-9 to L. 219-18 and R. 219-2 to R. 219-17)[34] .

Competent Authorities

The relevant government authorities (or 'Competent Authorities' as referred to in to MSFD) for the Member States in the Celtic Seas sub-region are:

- Department for the Environment, food and Rural Affairs (DEFRA) in the United Kingdom,
- Department of the Environment, Community and Local Government (DECLG) in Ireland, and
- Ministry of Ecology, Sustainable Development, Transport and Energy in France.

[28] http://www.legislation.gov.uk/uksi/2010/1627/contents/made
[29] Further details are provided on the implications of UK Devolution can be found on page 20.
[30] http://www.legislation.gov.uk/ukpga/2009/23/contents
[31] http://www.legislation.gov.uk/asp/2010/5/contents
[32] http://www.doeni.gov.uk/index/protect_the_environment/natural_environment/marine_and_coast/marine_policy/northern_ireland_marine_bill.htm
[33] (Marine Strategy Framework) Regulations 2011, Ireland. http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/RHLegislation/FileDownLoad,26552,en.pdf
[34] Décret n° 2011-492 du 5 mai 2011 relatif au plan d'action pour le milieu marin http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000023950589&dateTexte=&categorieLien=id

UK Devolution: Implications for MSFD and the Celtic Seas Partnership

Although the Marine Strategy Regulations (2010) transposed the MSFD for the whole of the UK, the Marine Acts apply in different ways across the UK due to differences in the legislative powers of the devolved administrations. The Marine Acts specify the appropriate authorities for marine planning and nature conservation in the different regions of the UK (Figure 8).

Marine Region	Appropriate authority for marine plans	Appropriate authority for nature conservation
England inshore	Secretary of State	Secretary of State
England offshore	Secretary of State	Secretary of State
Wales inshore	Welsh Ministers	Welsh Ministers
Wales offshore	Welsh Ministers	Secretary of State
Northern Ireland inshore	Department of the Environment (Northern Ireland) (with agreement of the Secretary of State in relation to retained functions)	Department of the Environment (Northern Ireland) (with agreement of the Secretary of State)
Northern Ireland offshore	Department of the Environment (Northern Ireland)	Secretary of State
Scotland inshore	Scottish Ministers	Scottish Ministers
Scotland offshore	Scottish Ministers	Scottish Ministers

Figure 8: The appropriate authorities under the Marine Act for marine planning and nature conservation (National Assembly for Wales, 2012)[35].

It is important to highlight that whilst there might be one overall process and timetable for MSFD implementation for UK marine waters, in practice the individual contributions of the devolved UK countries to this EU Directive are set within the wider existing UK marine policy context. Since the establishment of the Marine and Coastal Act in 2009[36], a national policy implementation process has been underway in the devolved administrations, with each following different timetables and involving a large number of different agencies and stakeholders.

However, despite these variations, it is encouraging from a Celtic Seas Partnership perspective that the UK and Devolved Administrations worked in collaboration to publish the Marine Policy Statement (DEFRA, 2011)[37] and the initial environment status assessment and proposals for GES (DEFRA, 2012b)[38].

[35] National Assembly for Wales (2012). The Marine Strategy Framework in Wales: September 2012. http://www.assemblywales.org/12-040.pdf

[36] http://www.legislation.gov.uk/ukpga/2009/23/pdfs/ukpga_20090023_en.pdf

[37] The Marine Policy Statement is a framework for preparing Marine Plans and taking decisions affecting the marine environment. https://www.gov.uk/government/publications/uk-marine-policy-statement

[38] DEFRA (2012b). Marine Strategy Part One: UK Initial Assessment and Good Environmental Status. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf

Defining the extent of marine waters

Each of the relevant Member States in the Celtic Seas sub-region has defined the extent of their marine waters in line with the obligations set under the MSFD. For the purpose of the Directive 'marine waters' are defined as the:

> *seabed and subsoil on the seaward side of the baseline from which the extent of territorial waters is measured extending to the outmost reach of the area where a Member State has and/or exercises jurisdictional rights, in accordance with the UNCLOS.*

United Kingdom

The Directive covers the extent of the marine waters over which the UK claims jurisdiction. This area extends from the landward boundary of coastal waters as defined by the Water Framework Directive[39] (which is equivalent to Mean High Water Springs) to the outer limit of the UK Renewable Energy Zone (REZ). It also includes the area of the Continental Shelf beyond the REZ over which the UK has a claim[40]. As Figure 9 indicates, in addition to the Celtic Seas sub-region, the UK's waters include a part of the Greater North Sea sub-region which is also part of the North-East Atlantic Ocean Marine Region. However, the UK will have one marine strategy covering the entire marine waters.

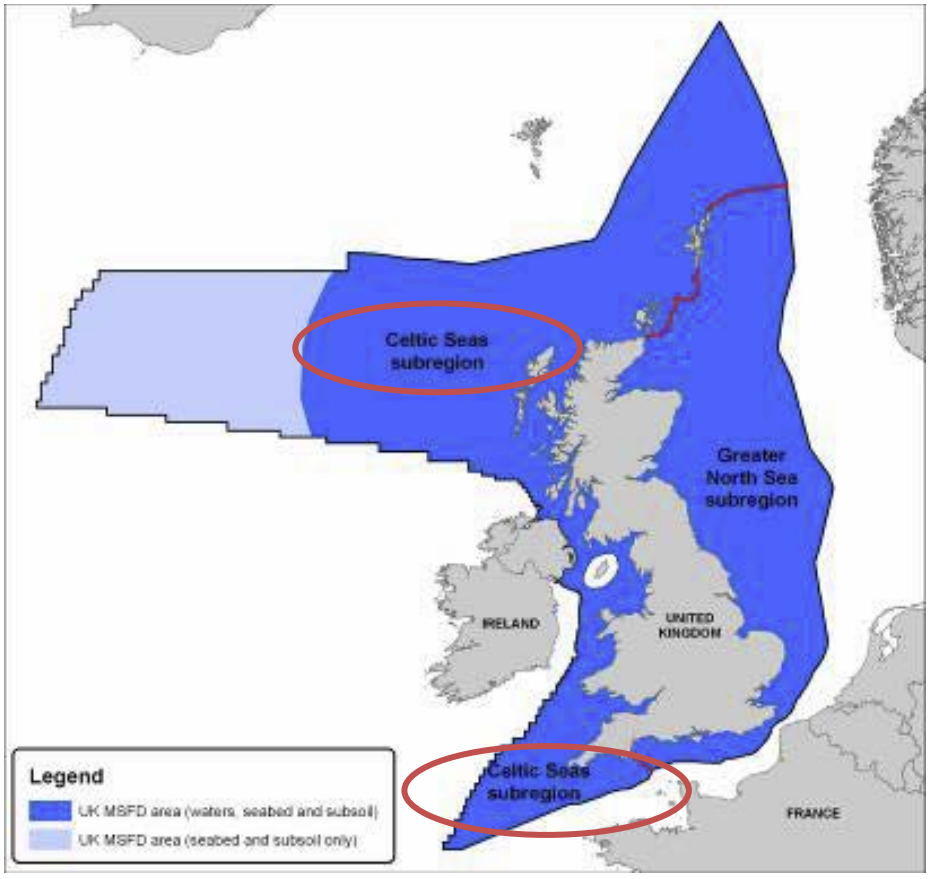


Figure 9. The extent of the United Kingdom's marine areas (DEFRA 2012b)[41]

[39] Linkages with the Water Framework Directive are discussed later in this report on pg.35
[40] DEFRA (2012b). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf
[41] *Op. Cit.,* note 39.

Ireland

The extent of the Ireland's marine waters can be seen in Figure 10. For the purposes of the MSFD Ireland's assessment area is deemed to consist of the combined spaces of Area 1 and Area 2, a total of 490,000km^2. Ireland's Exclusive Economic Zone is shown as Area 1, while Ireland has a limited form of jurisdiction over the natural resources located in, on or under the seabed of an area of the continental shelf adjoining the Porcupine Abyssal Plain (Area 2). Area 3 and 4 are currently disputed with neighbouring jurisdictions and are yet to be determined under international law.

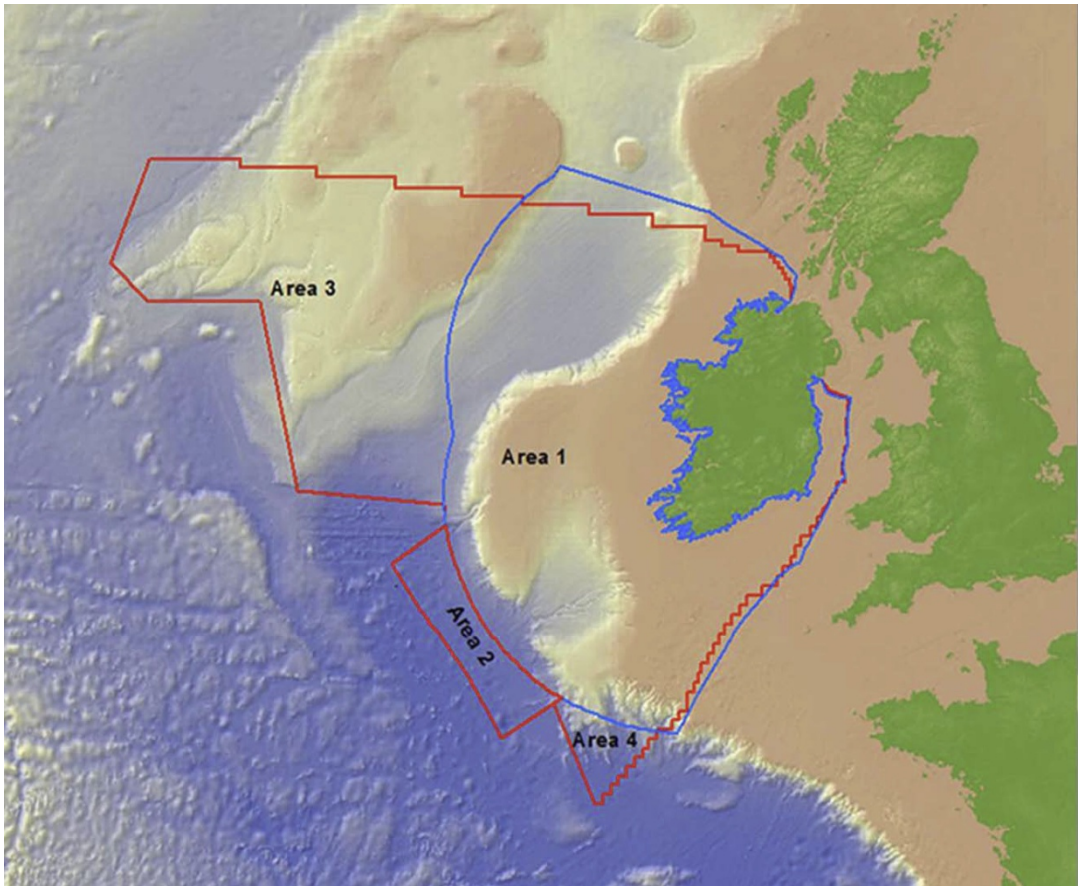


Figure 10. The extent of Ireland's marine areas including the MSFD Assessment Area (DECLG, 2012)[42].

France

With a total maritime zone of 11 million km^{2,} France has the second largest marine area in the world (Ministry of Ecology, Sustainable Development, Transport and Housing, 2012)[43]. The Directive applies to waters around the French mainland, which are divided into four marine sub-regions: the English Channel, North Sea; Celtic Seas; the Bay of Biscay; and the Western Mediterranean Sea (Figure 11).

[42] Department of Environment, Community & Local Government (2012). Ireland's Marine Strategy Framework Directive Implementation. http://www.environ.ie/en/PublicationsDocuments/FileDownLoad,32063,en.pdf

[43] Ministry of Ecology, Sustainable Development, Transport and Housing (2012). Towards good environmental status in the marine environment. http://www.developpement-durable.gouv.fr/IMG/pdf/DCSMM_GB.pdf

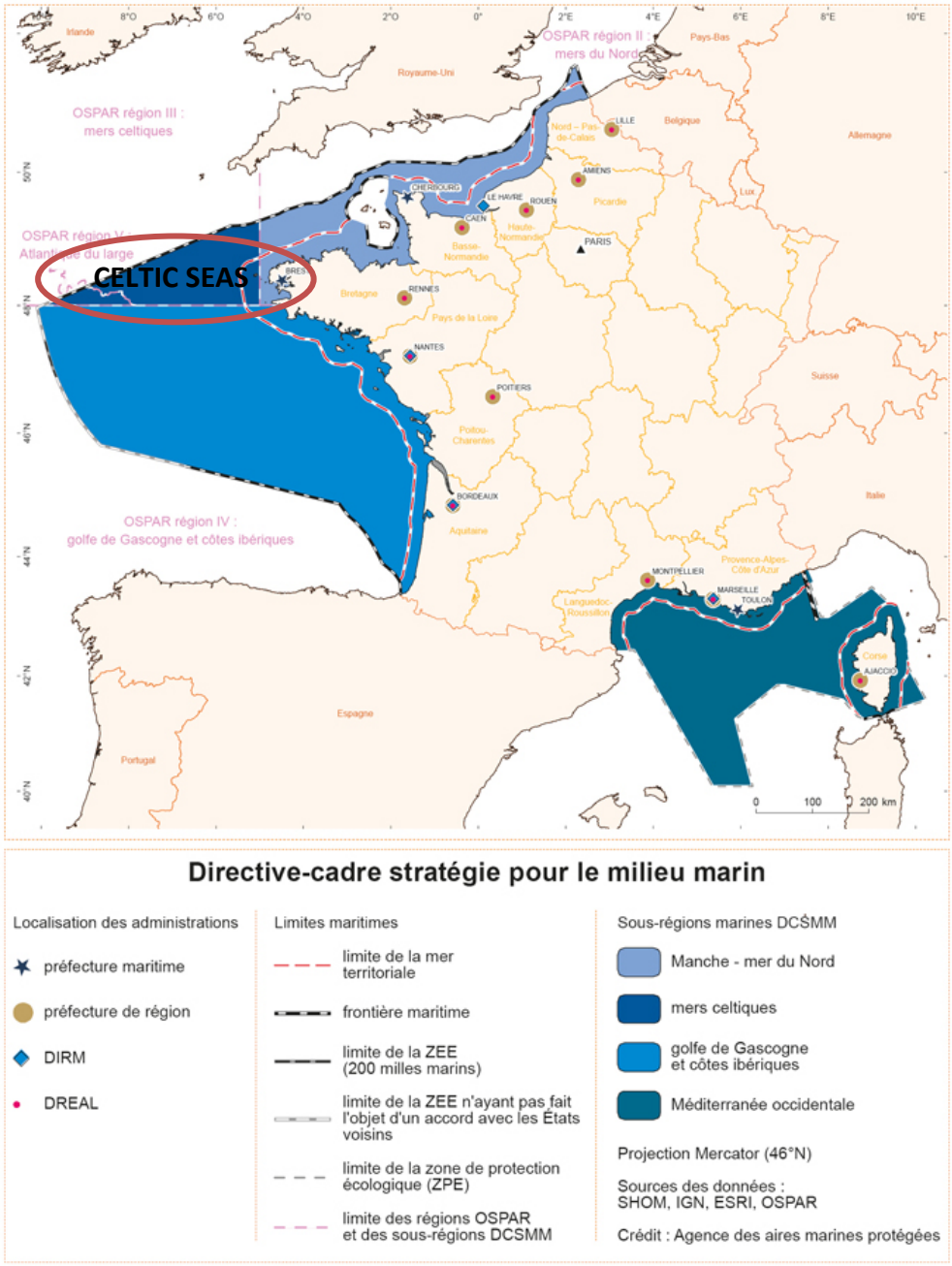


Figure 11. The extent of the French marine waters in the Celtic Seas (Ministry of Ecology, Sustainable Development and Energy (2012).

The French Celtic Seas feature a shelf that slopes gently down towards the south-west and ends on the west by a steep slope. The island of Ushant and its vicinity are the only emerged land and coastal areas[44] (Ministry of Ecology, Sustainable Development and Energy, 2012). This offshore area depicted in Figure 11 is the smallest of the French marine waters under the MSFD and potentially problematic in terms of identification of the relevant stakeholders that operate in these waters.

MSFD limits per jurisdiction:

Marine waters as defined by the MSFD, also include the seabed and subsoil under the water column, The MSFD includes Coastal Waters (as defined by the Water Framework Directive), but does not

[44] Ministry of Ecology, Sustainable Development and Energy (2012). Initial Assessment of Marine Waters: Marine subregion Celtic Seas. Summary for the public, July 16, 2012.

include WFD Transitional Waters (e.g. estuaries, sea lochs, coastal lagoons). [1] The requirements of the MSFD and WFD overlap in WFD Coastal Waters. These extend from Mean High Water out to 1 nautical mile in England, Wales and Northern Ireland, and 3 nautical miles in Scotland. Likewise, Irish and French marine waters include coastal waters identified for the purposes of the WFD. The landward boundary of marine waters is identified by the High Water Mark (HWM) shown on the Ordnance Survey Maps of Ireland (DECLG, 2013)[45]. The basis for delimiting the landward boundary in France is Mean High Water (MHW).

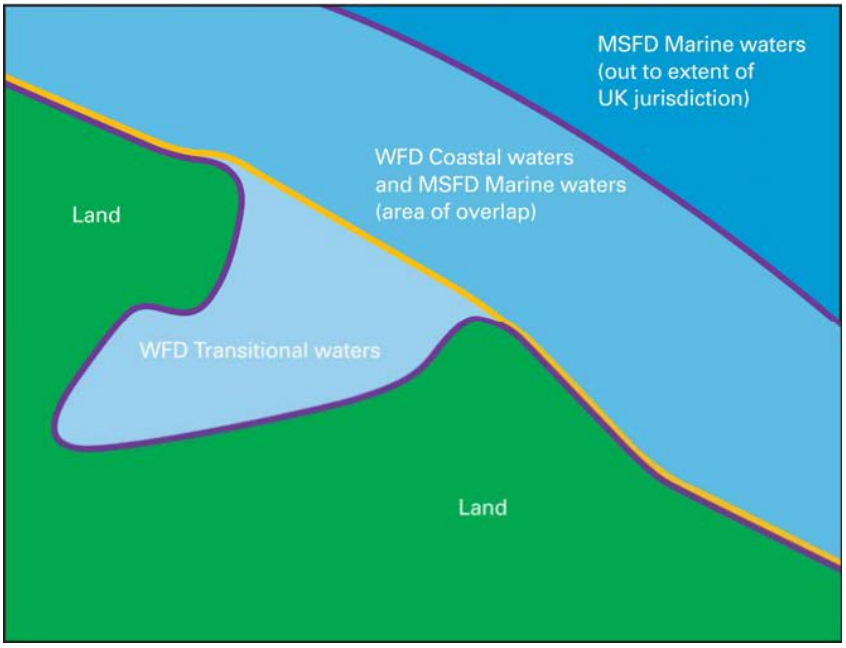


Figure 12: MSFD/WFD boundaries in the United Kingdom (DEFRA, 2012b)[46].

The Directive sets a legally binding implementation framework, within which Member States must progressively develop Marine Strategies (action plans) in several steps (Figure 12), with important milestones. The deadlines for completion of the first three steps which cover the 'preparatory phase' have now passed.

UK Devolved Administrations

In the Devolved Administration the following Government Department's are coordinating the MSFD implementation in their jurisdiction and contributing to the overall process in the United Kingdom:

- Northern Ireland- Department of Environment (DOENI) under the auspices of the Northern Ireland Executive;
- Scotland-Scottish Ministers ; and
- Wales- Welsh Ministers.

[45] DECLG (2013). MSFD: Ireland's Initial Assessment Report for Geographical Boundaries. http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/PublicConsultations/MSFDReportingSheets/FileDownLoad,32929,en.pdf

[46] *Op. Cit.,* note 39.

Initial Assessment, Determination of GES, and Identification of Environmental Targets and Indicators

Preparatory steps:

As defined by the Directive, three important preparatory steps (Figure 13) in the implementation cycle were due to take place in 2012. For this crucial deadline, the Member States were due to submit to the Commission by 15 October 2012 their reports on the following elements:

- Initial assessment of the current environmental status of their marine waters (Art. 8 MSFD),
- Determination of what GES means for the marine waters of relevant marine regions and sub-regions (Art. 9 MSFD), and
- Identification of environmental targets and associated indicators to guide progress towards achieving GES by 2020 (Art. 10 MSFD).

According to Article 12 of the Directive, the Commission will then assess whether these reported elements constitute an appropriate framework to meet the requirements of the Directive.

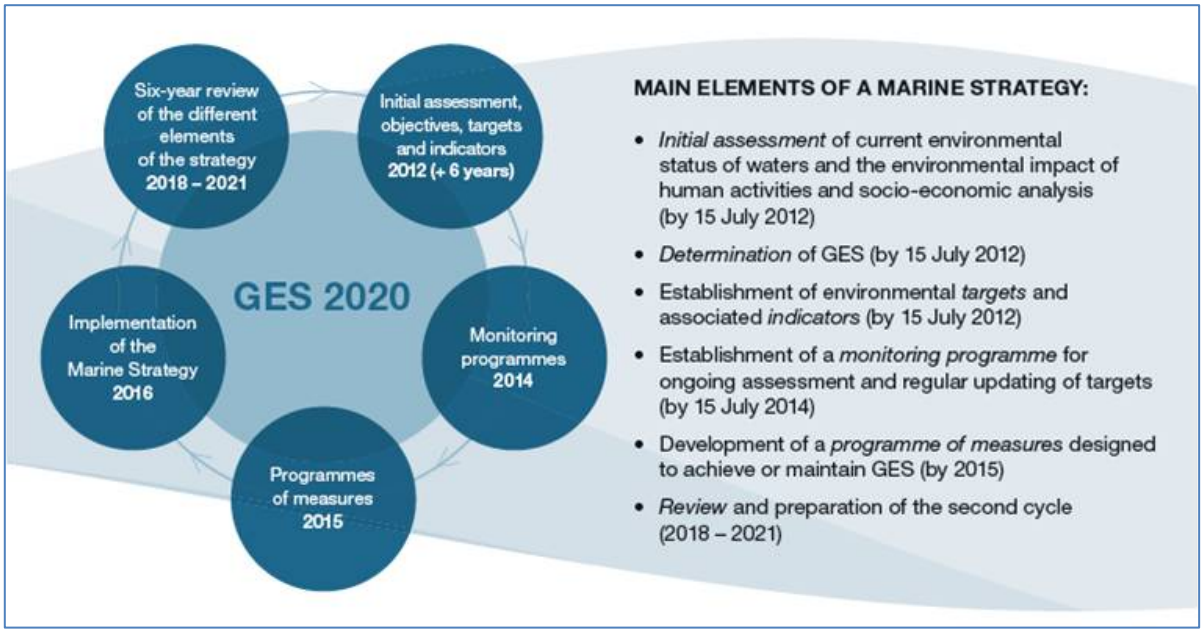


Figure 13. Key targets legally imposed on Member States by the Marine Strategy Framework Directive (European Commission, 2011: 25[47]).

United Kingdom

As indicated previously the UK will have one marine strategy incorporating the entire marine waters and the three reports have been developed at this scale (as opposed to separate strategies for the Celtic Seas and North Sea sub-regions). However, where there are significant biogeographical differences between these sub-regions, these have been taken into account. The Initial Assessment thus makes reference to the status of UK waters at the scale of the sub-region and a series of informal assessment regions developed for Charting Progress 2[48].

The UK Administrations jointly published a consultation on the '*UK Initial Assessment and Proposals for Good Environmental Status'*[49] in March 2012. The consultation focussed on the initial stages of

[47] European Commission (2011) Seas for Life: Protected- Sustainable- Shared European Seas by 2020. http://bookshop.europa.eu/en/seas-for-life-pbKH3111249/

[48] *Charting Progress 2* is a comprehensive report on the state of the UK seas. It has been published by the UK Marine Monitoring and Assessment community which has over 40 member organisations. Further information is available at: http://chartingprogress.defra.gov.uk/

[49] DEFRA (2012c)https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82639/20120327-msfd-consult-document.pdf

implementation and included a draft Initial Assessment of the state of the UK's seas; proposals for UK characteristics of GES; proposals for detailed UK targets and indicators of GES; and an impact assessment setting out potential implications of the proposed GES targets and indicators. A government response to the public consultation was published in December 2012; '*Marine Strategy Part One: UK Initial Assessment and Good Environmental Status*[50]' (DEFRA, 2012b). DEFRA engaged with marine experts and stakeholders (or interested parties) from an early stage in the implementation process through a series of public consultations, workshops and meetings held between 2010 and 2012.

A joint consultation between DEFRA, the Northern Ireland Executive, the Scottish Government and the Welsh Government[51] was held between 27 March and 18 June 2012. The UK consultation sought views on the implementation of the (MSFD) from over 700 statutory and non-statutory organisations[52]. Figure 14 provides a list of the statutory and non-statutory stakeholders consulted in the UK Initial Assessment process.

List of statutory and non-statutory stakeholders
Academic / research organisations
Angling organisations
Aquaculture organisations
Coastal development organisations
Coastal managers
Commercial Fishermen's organisations
Consumer organisations
Environmental NGOs
Government agencies
Inshore fisheries and conservation authorities
Local Government
Marine aggregates industry sector organisations
Marine dredging industry sector organisations
Marine industry sector groups/organisations
Marine leisure & recreational organisations
Oil & gas industry sector organisations
Ports and Harbours authorities
Producer organisations
Recreational boating sector organisations
Regional advisory councils
Renewable energy sector organisations
Shipping industry sector organisations

[50] *Op. Cit.,* note 42.
[51] The Marine Strategy Framework Directive in Wales: Consultation document available at: http://www.assemblywales.org/12-040.pdf
[52] A comprehensive list of these consultees is available at: http://webarchive.nationalarchives.gov.uk/20100505154859/http://www.defra.gov.uk/corporate/consult/msfd-legal-framework/consultee-list.pdf

Figure 14: Examples of the statutory and non-statutory stakeholders consulted in the UK Initial Assessment process.

DEFRA solicited responses from interested organisations and groups by emailing them directly while others submitted their opinions after consulting the Defra website. In Northern Ireland, the consultation was launched by the Department of Environment and was advertised in various print media sources. The documents were also available for download on the MSFD page on the Department of Environment (DOE) website. Letters and emails highlighting the consultation were sent to key organisations and groups. In Scotland, the consultation was published on the Scottish Government's website and an email alert sent to interested parties. And in Wales, the consultation was published on the Welsh Assembly Government's website and a link emailed directly to key organisations and groups in Wales.

It is worth noting that the UK has been exemplary in terms of their stakeholder engagement strategy. They have arguably been the most pro-active Member State in the Celtic Seas sub-region with regard to *'early and effective engagement'* as prescribed by the MSFD. A total of 77 responses to the consultation were received from a range of stakeholders including eNGOs, marine industry, the marine research community, Government Agencies and Non-Departmental Bodies. The majority of responses were broadly supportive of the proposals and commented on the fact that they build on existing approaches.

Consultation Topic	General Response	Relevance to Celtic Seas Partnership
Use of precautionary principle	Some eNGOs felt that this approach was needed for the UK to reach GES. Conversely, some industry respondents urged a proportionate use of this approach, as they felt that industry suffered when the precautionary approach was used in case where data was lacking.	There are evidently polarised views from different stakeholders in the Celtic Seas sub-region. The project team must be sensitive to these differing views and perceptions when engaging with stakeholders.
Links between MSFD and other marine policy and legislation	A number of respondents commented on the need to ensure consistency with other Government policies. The large amount of different types of marine legislation is confusing and has the potential to be contradictory.	MSFD implementation and the achievement of GES in UK waters is set within the context of wider objectives of existing national marine planning and consenting policies. One of the expected key results of the project is involving stakeholders and raising environmental awareness of differing marine and maritime policies.
Clarity on links between MSFD and WFD	Specific comments related to the need to provide clarity to marine users by ensuring that the determination of good status is consistent across MSFD and WFD where they overlap in Coastal Waters.	Similar to above, the project can help provide clarity on the links between the MSFD and WFD through its outreach and dissemination activities (e.g. publishing guidance documents, conducting stakeholder workshops, presentations by marine experts at the Celtic Seas Conferences).
Links to Marine Planning	There was a desire to see a stronger emphasis on the fact that marine planning and licensing must work together and specifically that marine plans should not compromise the ability of the UK to implement measures for GES.	We also must be cognisant of the number of national marine planning processes that are currently underway and at different stages throughout the United Kingdom and the pre-planning context for MSP in Ireland..
Marine Protected Areas	eNGOs felt that a stronger approach to	The project should incorporate the

	implementing management measures was needed for European Marine Sites and voiced concern that the current Marine Conservation Zone (MCZ) designation process in England is at risk due to the significantly higher level of evidence required. The Fishing industry suggested that the effects of fisheries displacement caused by MCZs could increase pressure on seabed habitats.	findings capitalise on the work carried out to-date by the MCZ designation process.
Coordination with other countries	There is a need to continue work with neighbouring countries with common waters to ensure a workable system is achieved which provides a level playing field. Coordination should be encouraged with countries that share the same sub-regions as the UK to present analysis and reports at the sub-regional level. It was generally felt that the UK Government needed to improve on regional coordination.	The project is developing governance mechanisms which will provide a platform for multi-sectoral stakeholder dialogue at a pan Celtic Seas scale.
Stakeholder engagement	One eNGO acknowledged that efforts have been made to engage with stakeholders, but felt that the future engagement process for MSFD implementation should be explicitly set out in a plan. Coordination of the MSFD could be improved (building on the work of the PISCES project) by the creation of a stakeholder forum at a sub-regional level.	The Celtic Seas Partnership can build on the multi-sectoral collaboration already achieved to-date in the Irish Sea, the Channel, the North Channel and the wider Celtic Seas region, the Celtic Seas Partnership.

Figure 15: Summary of stakeholders' responses to the *MSFD consultation on the UK Initial Assessment Proposals for GES* of most relevance to the Celtic Seas Partnership (DEFRA, 2012)[53].

Ireland

Following Ireland's late transposition of the Directive into domestic law, the Competent Authority, the DECLG also failed to complete the three steps by the 2012 deadline. According to the EIONET Central Depository, the required reports were submitted on 26 April 2013, some six months after the legal deadline. The DECLG stated that prolonged delay in completing these legal obligations was due to a lack of available resources. In recent years, budgets and staffing levels within the Department have been significantly reduced. Implementation of the MSFD thus has to be considered in the context of the resource constraints as a result of the current economic climate (Brady et al., 2013)[54]. It is also important to highlight that the DECLG provided funding to the Irish Marine Institute[55] who in turn engaged a private environmental consultancy, RPS, to prepare Ireland's submission to the European Commission. At the end of December 2012 (two months after the reporting deadline), the DECLG published '*Ireland's Marine Strategy Framework Implementation*[56], developed as part of a public information process which aims to promote awareness of MSFD implementation in Ireland. According to the Department's website, a draft summary of the Initial Assessment, Determination of GES and Establishment of Indicators is currently being prepared by

[53] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/86574/msfd-consult-sumresp-20121220.pdf

[54] Brady et al., (2013). The Marine Strategy Framework Directive in Ireland: Requirements, Implications & Opportunities for Environmental Sustainable Management of Our Marine Waters. Sustainable Water Network (SWAN). Dublin. http://www.swanireland.ie/wp-content/uploads/2011/02/SWAN-MSFD-Report1.pdf

[55] The Marine Institute is a statutory agency for marine research and development under the auspices of the Department of Agriculture, Food and the Marine (DAFM).

[56] DECLG, (2012). *Ireland's Marine Strategy Framework Implementation* http://www.environ.ie/en/PublicationsDocuments/FileDownLoad,32063,en.pdf

the DECLG and will be made available by the end of September 2013 for 'further consultation'[57]. Thus, the totality of stakeholder involvement in the MSFD process to-date in Ireland amounts to an online invitation to comment on an information booklet and the 133 reporting sheets submitted to the European Commission.

France

Following the late transposition of the Directive May 2011 under Decree No. 2011-492 on the Action Plan for the Marine Environment through the Environmental Code (articles L. 219-9 to L. 219-18 and R. 219-2 to R. 219-17, the Decree project was then submitted for public consultation from the March 31 to April 15, 2011. Prior to this consultation period, the Decree underwent a series of reviews at the marine sub-region level to evaluate the action plan. This was followed by a period of consultation with marine stakeholders in addition to a wider consultation with the general public in early 2012.

Since 2009, the Ministry of Ecology has led to a network of scientists to conduct the Initial Assessment of French marine waters. This network consists of representatives from the National Museum, French Geological Survey, various Water-related agencies, the Hydrographic and Oceanographic Naval Service, IFREMER, and the Marine Protected Areas agency. The findings of the Initial Assessment were submitted to several stakeholders from December 2011 to the end of March 2012. The French government also created four new marine committees, known as the *'Comité maritime de façade'* to coordinate the overall MSFD process across France's four European Marine Regions (. The Committee responsible for the coordination of Celtic Seas MSFD sub-region is that of the *North Atlantic and Western Channel*.

These committees bring together diverse stakeholders such as Regional Councils and General Councils representatives, coastal cities, Fishermen, Water- sports, Marine Transport, Ports, NGOs, Recreational Fishing. The North Atlantic and Western Channel 'Comité maritime de façade' held a series of meetings in November 2011, March 2012 and July 2012. These consultations contributed to the overall efforts on France's Initial Assessment of their offshore marine area in the south west area of the Celtic Sea sub-region.

The first three elements of the Marine Environment Action Plan for MSFD implementation were submitted to public consultation from 16 July 2012 to October 2012 (it was announced in the press) and in parallel to stakeholders consultation. Within the 'Comité maritime de façade , the project of Initial Assessment had to be completed and commented on by the members in order to allow a shared analysis and the further development of the Initial Assessment.

[57] See DECLG website for further details:
http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/PublicConsultations/

Summary of the current status of MSFD implementation of the Member States in the Celtic Seas sub-region

In order to monitor and inform about how well Member States follow their reporting obligations, an informal web-based *Marine Strategy Framework Directive Scoreboard*[58] has been developed. Figure 16 illustrates the latest state of implementation of the MSFD by the Member States as regards how well they follow their reporting obligations. However, it does not give any indication as to the quality or whether the notified reports conform to the requirements of the Directive (i.e. if the reported information has fulfilled all requirements of the respective articles). The Commission is assessing these reports and intends to present a report in late 2013.

Country	Art. 26 Transposition Due 15/07/2010	Art. 7 Competent authorities Due 15/01/2011	Art. 8 Initial Assessment Art. 9 Determination of GES Art. 10 Environmental targets & indicators Due 15/10/2012
United Kingdom			
Ireland			
France			

Explanation of symbols and colours	
Report or information submitted	
Report or information only partially submitted (e.g. report for specific Article or specific marine region missing)	
Report or information not submitted	

Figure 16: The status of the Celtic Seas sub-region Member States' reports according to the Marine Strategy Framework Directive Scoreboard (as of August 2013).

[58] http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/scoreboard_en.htm

It is clear from the evaluation of progress to-date in the UK, Ireland and France that they have implemented the legal and procedural requirements of preparatory steps in differing manners and using different time scales. Figure 17 provides a concise summary of the information. The implications of these characteristics will be critically analysed in the next section of this report.

MSFD PREPARATORY ACTION	DEADLINE	UNITED KINGDOM	IRELAND	FRANCE
Transposition (Article 26, 27)	**15 July 2010**	15 July 2010	31 May 2011	6 May 2011
Competent Authority	**15 July 2010**	15 July 2010- Department for the Environment, food and Rural Affairs (DEFRA); Devolved Authorities- Scottish Minister, Welsh Ministers and the DOE in Northern Ireland.	15 January 2011- Department of the Environment, Community and Local Government (DECLG).	15 July 2010- Ministry of Ecology, Sustainable Development, Transport and Energy.
Initial Assessment (Article 8)	**15 July 2012**	15 July 2012	26 April 2013	15 July 2012
Determination of GES (Article 9)	**15 July 2012**	15 July 2012	26 April 2013	15 July 2012
Targets and Indicators (Article 10)	**15 July 2012**	15 July 2012	26 April 2013	15 July 2012
Draft Summary for Public Consultation (Article 19)	**15 July 2012**	Published in March 2012 (Consultation period: 27 March- 18 June 2012)	To be made available by 30 September 2013	16 July 2012

Figure 17. Summary of the current status of Celtic Seas sub-region Member States in terms of legal and procedural obligations under the Marine Strategy Framework Directive.

Potential implications for missed MSFD deadlines in the Celtic Seas sub-region

As indicated in Figure 16, Ireland is currently almost a year behind the UK and France in terms of different phases of MSFD implementation. This delay is likely to have a ripple effect for the wider Celtic Seas sub-region in the long term. To meet the next deadline under the MSFD, the Irish Government has a lot of ground to make up. The next stage of implementation, which is to be completed by 15 July 2014, is the establishment of a monitoring programme for ongoing assessment. In order to meet this deadline, the preparatory (overdue) stage needs to be completed expeditiously. In keeping with the legal requirements of the MSFD and the Aarhus Convention, the Irish Government must also ensure that all stakeholders with an interest in the marine environment are involved in this process. Engagement with the Celtic Seas Partnership could potentially be a valuable avenue for the Irish Government to fulfil its requirements in terms of effective engagement with stakeholders as well as coordination with neighbouring Member States.

Next steps

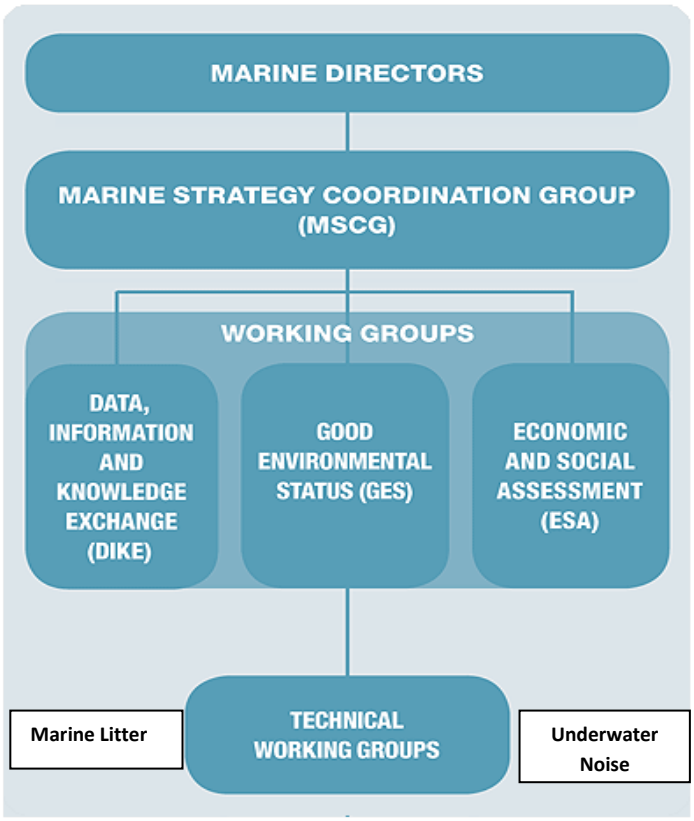
According to Article 12 of the Directive, the Commission will now assess whether these reported elements constitute an appropriate framework to meet the requirements of the Directive. It has yet to be seen if the Member States of the Celtic Seas sub-region have adequately addressed the first three steps of the preparatory phase of MSFD implementation.

Coordination with neighbouring Member States

EU level

The Directive sets out a regional approach to the management of our seas, requiring Member States to cooperate with their neighbours when developing their marine strategies. Sharing our marine waters does not mean only sharing the benefits from the seas, but also addressing together the numerous challenges to be faced in achieving GES.

Developing common approaches, pooling resources through experience-sharing, bringing together the best technical expertise and investing in joint research are crucial tools to ensure that marine strategies are coherent, consistent and built on the best advice of the political and scientific communities. In order to facilitate this work, Member States and the European Commission have set up an informal programme of coordination, the Common Implementation Strategy (CIS). The CIS is composed of the following working groups:



Highest level political group focused on ensuring the overall implementation of the Directive.

Link between Marine Directors and Working Groups, preparing material for the Marine Directors and overseeing the work of the Working Groups.

Prepare common methods for implementation of the Directive:

- *WG on Good Environmental Status* to support Member States in the determination of GES.
- *WG on Economic and Social Analysis* to develop common methodologies and approaches to carry out the economic and social analysis of the use of the marine waters.
- *WG on Data, Information and Knowledge Exchange* to support Member States with their data reporting obligations.

Figure 18: Mechanisms for coordination at an EU level (Adapted from DG Environment, 2013).

Regional level

The Directive specifies that Member States:

shall, as far as possible, build upon relevant existing programmes and activities developed in the framework of structures stemming from international agreements such as Regional Sea Conventions.

OSPAR is the legal instrument through which the MSFD will be regionally coordinated for the determination of GES, and for the establishment of environmental targets and indicators in the Celtic Seas sub-region.

The barriers and opportunities for MSFD implementation in the Celtic Seas sub-region

A number of key weaknesses and strengths of the MSFD have been identified in academic literature (Fletcher, 2007[59]; Mee et al., 2008[60]; Borja et al., 2010[61]; Wakefield, 2010[62]); Long, 2011[63]; Van Hoof et al., 2012[64]; Van Leeuwen, 2012[65]; Bertram and Rehdanz, 2013[66]; Van Tatenhove, 2013[67]). The following section analyses the barriers and opportunities for MSFD implementation with specific reference to the Celtic Sea sub-regional context.

Existing institutional structures

The central issue in relation to MSFD implementation in the Celtic Seas sub-region will be the issue of governance. The Directive will most likely be ineffectual in achieving its objective in term of environmental quality if the appropriate institutional structures are not in place at the appropriate levels (Van Tatenhove, 2013). A number of guidance documents have been developed at an EU level to help facilitate the implementation process, and within OSPAR the relevant Committees and Working Groups have developed specific guidance on the development of GES characteristics and targets for each Descriptor[68]. The UK has led work within OSPAR to compare approaches to target and indicator development across countries including Ireland and France, with the aim of improving coordination. This has culminated in the publication of *Finding Common Ground* (OSPAR

[59] Fletcher, S. (2007). Converting science to policy through stakeholder involvement: An analysis of the European Marine Strategy Framework Directive. Marine Pollution 54 pg.1881-1886. http://www.sciencedirect.com/science/article/pii/S0025326X07002792

[60] Mee, L.D. Jefferson. R.L., d'A. Laffloley, D.A., Elliot, M. (2008). How good is good? Human values and Europe's proposed Marine Strategy Directive. http://www.sciencedirect.com/science/article/pii/S0025326X07003566

[61] Borja, A., Elliott, M., Carstensen, J., Heiskanen, A.S., and van de Bund, W. (2010). Marine management – Towards an integrated implementation of the European Marine Strategy Framework and the Water Framework Directives. Marine Pollution Bulletin Volume 60, Issue 12, 2175–2186. http://www.sciencedirect.com/science/article/pii/S0025326X1000442X

[62] Wakefield, J. (2010). 'Undermining the Integrated Maritime Policy', 60 Marine Pollution Bulletin, 323-333. http://www.sciencedirect.com/science/article/pii/S0025326X09005396

[63] Long, R. (2011a). The MSFD: A New European Approach to the Regulation of the Marine Environment, Marine Natural Resources and Marine Ecological Services. Journal of Energy & Natural Resources Law 29(1). http://www.liv.ac.uk/media/livacuk/odemm/docs/ODEMM_Deliverable_2B.pdf

[64] van Hoof**, L.,** van Leeuwen J., and van Tatenhove**, J**. (2012). All at sea; regionalisation and integration of marine policy in Europe. Maritime Studies *2012,* 11:9. http://www.maritimestudiesjournal.com/content/11/1/9

[65] van Leeuwen, J., van Hoof, L., and van Tatenhove, J. (2012). Institutional ambiguity in implementing the European Union Marine Strategy Framework Directive. Marine Policy 36, 636-643. http://www.sciencedirect.com/science/article/pii/S0308597X11001576#

[66] Bertram, C. and K. Rehdanz (2013), On the Environmental Effectiveness of the EU Marine Strategy Framework Directive Marine Policy, *Marine Policy*, 38 25-40. http://www.sciencedirect.com/science/article/pii/S0308597X12001042

[67] Tatenhove, J. Van (2013). How to turn the tide: Developing legitimate marine governance arrangements at the level of the regional seas. Ocean & Coastal Management, 71: 296-304.

[68] For further details on the 11 Descriptors under Annex I of the MSFD refer to: http://ec.europa.eu/environment/water/marine/ges.htm

Commission, 2012)[69], which provides a useful summary of the outcomes to-date of the regional coordination process and sets the direction for future coordination. Due to the very tight timescales imposed by the Directive coordination between countries has been a real challenge and more work is needed between now and 2018 to improve alignment of GES characteristics, targets and indicators across the CMSR, OSPAR and the wider EU.

At a Member State level, it is particularly relevant for the project to consider the role of Statutory Agencies in the MSFD implementation process. In the United Kingdom, the Joint Nature Conservation Committee (JNCC), in its role as statutory advisor to Government, is advising on aspects of the MSFD which relate to biodiversity and ecosystem protection. This includes in relation to both monitoring and assessment of the state of the marine environment, and the programmes of measures needed to achieve or maintain GES. At present this advice is focused on how the Directive might be delivered at UK and Regional levels[70]. In addition, the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) is contributing to the evidence base in terms of biological diversity, the designation of MPAs and associated ecosystem services.

In the case of Ireland, due to the cross-cutting nature of marine issues, four other Government Departments are intrinsically linked into the MSFD process – Department of Agriculture, Marine and Food (DAMF), Department of Transport, Tourism and Sport, the Department of Arts, Heritage and the Gaeltacht and the Department of Communications, Energy and Natural Resources (DCENR). On a practical level, the Marine Institute (a Statutory Agency under the auspices of DAFM) is playing a vital major role to play in the delivery of the Directive.

In France, the Agence des Aires Marines Protégées is collaborating with technical experts from IFREMER on over 70 distinct themes relating to the MSFD implementation in the marine waters of mainland France.

Legal grounds for MSFD implementation and linkages with other EU instruments

The MSFD cannot be read as a standalone legislative act; as identified in this report, the Directive is intended to complement a host of other European, regional and international instruments and its effectiveness is therefore also related to these (van Leeuwen et al. 2012[71]). The Directive essentially sets a goal for Member States to achieve or maintain GES for their waters, but it does not dictate any tangible measures to attain that goal. However, the MSFD should fundamentally be welcomed by all Member States as an essential and belated regulatory intervention by the EU in the field of marine environmental policy and marine natural resource law. The Directive has the potential to become the principal source of marine environment measures in the EU for many decades to come (Long, 2011)[72].

It is specifically intended to provide a regulatory platform for implementing the environmental pillar of the EU's Integrated Maritime Policy. Critical analysis of the complex linkages with other EU instruments reveal a host of barriers and potential opportunities that may impact the overall objective of reaching or maintaining GES in the Celtic Seas sub-region and beyond by 2020. The following section outlines a number of examples of these linkages in terms of barriers and opportunities.

In recent years there has been much debate surrounding the linkage between the MSFD and the EU Common Fisheries Policy (CFP). Salomon (2009) state that better coordination in European policies

[69] OSPAR Commission (2012). Finding Common Ground: Towards regional coherence in implementing the MSFD in the North-East Atlantic region through the work of the OSPAR Commission. http://www.ospar.org/documents/dbase/publications/p00578_msfd%20report.pdf
[70] http://jncc.defra.gov.uk/page-5193
[71] *Op. Cit.,* note 66.
[72] *Op. Cit.,* note 64.

(such as that of the CFP and the IMP) is a necessary precondition for successful implementation of the MSFD even at low levels[73]. One of the qualitative criteria for determining GES under the MSFD centres on ensuring that the populations of all commercially exploited fish and shellfish are within safe biological limits and exhibit characteristics that are consistent with healthy stocks (Descriptor 3). This requirement establishes a firm correlation between the MSFD and the CFP. However, under the CFP (which is presently undergoing a reform process) current fishery management measures can only be administered by EU institutions. The MSFD therefore does not provide a legal basis for Member States to adopt autonomous conservation or management measures aimed at protecting fish stocks or marine ecosystems. Under Article 15 of the Directive, Member States are in fact restricted by the MSFD to proposing recommendations to the Commission when action cannot be taken at a national level and where EU measures are required (Hans-Joachim Ratz et al., 2010)[74]. At the time of writing, the details of the CFP reform are being finalised. We can therefore expect further clarity on the precise nature of the relationship between the MSFD and CFP in the summer of 2013.

Another challenge most relevant to the Celtic Seas Partnership is the transboundary character of both the use of the seas and their impacts from pollution. The protection and use interests associated with the sea are inter-related, not only horizontally (across sectoral policies), but also vertically across several hierarchical levels (international, European, national, and even sub-national). This intertwining involves great challenges not only when it comes to reaching agreement on marine protection measures, but also for their monitoring and enforcement Saloman and Dross (2013)[75].

Opportunities

In light of the fact that one of the primary forms of marine pollution is pollution from land-based sources, the regulatory structure established by the MSFD is closely interwoven with the Water Framework Directive (2000/60/EC)[76] which requires Member States to achieve good ecological and chemical status in their terrestrial and coastal water bodies up to one nautical mile out to sea by 2015. The methodology and the criteria outlined in the MSFD have evolved from existing obligations that originate from the Water Framework Directive (WFD). Additionally, the two Directives have similar objectives, with the WFD focused on the achievement of good chemical and ecological status and the MSFD aiming to achieve GES. Due to these similarities the UK Government anticipates that measures introduced under the WFD will also be sufficient in meeting some of the MSFD objectives for these criteria. For example, for Descriptor 5 (eutrophication), the MSFD targets apply both to coastal waters and wider marine waters. The target is expressed in a way which is consistent with existing WFD targets/tools, and will use some of the WFD tools for part of the assessment of GES, although these would be applied at a broader scale than an individual WFD water body (DEFRA, 2012d)[77].

The MSFD is complementary to Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, which is more commonly known as the Habitats Directive. The Habitats

[73] Salomon, M. (2009). Recent European initiatives in marine protection policy: towards lasting protection for Europe's seas? Environmental Science and Policy 12:359–366.
[74] Hans-Joachim Ratz et al. (2010). Complementary roles of European and national institutions under the Common Fisheries Policy and the Marine Strategy Framework Directive. Marine Policy 34 pg. 1028-1035.
[75] Salomon, M., and Dross, M. (2013). Challenges in cross-sectoral marine protection in Europe. http://www.sciencedirect.com/science/article/pii/S0308597X13000559
[76] Directive 2000/60/EC http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:327:0001:0001:EN:PDF
[77] DEFRA (2012d). Links between the Marine Strategy Framework and Water Framework Directives. Factsheet 1. http://archive.defra.gov.uk/environment/marine/documents/legislation/msfd-factsheet1-waterdirective.pdf

Directive requires Member States to take action to maintain or restore the natural habitats and species, outlined in the annexes of the Directive, to a favourable conservation status. In order to achieve this objective, a Special Areas of Conservation (SAC) must be identified for the habitats and species listed. There are currently 107 SACs with marine components, covering 7.6% of the UK sea area (JNCC, 2013)[78]. In Ireland, 130 marine habitats have SAC status (NPWS, 2013)[79] while France has a total of 207 marine SACS. These marine SACs protect a host of habitats including sandbanks, reefs and species such as bottlenose dolphins and seals (JNCC, 2012)[80]. Despite the different emphasis, the measures implemented under the Habitats Directive can make an important contribution to achieving the wider objectives of the MSFD and vice versa. Conservation measures under the Habitats Directive (HD) should be part of any programme of measures to meet the requirements of MSFD and therefore help deliver more integrated policy and planning.

The Birds Directive (2009/147/EC) requires Special Protected Areas (SPAs) to be established in order to protect rare and vulnerable bird species and wetlands of international importance. Within the UK, there are 107 SPAs with marine components (JNCC, 2013)[81], in Ireland there are 100 and in France, 59. Given that the monitoring requirements under MSFD and BHD are very broad (covering Member States targets and indicators of biodiversity/listed habitats and species and all waters in the MSFD and Birds and Habitats regions) there is likely to be scope for these monitoring requirements to be mutually supportive[82].

The MSFD, the Habitat Directive and the Birds Directive are clearly inter-related in that all are concerned with aspects of biodiversity conservation in the marine environment, where Member States have and/or exercise jurisdictional rights. This includes in each Directive a requirement to establish protected areas as part of the overall set of protection measures. Given that all three Directives cover the same area of sea and seabed and the overlap in the regions being used, there is again considerable benefit to be gained by including the Natura 2000 network into Member States' strategies. This is encouraged under the MSFD and existing legislation should be taken into account[83].

Regional and Sub-regional Coordination amongst Member States

Barriers

The Directive recognises that, in certain situations, action by Members States alone will be insufficient and that measures will need to be taken at a regional and sub-regional level. While each Member State is responsible for developing a strategy specific to its own waters, each national strategy must be consistent with and reflect the broader outlook of the Marine Region of which it is part and thus contribute to the GES at three different scales; the national (United Kingdom, Ireland, and France), the sub-regional (Celtic Seas) and the regional (North-East Atlantic).

An important factor the Celtic Seas Partnership is to recognise that the draft map of European Marine Regions and sub-regions produced by the European Environment Agency in October 2012 (see Figure 1) and presented in EC working groups has not yet been finalised and approved by Member States (DEFRA, 2012c)[84]. This has implications for the overall consistency of assessment and implementation phases of the Directive.

[78] JNCC (2013). SACS with Marine Components. http://jncc.defra.gov.uk/page-1445
[79] NPWS (2013). Marine Habitats. http://www.npws.ie/marine/marinehabitats/
[80] JNCC (2012). Different types of marine protected areas. http://jncc.defra.gov.uk/pdf/MPAsInfoDoc_v2_2.pdf
[81] JNCC (2013). UK Marine SPAs. http://jncc.defra.gov.uk/page-1414
[82] 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)).
http://ec.europa.eu/environment/nature/natura2000/marine/docs/FAQ%20final%202012-07-27.pdf
[83] *Op. Cit.,* note 79.
[84] *Op. Cit.,* note 48. DEFRA.

One of the most novel characteristics of the MSFD and contemporary regulation of the marine environment is the establishment of marine regions and sub-regions in EU law. More specifically, Article 6 of the MSFD emphasises the requirement for regional coordination and cooperation between Member States through the implementation of each of its stages within marine regions and sub-regions. This legal obligation for regional cooperation is based upon the need to ensure coherence and consistency of implementation of the Directive across Europe's seas. Should Member States apply differing approaches to implementation, tensions are likely to arise which will in turn have an impact on the ability to coordinate efforts in marine regions and sub-regions.

A key challenge for sub-regional coordination in this area is the number of jurisdictions with a complex range of political, administrative and management boundaries. Figure 19 refers to countries (and the Isle of Man which is a self-governing British Crown Dependency) which share boundaries in the Celtic Seas marine sub-region; these countries will need high levels of cooperation, particularly in relation to data-sharing issues. However under the requirement of the Directive, cooperation is required between all Member States within a marine sub-region even if they don't share borders.

		UNITED KINGDOM						
		England/ UK Government	*Wales*	*Scotland*	*N. Ireland*	*Isle of Man**	**Ireland**	**France**
UK	*England/ UK Government*		■	■	■	■	■	■
	Wales	■					■	
	Scotland	■			■	■		
	N. Ireland	■		■		■	■	
	*Isle of Man**							
	Ireland	■	■		■			
	France	■						

* Although governed by British law, the Isle of Man (IOM) is not part of the UK or a direct member of the European Community and therefore not legally required to implement the MSFD in its marine waters.[85].

Figure 19: Matrix of cooperation required under MSFD obligations across the seven jurisdictions in the Celtic Seas sub-region.

A further obstacle to effective implementation of the MSFD is that a number of other Member States from outside the Celtic Seas sub-region have commercial interests in these marine waters including international fishing fleets (Belgium, Spain, Denmark, Germany, Netherlands etc.). These and other important stakeholders will need to be involved in an appropriate way in the development of marine strategies by the United Kingdom, Ireland and France.

Opportunities

Traditionally Europe's marine resources (with the exception of fisheries management) have been managed on the basis of administrative and political boundaries disregarding the fundamental

[85] Under the MSFD, IOM is classed as a non-EU country or *third country* and its neighbouring Member States are required to The Directive calls on Member States to cooperate with third countries in the same region, making use 'where practical and appropriate' of the relevant regional pollution commission and other relevant regional bodies and agreements.

transboundary nature of these resources. The introduction of the geographical concepts of the marine regions and sub-regions must be viewed favourably as this approach not only acknowledges implicitly the diversity of Europe's regional seas but it also has some very practical implications as it allows for the management of marine resources and activities on the basis of natural hydrological, oceanographic and biogeographic features (Long 2011a)[86].

Furthermore, Long (2011) contends that the MSFD may also help Member States overcome some of the difficulties that they encounter in adopting management measures for areas where maritime boundaries have not been delineated or are disputed between opposite or adjacent States. An example of such an area is the south- east corner of the Celtic Sea and the Bay of Biscay where four Member States- Ireland, United Kingdom, France and Spain have yet to fully delimit their respective continental shelf boundaries[87]. These Member States will have to coordinate their approach in adopting the programme of measures for the entire region or sub-region following the ecosystem approach irrespective of boundary disputes.

In 2010, OSPAR adopted a MSFD Road Map[88] outlining what countries should do to ensure a coordinated regional approach to implementing the MSFD within the OSPAR Convention during the period 2010-2020, taking account of their national obligations under the Directive. A more recent publication on regional coherence in MSFD implementation reports that OSPAR have facilitated substantial information sharing of existing methodologies for determining GES as well as coordinating action across Contracting Parties on their further development. They have also published a number of guidance documents which have been made available to Contracting Parties' delegations and OSPAR Observers. Furthermore, an OSPAR socio-economic analysis is currently underway and when completed, it will provide a strong basis for more detailed coordination of the socio-economic element of the MSFD assessment process in the future (OSPAR Commission, 2012[89]).

Ultimately, the effectiveness of the Directive will depend on the extent to which Member States meet the legal requirements at the national level. It will also depend on the extent to which national marine strategies are integrated and coordinated in a way that ensures coherence and comparability across the entire European Union (Long, 2011)[90].

In relation to MSFD Descriptors, coordination to-date has been varied. Figure 20 summarises the current progress at an EU level.

[86] *Op. Cit., Note 64.*

[87] In 2009, the Commission on the Limits of the Continental Shelf (CLCS) adopted a Recommendation regarding the Joint Submission made by France, Ireland, Spain and the United Kingdom of Great Britain and Northern Ireland in respect of the area of the Celtic Sea and the Bay of Biscay in 2006. These States have yet to agree their respective boundaries within this area. For a summary of the CLCS Recommendation, see: http://www.un.org/Depts/los/clcs_new/submissions_files/frgbires06/fisu_clcs_recommendations_summary2009.pdf

[88] MSFD Road Map (OSPAR, 2010). http://www.ospar.org/documents/dbase/publications/p00501_msfd%20roadmap.pdf

[89] OSPAR Commission (2012). Finding Common Ground: Towards regional coherence in implementing the MSFD in the North-East Atlantic region through the work of the OSPAR Commission. http://www.ospar.org/documents/dbase/publications/p00578_msfd%20report.pdf

[90] *Op. Cit., Note 16.*

Strong Coordination	Potential for Strong Future Coordination	Less Progress on Coordination
Descriptor 3: Commercial fish and shellfish	Descriptor 1: Biodiversity	Descriptor 7: Changes to hydrographical conditions
Descriptor 5: Minimising eutrophication	Descriptor 2: Impacts of non-indigenous species	Descriptor 4: Food webs
Descriptor 8: Effects of contaminants	Descriptor 4: Sea-floor integrity	
Descriptor 9: Contaminants in seafood	Descriptor 10: Marine litter	
	Descriptor 11: Underwater noise	

Figure 20: Progress to-date at an EU level in relation to coordination across MSFD Descriptors (DEFRA, 2013).[91]

The Celtic Seas Partnership can help support implementation and add value by focusing particularly on those Descriptors that have potential for stronger coordination as well as those that have experienced little progress up to now.

Scientific uncertainty, availability and accessibility of data

The MSFD calls for an iterative process of adaptive management involving continuous scientific monitoring and assessment. One of the key drivers leading to the adoption of the MSFD was the long-standing failure of Member States to initiate or maintain adequate scientific monitoring of the status of Europe's seas as well as the natural resources and ecological systems that they support (EC, 2005[92]). In order to comply with the requirements of the MSFD (Article 5), Member States must obtain a comprehensive scientific overview of the current and future status of their marine environments.

Barriers

From a scientific perspective, information on marine ecosystem processes and functioning is at a relatively embryonic stage and at best is complex to interpret and even more challenging to manage (Long, 2011b)[93]. In the absence of appropriate data and monitoring programmes, application of adaptive management on the basis of the ecosystem approach at the Celtic Seas Marine sub-regional scale will be impractical. In common with most Member States across Europe's four Marine Regions, the scientific resource which presently exists in the United Kingdom, Ireland and France is deficient in respect to a number of MSFD Descriptors (e.g. Noise, Marine litter) to comprehensively address every constituent of the Directive. Further resources will need to be invested to build capacity across the CELTIC SEAS in terms of the scientific knowledge base in order to address these data gaps.

In some Member States, open access to existing scientific data can also be an obstacle. For example, in France, bathymetric data is protected under national security law (as a military secret) for certain

[91] DEFRA (2013). Marine Strategy Framework Directive: An exercise in coordination across Europe. Presentation by Sue Scott (MSFD Implementation Team.

[92] Communication from the Commission to the Council and the European Parliament, Thematic Strategy on the Protection and Conservation of the Marine Environment, COM (2005)504 final, Brussels, 24.10.2005, p.4.

[93] Long, R. (2011b), Legal Aspects of Ecosystem-Based Marine Management in Europe in A. Chircop,M. L. McConnell,S. Coffen-Smout(ed.), OCEAN YEARBOOK Vol. 26, (Boston/Leiden, Brill Academic Publishers), pg. 417-484. http://aran.library.nuigalway.ie/xmlui/bitstream/handle/10379/2917/R_Long_Legal_aspects_EBM_OY.pdf?sequence=1

seas areas under their jurisdiction. In such cases public acquisition is either forbidden or restricted in relation to the scale or resolution of the data that is made available (EC, 2009)[94].

Opportunities

Under the INSPIRE Directive (2007/2/EC)[95], the EU is currently developing an infrastructure for the exchange of spatial information and environmental data. This will be particularly beneficial in securing a transparent and consistent approach to data collection requirements under Member State's obligations under the MSFD. The Public Sector Information Directive 2003/98/EC[96] provides a further opportunity in that it facilitates access and re-use of all public information. Additionally, the emergence of the European Marine Observation and Data Network (EMODENT)[97] and the establishment of a Common Information Sharing Environment represent potential synergies for the successful implementation of the MSFD in the Celtic Seas sub-region and across Europe's seas.

In addition to complementing these Directives relating to spatial information and environmental data, the Celtic Seas Partnership will help support MSFD implementation in the sub-region through the development of novel techniques and methods based on scientific and local knowledge for the Celtic Seas to help monitor GES.

Stakeholder involvement in the development of marine strategies

The scientific requirements of marine strategies are clearly defined under the Directive; however, the requirements related to stakeholder involvement are far from transparent. The MSFD applies a variety of terms to describe the external parties expected to become involved in its implementation. In relation to the development of Programmes of Measures (Article 13), 'stakeholder' involvement is specified as a core constituent of this step. In Article 19(1) the involvement of 'interested parties' is the preferred term, whereas in Article 19(2) describes the necessity to for information to be made available for 'public' comment. Fletcher (2007) focuses on the definition of stakeholder, the sequencing of involvement, and the form and purpose of involvement. He concludes that the MSFD lacks coherency with respect to stakeholder involvement which may perpetuate the traditional tension between marine science and policy. This in turn may compromise the ability of the Directive to protect Europe's marine environment.

Barriers

The inconsistency and inherent ambiguity of the terminology used in the text of the Directive poses a significant impediment to the effective implementation of the MSFD. Each term infers a distinct and divergent set of potential participants that should be involved. The omission of any definitions of who should participate or be involved is a significant barrier. Fletcher (2007)[98] reports that the MSFD lacks coherency with respect to stakeholder involvement which may perpetuate the traditional tension between marine science and policy. This in turn may compromise the ability of the Directive to protect Europe's marine environment.

A further challenge is the exclusion of a proposed methodology for allocating specific groups or individuals to these different categories. It is therefore evident that the Directive lacks clarity

[94] See Commission Staff Working Document, Building a European marine knowledge infrastructure: Roadmap for a European Marine Observation and Data Network. SEC(2009) 499 final. Brussels, 7.4.2009, p. 19. https://webgate.ec.europa.eu/maritimeforum/system/files/roadmap_emodnet_en_0.pdf

[95] DIRECTIVE 2007/2/EC. Establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:108:0001:0014:en:PDF

[96] DIRECTIVE 2003/98 on the re-use of public sector information. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:345:0090:0096:EN:PDF

[97] Electronic access is provided to bathymetric, geological, physical, chemical, biological and habitat data for selected sea basins. For further information see https://webgate.ec.europa.eu/maritimeforum/category/160

[98] *Op. Cit., note 59.*

concerning key elements of the stakeholder participatory process and an imbalance exists between the emphasis placed on scientific data acquisition and the vague emphasis placed on stakeholder inputs (Fletcher, 2007).[99]

Of particular relevance to the Celtic Seas Partnership is that of Ounanian et al.'s (2012)[100] comprehensive analysis of five marine sectors active in the marine environment (fisheries, offshore renewable energy, offshore oil and gas, navigation, and coastal tourism) and on non-industry stakeholders represented by environmental Non-Governmental Organisations (eNGOs). This article explores how they have engaged in the MSFD stakeholder consultation process and what they foresee as potential challenges for implementation. The navigation, offshore oil and gas, and offshore wind energy sectors as well as eNGOs have the capacities and capabilities to actively engage in the MSFD processes, whereas the fishing and coastal tourism sectors have not really engaged in the MSFD process. A key finding of this research is that sectors have limited resources and organisational capacity to devote to participation in seemingly myriad EU policy consultations as they relate not only to the sector-specific policies but also to "systems" policies like the MSFD.

Opportunities

Despite the difficulties outlined above, early and effective stakeholder involvement is a fundamental aspect of the ecosystem approach and is a legal requirement under Article 19 of the MSFD, as well as the Convention on Biological Diversity (CBD), Aarhus Convention and OSPAR's North-East Atlantic Environment Strategy. The Directive states that:

> *In accordance with relevant existing Community legislation, Member States shall ensure that all interested parties are given early and effective opportunities to participate in the implementation of MSFD.*

A case study entitled *Across the waters* (Ritchie and Ellis, 2009)[101] obtained the views of transboundary stakeholders from the shipping and conservations sectors from the North Channel, the stretch of water separating Northern Ireland and Scotland. These stakeholders proposed a series or recommendations for a cross-border approach to marine management in the region. They also highlighted the need for alignment of policies and targets for the Celtic Seas sub-region (of which the North Channel is only a small part). This is an ideal opportunity for the project to potentially collaborate with stakeholders in this particular transboundary area who are already accustomed to active engagement across a spectrum of marine sectors.

The Irish Sea Maritime Forum (ISMF) provides a valuable platform for the Celtic Seas Partnership to pro-actively engage with Celtic Seas stakeholders from six of the jurisdictions in the marine sub-region. Launched in Belfast in June 2012, the Forum was established in response to a series of stakeholder workshops held in 2011. The ISMF is guided by a Steering Group which includes representatives from marine planning teams and relevant marine and coastal fora such as the Scottish Coastal Forum as well as other stakeholder interests from all six Irish Sea jurisdictions. Although it is a stakeholder-led initiative, it has received financial support from a range of statutory organisations including Department of Environment, Northern Ireland, The Isle of Man Government and the Marine Management Organisation. Secretarial support is currently provided by the North West Coastal Forum and the University of Liverpool. Of particular relevance to the Celtic Seas

[99] *Op. Cit., note 79.*

[100] Ounanian, K., Delaney, A., Raakjær, J., and Ramirez-Monsalve, P. (2012). On unequal footing: Stakeholder perspectives on the marine strategy framework directive as a mechanism of the ecosystem-based approach to marine management. http://www.sciencedirect.com/science/article/pii/S0308597X11001588#

[101] Ritchie, H., and Ellis, G. (2009). Across the waters: Implementation of the UK Marine and Coastal Access Act and devolved marine legislation: cross-border case studies. http://assets.wwf.org.uk/downloads/atw_north_channel.pdf

Partnership, are the Forum's two Working Groups that focus on MSFD implementation and MSP in the Irish Sea.

Since its revival in 2003 and the creation of the Channel Arc Manche Assembly[102] in 2005, the Franco-British cooperation project at the maritime basin's level is dedicated to dialogue, reflection, proposition and action aiming to promote the specificity, the coherence and the relevance of the Channel area at the European level. One of the key successes of the Assembly has been the establishment of a Cross-Channel Forum[103]. This Forum brings together all the stakeholders who are interested in the implementation of an integrated maritime policy in the Channel area: local and national government, European institutions, research institutes, universities, industry and commercial interests, ports, regional fisheries interests, regional tourism associations, non-governmental organisations. In a similar way to the ISMF, this Cross-Channel Forum has many synergies with the key expected results of the Celtic Seas Partnership.

One of the key outputs of the recently completed LIFE+ co-financed project, PISCES (Partnerships Involving Stakeholders Involved in the Celtic Sea Ecosystem)[104], was identification of a range of ways in which stakeholders can become actively involved and support implementation of the MSFD in the southern waters of the Celtic Seas sub-region. This project also involved stakeholder engagement with Government and fisheries industry representatives that from Spain that operated in the Celtic Seas. Examples are outlined in Figure 21. The benefits of involving stakeholders are also likely to provide opportunities to reduce regulatory burden, more certainty for investment, fairer and more affordable measures, and increased commercial opportunities. At a time when public authorities are stretched resource-wise (as indicated by the DECLG in the case of Ireland), it seems sensible to incorporate as much voluntary effort as possible by utilising the skills and knowledge of stakeholders (or interested parties) as a contribution to the successful implementation of the MSFD.

- ***Supporting assessment and monitoring:*** stakeholders can contribute to the programme design; collecting, providing and validating data; supporting data analysis and interpretation; and collaborating on joint-data collection.
- ***Implementing voluntary sectoral measures:*** stakeholders can help meet policy targets, encourage others to do so, and highlight these efforts to government.
- ***Helping to identify, test and evaluate measures:*** stakeholders can improve the quality of marine strategies and help government meet targets while minimising costs.
- ***Providing evidence to support over-riding public interest and disproportionate cost arguments:*** stakeholders can actively help to ensure that sustainable development requirements are met.

Figure 21. Examples of ways in which stakeholders can participate and influence different steps in the implementation of the MSFD (Roxburgh et al., 2012).

Sectors and stakeholders are not all on equal footing, because there is a wide diversity in the institutional capabilities, economic strength, and political clout among them (Ounanian et al., 2012)[105]. The existence of various non-statutory governance mechanisms in the Celtic Seas sub-regions such as the partnerships and fora outlined above provides a key opportunity for the Celtic Seas Partnership. Building on the multi-sectoral collaboration already achieved to-date in the Irish

[102] For more information, see: http://www.arcmanche.com/en/the-channel-arc/what-is-it/
[103] For more information, see: https://camis.arcmanche.eu/crossChannelForum/
[104] Roxburgh at al. (2012). Towards sustainability in the Celtic Sea: A guide to implementing the ecosystem approach through the Marine Strategy Directive. http://assets.wwf.org.uk/downloads/the_pisces_guide.pdf
[105] *Op. Cit.,* note 79.

Sea, the Channel, the North Channel and the wider Celtic Seas region will undoubtedly assist the project in achieving its four expected results[106].

[106] The four expected results of the Celtic Seas Partnership by 2016: *Celtic Seas Engagement and Capacity Building*: Stakeholders across the Celtic Seas are familiar with the requirements of the MSFD and are willing to cooperate and coordinate activities; *Transboundary Partnership:* Transboundary governance approaches led by stakeholders demonstrate effective use of the ecosystem approach for cross-border marine management; *Transboundary Sectoral Good Practice:* Best practice approaches between sectors have been developed and applied to mobilise capacity to support sustainable management of marine resources in the Celtic Seas; *Transboundary Information Resources:* Techniques and methods have been developed based on scientific and local knowledge for the Celtic Seas to help monitor GES.

Recommendations for capacity building

This desk top study has involved a comprehensive review of relevant documents and academic literature related to MSFD implementation with the overall objective of establishing a baseline of the existing capacities and needs for capacity building for MSFD implementation. From a governance perspective it is clear that the MSFD has not been that well-thought through; the consistency of the overall legal frameworks and specific regulations related to marine management has created legal vagueness and subsequently caused legal uncertainties leading to conflicting policies and regulations having unclear boundaries (Long, 2011)[107]. This report has identified the following requirements and recommendations in terms of legal, procedural, necessary informational support of actions and indicators for successful implementation of the MSFD in the Celtic Seas.

Sub-regional uncertainty

- From a legal and procedural perspective, there is an urgent need for clarification on the borders of the Celtic Seas on a sub-regional scale. The final map needs to agreed by the UK, Ireland and France and then published by the European Environment Agency to ensure consistency across the Celtic Seas sub-region. This delay is adding to the already contradictory elements of the Directive as described in this report.

Scientific uncertainty

- In the context of resources constraints associated with the present economic climate in the sub-region and beyond, it is critical that transboundary coordination of efforts is embraced to avoid duplication of effort and costs by the three Member States bordering the Celtic Seas. This may involve a radical re-thinking by policy makers of their traditional administrative procedures. The Celtic Seas Partnership has a vital role to play in advocating for a fundamental shift in the way Governments implement Directives as prescribed by the MSFD.

- Capacity to adequately assess and monitor certain Descriptors is a common challenge across all European Seas and requires immediate action.

Stakeholder involvement

- The large amount of different types of marine, maritime and environmental policy and legislative frameworks is confusing and has the potential to be contradictory for some stakeholders. The Celtic Seas Partnership project team must be cognisant of the number of national marine planning processes that are currently underway and at different stages throughout the United Kingdom and the pre-planning context for MSP in Ireland. The Celtic Seas Partnership can raise environmental awareness and encourage enhanced participation of stakeholders by clarifying the linkages between these complex policy and legal instruments and de-mystifying the MSFD.

- It is essential that new governance mechanisms (e.g. a stakeholder forum) for multi-sector transboundary stakeholder participation at the Celtic Seas sub-region scale are established to ensure coherent coordination. The project can build on a host of existing stakeholder platforms that are currently operating at different scales throughout the Celtic Seas. This mechanism will represent a milestone for transboundary multi-sectoral dialogue at a pan-Celtic Seas level.

[107] *Op. Cit., Note 16.*

- The promotion and adoption of innovative approaches to actively engage relevant stakeholders, interested parties and the general public (e.g. identifying niches for non-statutory bodies and bottom-up management to support the Competent Authorities) is essential to achieve buy-in to the process and in turn, ensure consistency in compliance with the obligations under the Directive.

- It is imperative that the Competent Authority in Ireland transitions beyond public consultation to a more proactive strategy of stakeholder engagement as experienced in the United Kingdom and France to ensure coherence across the Celtic Seas sub-region.