

Marine Strategy Framework Directive

Ireland Programme of Measures Summary Report July 2016

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LIST OF ACRONYMS

BD	Birds Directive
BIM	Bord Iascaigh Mhara
CFP	Common Fisheries Policy
CLAMS	Co-ordinated Local Aquaculture Management Systems
DAFM	Department of Agriculture Food and the Marine
DECLG	Department of Environment, Community and Local Government
DTTAS	Department of Transport, Tourism and Sport
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EU	European Union
F _{MSY}	Fishing mortality consistent with achieving Maximum Sustainable Yield (MSY)
GES	Good Environmental Status
HD	Habitats Directive
ICES	International Council for the Exploration of the Sea
KTMs	key types of measures
MPAs	Marine Protected Areas
MSFD	Marine Strategy Framework Directive
MSY	Maximum Sustainable Yield
NIS	Non-Indigenous Species
NOx	Nitrogen Oxides
NPWS	National Parks and Wildlife Service
NWPP	National Waste Prevention Programme
OSPAR	Oslo/Paris Convention
PCB	polychlorinated biphenyls
PoMs	Programme of Measures
SEA	Strategic Environmental Assessment
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
TBT	Tributyltin
WFD	Water Framework Directive

1 INTRODUCTION

This Summary Report provides an overview of the Marine Strategy Framework Directive (MSFD) Programme of Measures (PoMs), as submitted to the European Commission in July 2016. The Summary Report constitutes a component of Member States' MSFD PoMs reporting package as outlined in MSFD Guidance Document 12 "Reporting on Programmes of Measures (Art. 13) and on exceptions (Art. 14) for the Marine Strategy Framework Directive" (5 November 2015). The main purpose of the PoMs is to put in place actions and measures which will support the meeting of the environmental targets set out under Article 10, leading to the achievement (or maintenance) of Good Environmental Status (GES).

2 REPORT STRUCTURE

The structure of this report follows [MSFD Guidance Document 12](#) entitled "Reporting on Programmes of Measures (Art. 13) and on exceptions (Art. 14) for the Marine Strategy Framework Directive" (dated 5 November 2015).

Section 2 provides a General Overview with an updated list of the environmental targets used for the PoMs, the outcomes of the assessment of existing measures, an evaluation of the adequacy of the PoMs to achieve the targets and GES, links to other policies, regional cooperation and transboundary impacts, and the public consultation and administrative processes.

A description of the measures included in Ireland's MSFD PoM is provided in sections **3.2.1** and **3.2.2** and has been organised by Descriptor, with the exception of the biodiversity-related Descriptors (Descriptors 1, 4 and 6), which, because of a high degree of overlap and similarity, have been considered together in line with the previous reporting of targets, indicators and supporting monitoring programmes. The Descriptors and their relevant sections in this report are shown in **Table 2.1**.

Table 2.1: Descriptors and Relevant Section of this Report.

Descriptor	Section of this report
<u>Biodiversity-related</u>	
Descriptor 1 Biological Diversity	3.2.1
Descriptor 4 Food Webs	3.2.1
Descriptor 6 Sea-floor Integrity	3.2.1
<u>Pressure-related</u>	
Descriptor 2 Non-Indigenous Species	3.2.2.1
Descriptor 3 Commercially Exploited Fish and Shellfish	3.2.2.2
Descriptor 5 Eutrophication	3.2.2.3
Descriptor 7 Hydrographical Conditions	3.2.2.4
Descriptor 8 Contaminants	3.2.2.5
Descriptor 9 Contaminants in Seafood	3.2.2.6
Descriptor 10 Marine Litter	3.2.2.7
Descriptor 11 Energy, including Underwater Noise	2.2.2.8

Section 4 of this report provides a full inventory of measures included in the Programme of Measures.

Ireland has reported a total of 203 constituent measures in the PoM. These are all existing measures and are considered appropriate for the achievement and maintenance of Good Environmental Status (GES) for Ireland's marine waters by 2020, in line with the objectives of the MSFD. The area covered by the MSFD in Ireland's marine waters with respect to the determination of GES is referred to as Ireland's *Assessment Area*.

3 GENERAL OVERVIEW

3.1 ENVIRONMENTAL TARGETS

The Programme of Measures is aligned to an updated and revised version of Ireland's environmental targets (Table 3.1) and associated indicators (MSFD Article 10). The revised Article 10 electronic envelope was submitted to EIONET in March 2016 and is available to view at:

http://cdr.eionet.europa.eu/ie/eu/msfd8910/acsie/envvvqrzw/ACSIE_MSFD10TI_20160323.xml/management_document.

Table 3.1: Ireland's Environmental Targets.

Descriptor	Target Description	Target Code
1 Biological Diversity	Distributional range and pattern is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.	D1_T1
	Population size is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.	D1_T2
	Population condition is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.	D1_T3
	Fish community composition and condition is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.	D1_T4
	The degree of biological or ecological effects that can be specifically attributed to contaminants is below the agreed OSPAR criteria. At present, this is limited to evaluation of reproductive impairment in marine gastropods associated with tributyltin (TBT).	D1_T5

<p>2 Non-indigenous Species</p>	<p>Reduction in the risk of introduction and spread of non-native species through the prioritisation of species and improved management of high risk pathways.</p>	<p>D2_T1</p>
<p>3 Commercial Fish and Shellfish</p>	<p>Target fishing mortality to be at levels which aim to restore and maintain populations of harvested species at least at levels which can produce the maximum sustainable yield, by 2015, where possible. Where stocks are managed within an agreed management plan, which is consistent with MSY in the long-term, target fishing mortality as specified by the management plan should be adhered to (Interim Target).</p>	<p>D3_T1</p>
	<p>Target fishing mortality to be at levels which aim to restore and maintain populations of harvested species at least at levels which can produce the maximum sustainable yield, by 2020, for all stocks. Where stocks are managed within an agreed management plan, which is consistent with MSY in the long-term, target fishing mortality as specified by the management plan should be adhered to.</p>	<p>D3_T2</p>
	<p>Spawning Stock Biomass (SSB) should be within the range of biomasses which would be expected under fishing mortality equal to or below Fishing mortality consistent with achieving Maximum Sustainable Yield (F_{MSY}) in the medium to long term and incorporate scientific uncertainty and natural variability.</p>	<p>D3_T3</p>
	<p>Size and age structure as measured by selected indicators reflect populations which are sustainably fished in the medium to long-term and incorporate scientific uncertainty and natural variability.</p>	<p>D3_T4</p>
<p>4 Food Webs</p>	<p>Population size is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.</p>	<p>D4_T1</p>
	<p>Fish community composition and condition is not adversely affected by human pressures and should be within the range expected when fishing the fish community equal to or below F_{MSY} in the medium to long term incorporating scientific uncertainty and natural variability.</p>	<p>D4_T2</p>
<p>5 Eutrophication</p>	<p>Winter dissolved inorganic nitrogen and phosphorus concentration should not exceed the Environmental Quality Standard laid down in national legislation implementing the Water Framework Directive (S.I. No. 272/2009) and the corresponding area specific assessment levels used by Ireland in the application of the OSPAR Common Procedure.</p>	<p>D5_T1</p>
	<p>Winter nutrient ratios should not exceed area specific assessment levels used by Ireland in the application of the OSPAR Common Procedure (e.g., winter nitrogen phosphorus ratio should be less than 24. This target is valid for offshore waters (salinity > 34.5).</p>	<p>D5_T2</p>
	<p>Median and 90%ile chlorophyll levels in WFD-defined coastal water bodies should not exceed the Environmental Quality Ratio laid down in national legislation implementing the Water Framework Directive (S.I. No. 272/2009).</p>	<p>D5_T3</p>
	<p>The abundance and extent of opportunistic macroalgae for WFD defined coastal waters should be consistent with the achievement of the environmental objectives of the Water Framework Directive as specified in national legislation implementing that Directive (S.I. No. 272/2009).</p>	<p>D5_T4</p>
	<p>The frequency and abundance of phytoplankton blooms in WFD coastal water bodies should be consistent with the achievement of the environmental objectives of the Water Framework Directive as specified in national legislation implementing the Directive (S.I. No. 272/2009).</p>	<p>D5_T5</p>

	<p>The composition of perennial macroalgae in WFD defined coastal waters should be consistent with the achievement of the environmental objectives of the Water Framework Directive as laid down in national legislation implementing that Directive (SI 272 2009). The abundance and species composition of intertidal seagrasses in WFD defined coastal waters should be consistent with the achievement of the environmental objectives of the Water Framework Directive as laid down in national legislation implementing that Directive (S.I. No. 272/2009).</p>	D5_T6
	<p>For WFD defined coastal water bodies, dissolved oxygen saturation should be consistent with the Environmental Quality Standard specified in national legislation implementing the Water Framework Directive (S.I. No. 272/2009) except in the case of seasonally stratified waters where the dissolved oxygen concentration (as a 5%ile) in bottom water should remain above area specific assessment levels (e.g. 5.0 to 6.0 mg/l).</p>	D5_T7
	<p>This is the overarching Target for Descriptor 5:</p> <p>GES for Descriptor 5 is achieved when the Irish MSFD marine waters are non-problem with regard to eutrophication and, where relevant, the eutrophication related environmental objectives of the EU Water Framework Directive have been met.</p> <p>The eutrophication status of Irish MSFD marine waters is to be assessed using the OSPAR Common Procedure. Under this scheme areas are generally considered as problem areas if nutrient enrichment and either a direct or indirect effect of eutrophication is observed.</p>	D5_T8
6 Sea-floor Integrity	<p>The degree of biological or ecological effects that can be specifically attributed to contaminants is below the agreed OSPAR criteria. At present, this is limited to evaluation of reproductive impairment in marine gastropods associated with tributyltin (TBT).</p>	D6_T1
7 Hydrographical Conditions	<p>All developments that may give rise to significant permanent changes in the hydrographical regime of currents, waves, or sediments must comply with the existing regulatory regimes and guidance should be followed to ensure that regulatory assessments are undertaken in a way that ensures the full consideration of any potential impacts, including cumulative effects at the most appropriate spatial scales to ensure that GES is not compromised.</p>	D7_T1
8 Contaminants	<p>Concentrations of selected substances identified within relevant legislation and under international obligations as relevant for the protection of the marine environment are within agreed levels at which adverse effects are unlikely to occur (e.g. are less than the Environmental Quality Standards applied within WFD and Environmental Assessment Criteria applied within OSPAR) and concentrations are not increasing for the assessment area.</p>	D8_T1
	<p>The degree of biological or ecological effects that can be specifically attributed to contaminants is below the agreed OSPAR criteria. At present, this is limited to evaluation of reproductive impairment in marine gastropods associated with tributyltin (TBT).</p>	D8_T2
	<p>Occurrence and extent of significant acute pollution events (e.g. slicks resulting from spills of oil and oil products or spills of chemicals) and the impact on biota affected by this pollution is minimised through appropriate risk-based approaches.</p>	D8_T3
9 Contaminants in Seafood	<p>Concentrations of contaminants in fish¹ and shellfish caught or harvested in Irish seas for human consumption show a high rate of compliance² with maximum limits listed in EU Regulation 1881/2006 (as amended).</p>	D9_T1

¹ Excludes finfish aquaculture, diadromous fish and wild species or stocks that migrate beyond the Assessment Area (but includes shellfish)

² Level of compliance to be defined

10 Marine Litter	Reduction in the number of visible litter items within specific categories/types on coastlines.	D10_T1
11 Energy (incl. Underwater Noise)	Establishment of a register of impulsive noise to determine the current level and trends in impulsive noise in the Irish Marine Assessment Area.	D11_T1

It is anticipated that a considerable amount of further work will be required to develop a broader, more comprehensive and scientifically supportable set of targets and associated indicators that matches Ireland's stated definitions for GES, while meeting the wider MSFD objectives. This work has already begun, both within Ireland and through Europe-wide collaboration with, for example organisations such as OSPAR (Oslo/Paris Convention) and ICES (International Council for the Exploration of the Sea).

3.2 INVENTORY AND ASSESSMENT OF EXISTING MEASURES

Section 4 of this report includes a list of all the measures which constitute Ireland's MSFD PoM. These measures contribute to the achievement and maintenance of GES, as well as meeting the revised environmental targets submitted under Article 10 of the Directive. The measures relating to Ireland's Water Framework Directive (WFD 2000/60/EEC) measures are drawn from the ongoing implementation of the WFD. A draft set of new WFD measures is scheduled to be published at the end of 2016 and the finalised measures will be published by the end of 2017.

Ireland recognises that careful consideration of the current knowledge gaps, together with practical economically and scientifically feasible options for addressing them is needed in order to support this work. It is not possible to fully address this within the present PoMs timeframe however this work will continue and be taken forward through the next reporting cycle.

Summaries of the measures included in Ireland's MSFD PoM are provided in sections **3.2.1** and **3.2.2**. These have been organised by Descriptor, with the exception of the biodiversity-related Descriptors (Descriptors 1, 4 and 6), which, because of a high degree of overlap and similarity, have been considered together in line with the previous reporting of targets, indicators and supporting monitoring programmes.

The alignment of each measure to both WFD and MSFD 'Key Types of Measures' (KTMs) is provided in the Detailed Reporting submitted to EIONET as a companion to this report.

3.2.1 Measures Relevant to Biodiversity Related Descriptors

3.2.1.1 Descriptors 1, 4 and 6: Biological Diversity, Food Webs and Sea-Floor Integrity

Descriptor 1: Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.

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

Descriptor 6: Sea-floor Integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.

Analysis of measure contribution towards achieving/maintaining Good Environmental Status

Descriptors 1, 4 and 6 encompass a wide range of biological and ecological elements including species (fish, birds, and marine mammals), marine habitats (water column and seabed) and their constituent biological communities. Given the scope of the biodiversity-related Descriptors, the potential human activities influencing the status of the biological elements is broad and can be aligned with many commercial sectors (e.g. fishing, aquaculture, infrastructure, shipping, off-shore energy, tourism). Due to the interrelationship between pressures and biological/ecological elements, measures for Descriptors 1, 4 and 6 are presented together because their action, either in isolation or combination, is likely to simultaneously influence the status of one or more of the Descriptors. Measures for Descriptors 1, 4 and 6 can be broadly categorised under the following overarching implementation streams:

- Water Framework Directive (2000/60/EEC)
- Natura Directives (i.e. Habitats Directive [2009/147/EC] and Birds Directive [92/43/EEC])
- Marine Planning/Licensing (e.g. Environmental Impact Assessment Directive [2011/92/EU]; Strategic Environmental Assessment Directive [2001/42/EC])
- Fisheries management (e.g. Common Fisheries Policy [1380/2013])

In general, measures nested within the above listed categories control (or mitigate) the potential impacts human pressures may have on biological/ecological elements of the Descriptors and/or support status assessments of the biological/ecological elements themselves.

Natura Directives

The *Natura* Directives, i.e. the Habitats Directive (HD) and Birds Directive (BD), and the MSFD are inter-related in that they all share a common overall goal of conserving biodiversity. While the final objectives of the Directives are defined differently and are not equivalent, they are complementary. The BD and HD have similar conservation aims; protecting habitat and species (including plants, invertebrates, fish, marine mammals and birds) and the establishment of a network of protected sites, termed *Natura* 2000 sites, for the conservation of biological elements listed under the Directives. *Natura* 2000 sites include Special Areas of Conservation designated due to their ecological importance for species and habitats protected under the HD and Special Protected Areas designated for the protection of bird species under the BD. For each designated area the Directives require site-specific Conservation Objectives to be set for the species and habitats of interest and subsequent management to ensure those objectives are achieved. Management measures taken to achieve the Conservation Objectives within *Natura* 2000 sites will make a significant contribution towards the achievement of GES with respect to Descriptors 1, 4 and 6.

Fisheries Management

The main management measures to address Descriptors 1 and 4 targets for marine fish communities are delivered through the revised Common Fisheries Policy (CFP) which came into force in January 2014. The CFP is expected to lead to a reduction in overall fishing pressures on both target and non-target fish species. This reduction will largely be achieved by setting annual total allowable catches

and fishing effort restrictions. The CFP is supported by range of regulations implementing technical conservation measures designed to reduce impact on the species components of fish communities including sensitive species and juvenile fish. These measures include the setting of conservation reference sizes, regulation of net size and avoidance of nursery/spawning grounds and juvenile fish aggregations. Other technical measures include the use of selective fishing gear to reduce high levels of unwanted catches to gradually eliminate discards. Measures promoting the use of selective fishing gears will also help achieve the new CFP landing obligation which calls for an end to the practise of discarding unwanted fish at sea. Fisheries management measures are also likely to make a significant positive contribution to the achievement of the GES objectives for Descriptor 6 Sea-floor Integrity. For example, measures restricting the use of certain types of fishing gear within closure areas will allow species and habitats vulnerable to physical damage from these gears to undergo recovery. Other fisheries management measures regulate commercial and recreational fishing of diadromous fish (species that migrate between the sea and fresh water over the course of their lifecycle), such as eel and salmon. Similarly, management measures have been put in place to conserve sensitive fish species including sharks, skates and rays and deep sea species.

Water Framework Directive

The Water Framework Directive (WFD) sets a goal of achieving Good Ecological Status for all EU ground and surface waters (including intertidal, transitional and coastal waters), which directly complements the goal of GES under the MSFD. Under the WFD, Ecological Status is assigned to a water body through assessment of hydromorphological, physico-chemical and biological quality elements, with the latter element being of particular importance. Biological elements considered in assessments include fish species, benthic communities, macroalgae and angiosperms (seagrass) while physico-chemical quality elements include nutrient and oxygen levels. All quality elements included in WFD assessments are subject to management measures to protect ecosystems in coastal and transitional waters and will collectively positively contribute to achieving GES with respect to Descriptors 1, 4 and 6, while simultaneously addressing elements of other Descriptors. For example, measures taken under the WFD and its related Directives, aim to minimise (or prevent) the eutrophication effects that can arise from elevated nutrient levels. Consequently, as well as directly contributing to GES targets for Descriptor 5 Eutrophication the measures will help reduce (or prevent) the adverse ecological impact of eutrophication on biological/ecological elements components of Descriptors 1, 4 and 6

Marine Planning/Licensing

Marine planning and licensing measures are in place to ensure sustainable development with respect to the environment. Under the planning and licensing measures, provisions are put in place to support a framework for systematically identifying and assessing the potential environmental consequences of proposed projects and plans based on the condition and sensitivity of ecosystem elements, with any adverse impacts, including cumulative effects, being avoided or mitigated before consent can be given under planning law. The main marine planning/licensing measures that will make a positive contribution towards the achievement of GES include the foreshore consent process (territorial waters) and the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) Directives and associated national regulations as set out in Ireland's Planning and Development Acts and Regulations. Furthermore, under the HD, Appropriate Assessment is required to be conducted for any project or plan that has the potential to significantly affect the Conservation Objectives of designated *Natura* 2000 sites. The permitting process, leading to appropriate controls on developments, plans and activities occurring within the marine environment, will positively contribute toward the achievement of GES. Note that the planning and licensing measures

mentioned here are also key measures that will contribute to the delivery of the Descriptor 7 (Hydrographical Conditions) GES target.

The measures referred to above will make a significant contribution towards the overall achievement of GES in coastal and marine waters. The details of the individual measures that are proposed for Descriptors 1, 4 and 6 are listed in **Appendix A**.

3.2.2 Measures Relevant to Pressure Related Descriptors

3.2.2.1 Descriptor 2 Non-Indigenous Species

Descriptor 2: Non-Indigenous Species (NIS) introduced by human activities are at levels that do not adversely alter the ecosystem.

Analysis of measure contribution towards achieving/maintaining GES

There is currently limited information on the presence and impacts of NIS in Irish marine waters and so it is difficult to assess if the GES target for this Descriptor is being met. Although knowledge on the distribution of many NIS in Ireland is limited, expert observations suggest that the number of NIS arriving in Ireland continues to increase. Ireland is endeavouring to improve its understanding of the presence, distribution and impact of NIS in Irish marine waters through a variety of programmes.

NIS in the context of Descriptor 2 are species that are either deliberately or unintentionally introduced by human activities outside of their natural range. NIS that become established and cause damage to the environment, or result in economic losses or health issues are typically referred to as invasive NIS. These species may cause unpredictable and irreversible changes to marine ecosystems through predation or competition with indigenous species, or by the modification of habitats and changes to food webs.

Descriptor 2 measures focus on the prevention and management of the introduction and spread of NIS through regulation and awareness of the sources and pathways of non-native species entering the Irish marine area. Current measures are largely directed towards the enforcement of licence conditions on the cultivation of shellfish, finfish and seaweeds, with controls on the movement of aquaculture species, including those that are of non-Irish origin or are locally absent. This is achieved through the application of a wide variety of legislative tools, including:

- European Commission Health of Aquaculture Animals and Products Regulations 2008;
- Fisheries Acts;
- Aquaculture (Licence Application) Regulations; and
- Council Regulation Concerning Use of Alien and Locally Absent Species in Aquaculture.

Several Descriptor 2 measures to control NIS are underpinned by the HD (2009/147/EC) and BD (92/43/EEC). Other measures to prevent and manage the introduction and spread of invasive NIS have specific EU legislative powers, in particular, EU regulation No 1143/2014, which entered into force on 1st January 2015.

Ireland has developed an invasive NIS code of practice that provides guidelines for water users on how to act responsibly and within the law to prevent NIS introductions and subsequent dispersal. This, together with the support for local action groups actively engaged in the surveillance and control of NIS, coupled with awareness campaigns, are examples of “bottom up” approaches that contribute towards achieving GES for Descriptor 2.

The measures referred to above will make a significant contribution in the movement towards the overall achievement of GES in coastal and marine waters. The details of the individual measures that are proposed to achieve the target set for Descriptor 2 Non-Indigenous Species are outlined in **Appendix A**.

3.2.2.2 Descriptor 3 Commercial Fish and Shellfish

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

Analysis of measure contribution towards achieving/maintaining GES

The MSFD requires member states to evaluate the impacts of fishing on commercial fish and shellfish stocks in their Assessment Areas. In fisheries assessments, the loss of fish from a stock through fishing activities is referred to as fishing mortality, while the fish within a population or stock capable of reproducing is termed the Spawning Stock Biomass (SSB). The assessment of the contribution of commercial fish stocks to GES is based on whether stocks are fished at, or below, Maximum Sustainable Yield (MSY) - the largest long-term average catch that can theoretically be taken from a species' stock and whether their SSB is within the range of biomasses that can sustain MSY.

The main management measures to address targets for Descriptor 3 are delivered through the revised CFP which came into force in January 2014. The fundamental objective of the CFP is to ensure living marine fish resources (stocks) are exploited at levels that restores and maintains populations of harvested species above levels that can produce the MSY. The implementation of the CFP is expected to lead to a reduction in fish mortality rates, with the reductions for the major fish stocks and fisheries being largely achieved through multi-annual plans. These management plans take into account the complexity of the interactions between fish stocks, while setting stock management targets in terms of fishing mortality and the Total Allowable Catch (TAC). Multi-annual plans³ are further supported by fishing effort restrictions including the management of the capacity of the sea-fishing fleet and technical measures to reduce impacts on sensitive species and juvenile fish. Technical fishing measures⁴ include:

- Restrictions on landing sizes;
- Closure areas and seasons (e.g. avoidance of nursery/spawning grounds and juvenile fish aggregations);
- Regulation of net size; and
- Use of selective fishing gear to reduce high levels of unwanted catches.

³ http://ec.europa.eu/fisheries/cfp/fishing_rules/multi_annual_plans/index_en.htm

⁴ http://ec.europa.eu/fisheries/cfp/fishing_rules/technical_measures/index_en.htm

Multi-annual plans developed as part of the CFP will be further supported by the new CFP landing obligation which calls for an end to the practice of discarding unwanted fish at sea. It is anticipated that implementation of the landing obligation will drive improvements in fishing gears in terms of catch selectivity, thus reducing by-catch. The landing obligation will ensure that the greater proportion of fish killed will be landed and so improve the quality and confidence of the data on fishing mortality.

A range of measures specific to exploited shellfish have been developed to provide protection for shellfish species in accordance with EU and national legislation. These measures include initiatives such as the introduction of landing size limits for lobsters, crabs and crawfish, and spawning closures for razor clam fisheries.

In addition to the CFP, specific management measures have been implemented in response to EU and domestic regulations promoting the conservation of sensitive fish species, in particular sharks, skates and rays, and deep sea species. Ireland's Inland Fisheries Act has also resulted in the establishment of measures to regulate commercial and recreational fishing of diadromous fish (species that migrate between the sea and fresh water over the course of their lifecycle), such as eel and salmon. Measures specific to the management of salmon include the implementation of a licensing scheme for commercial and recreational fishing, while Ireland's Eel Management Plan, developed in response to EU regulations, outlines a comprehensive programme for species monitoring and stock enhancement measures. Other conservation and protection measures enacted in response to EU regulations comprehensively prohibit commercial exploitation of vulnerable stocks including sea bass.

The current status of fish and shellfish stocks in terms of their contribution to the achievement of GES cannot be fully determined because a number of stocks have not been evaluated against specific MSY reference points. However, there has been an overall reduction in fishing pressure in the Irish Assessment Area in the last ten years with the majority of the assessed stocks now being fished sustainably. Many of the once depleted stocks have now increased to acceptable levels (above defined biomass reference levels).

The management measures listed above will also positively contribute to a wide range of biological and ecological elements of Descriptors 1, 4 and 6. In particular, measures designed to reduce impact on the species components of fish communities including sensitive species and juvenile fish will have a significant positive influence on the achievement of the fish community related targets under Descriptors 1 and 4. Similarly, technical measures restricting the use of certain types of fishing gear within closure areas will allow seabed habitats vulnerable to physical damage from these gears to undergo recovery and subsequently make a significant positive contribution to the achievement of the GES objectives for Descriptor 6 Sea-floor Integrity.

The measures referred to above will make a significant contribution in the movement towards the overall achievement of GES in coastal and marine waters by 2020. The details of the individual measures that are proposed to achieve the targets set for Descriptor 3 Commercial Fish and Shellfish are provided in **Appendix A**.

3.2.2.3 Descriptor 5 Eutrophication

Descriptor 5: Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.

Analysis of measure contribution towards achieving/maintaining GES

Excess nutrients, commonly nitrogen and phosphorus, introduced into the sea by human activities (a process known as eutrophication) can disturb the natural balance between nutrient availability and marine plant and animal growth. Increased availability of nutrients can cause the proliferation of rapidly reproducing opportunistic species of marine plants and animals, some of which can adversely affect ecosystems. Phytoplankton, for example, can occur at sufficient densities to form blooms, which reduce light availability for marine plants such as seagrass. As the nutrients become depleted the algae begins to die and the microorganisms feeding on the dead algae multiply and greatly reduce dissolved oxygen levels, often leading to fish and benthic invertebrate mortalities.

To contribute towards achieving/maintaining GES for Eutrophication, measures listed under Descriptor 5 focus on directly reducing nutrient levels, and minimising or preventing the eutrophication effects that can arise from elevated nutrient levels.

Given that most of the activities that cause eutrophication are either terrestrial in nature or take place in the coastal zone, it is considered likely that the measures taken under the WFD and its related Directives will collectively constitute the greatest contribution to achieving and maintaining GES targets for eutrophication across Ireland's marine waters.

The implementation of measures taken through River Basin Management Plans developed under the WFD, emission limits through the Industrial Emissions Directive (2010/75/EU) and implementation of the National Emissions Ceiling Directive (2001/81/EC), which sets emission ceilings on various forms of nitrogen, will play a key role in achieving cuts to nutrient loading.

Measures identified under the Urban Waste Water Treatment Directive (91/271/EEC) will control the sources of nutrients from inadequate collection and treatment of urban wastewater discharges, which is a key potential source of nutrients (phosphorus and nitrogen).

Measures are included from the Nitrates Directive (91/676/EEC) that protect and improve water quality through the application of Ireland's Nitrates Action Programme. This will continue to promote more efficient and effective fertiliser and manure management and other farm management practices to reduce nutrient run-off (by applying codes of good agricultural practice).

The implementation of the Green Low-Carbon Agri-Environment Scheme, a new agri-environment scheme developed through the Rural Development Programme 2014-2020, under Regulation (EU) No 1305/2013 with support from the European Agricultural Fund for Rural Development will further promote good agricultural practice.

Ireland will continue to control Nitrogen Oxides (NO_x) emissions from ships through the application of the Sea Pollution (Prevention of Air Pollution from Ships) Regulations 2010 (S.I. No. 313/2010) under Annex VI to the MARPOL Convention.

Additional measures undertaken under OSPAR include:

- To continue to apply PARCOM Recommendation 88/2 on the Reductions in Inputs of Nutrients to the Paris Convention Area (to reduce nutrient inputs to identified eutrophication problem areas by 50% relative to input levels in 1985, until new reduction targets are set for problem areas in order to achieve non-problem area status); and
- To continue to apply PARCOM Recommendation 89/4 on a Coordinated Programme for the Reduction of Nutrients.

Currently, Ireland's marine waters are not significantly affected by eutrophication and are therefore already achieving the Descriptor 5 targets for GES. The measures referred to above will ensure that this situation is maintained and that any arising problem areas continue to be reduced or eliminated. The details of the individual measures that are proposed to achieve the targets set for Descriptor 5 Eutrophication are provided in **Appendix A**.

3.2.2.4 Descriptor 7 Hydrographical Conditions

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

Analysis of measure contribution towards achieving/maintaining GES

Hydrographical conditions relate to the physical characteristics of seawater (temperature, salinity, depth, currents, waves, turbulence, and turbidity) that play a crucial role in maintaining marine ecosystems. These conditions can be disrupted by human activities sometimes resulting in permanent alteration to the tidal regimes, sediment and freshwater transport, current or wave action.

Human activities undertaken in the Irish Assessment Area that could potentially alter hydrographical conditions include: the construction or extension of port developments and coastal infrastructure, dredging, dumping, sewage and cooling water outflows, channelisation, water abstraction, aquaculture facilities, the construction of offshore gas platforms, together with the construction of offshore wind and marine renewable devices and arrays. The majority of the proposed Descriptor 7 measures are designed to control or regulate these activities.

Measures listed under Descriptor 7 are aimed at ensuring developments comply with existing regulatory regimes and that there is full consideration of potential impacts to the hydrographical conditions and impacts on the marine environment.

Measures are included that ensure marine and coastal development applications provide the necessary information for a full assessment of the proposed development. This involves a consenting process that sufficiently accounts for the potential alteration of hydrographical conditions, protection of habitats and species, and control of impacts through appropriate monitoring and mitigation strategies. These measures are being achieved through the coordinated application of a wide variety of legislative tools that include:

- Environmental Impact Assessment Directive (85/337/EEC) as amended,
- Habitats Directive (92/43/EEC),

- Water Framework Directive (2000/60/EC),
- Foreshore Act 1933 as amended,
- Petroleum and Other Minerals Development Act 1960,
- Planning and Development Acts and Regulations, and
- Legislation providing responsibilities to the Environmental Protection Agency (Integrated Pollution Control Licensing, Industrial Emissions licensing, Waste licensing, Waste Water Discharge authorisation, Dumping at Sea permitting).

There is also a focus on proper consideration of particularly sensitive species and habitats through the application of the OSPAR Recommendation 2010/5 in relation to threatened and/or declining species and habitats.

In addition to accounting for coastal and marine developments, the measure to implement marine plans, under the Marine Spatial Planning Directive (2014/89/EU), will provide a plan-led structure to determine when and where human activities take place at sea.

In the offshore environment, Ireland has few economic sectors that undertake activities that could lead to hydrographical alterations, while the effects of inshore or coastal activities on hydrographical conditions are likely to be highly localised. Any current impacts on coastal waters are not thought to be significant. Overall, the sources of possible hydrographical modifications are relatively few in Irish waters and any impacts are expected to remain localised. It is presently estimated that less than 1% of the Irish Assessment Area is at risk of permanent hydrographical alterations.

It is has not been possible to assess whether the GES target for Descriptor 7 is currently being met for anthropogenic effects on hydrographical processes and impacts on marine habitats and communities due to insufficient data and lack of established methods. The achievement of GES for this Descriptor rests on having adequate regulatory regimes in place to control and manage human activities so that significant hydrographical changes do not occur. The measures presently outlined for Descriptor 7 are considered sufficient to achieve and maintain this objective.

The measures referred to above will make a significant contribution towards the overall achievement of GES in coastal and marine waters by 2020. The details of the individual measures that are proposed to achieve the target set for Descriptor 7 Hydrographical Conditions are provided in **Appendix A**.

3.2.2.5 Descriptor 8 Contaminants

Descriptor 8: Concentrations of contaminants are at levels not giving rise to pollution effects.

Analysis of measure contribution towards achieving/maintaining GES

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

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

Measures undertaken for Descriptor 8 focus on reducing the levels of contaminants entering the marine environment and incorporating regulation and awareness of the sources and pathways of contaminants entering the Irish marine area. This is to ensure that contaminant concentrations are kept to a minimum and are not present at elevated or harmful concentrations.

The implementation of measures will be taken through River Basin Management Plans developed under the WFD (2000/60/EC), while emission limits are addressed through the Industrial Emissions Directive (2010/75/EU). Implementation is also achieved through existing licensing and permitting processes which regulate and control contaminant discharges.

These regulation procedures are achieved through the application of a wide variety of legislative tools, including:

- EC (Water Policy) Regulations 2003 (S.I. No. 722/2003);
- Environmental Protection Agency (Integrated Pollution Control) (Licensing) Regulations 2013 (S.I. No. 283/2013);
- EU (Industrial Emissions) Regulations 2013 (S.I. No. 138/2013);
- Waste Water Discharge (Authorisation) (Amendment) Regulations 2010;
- Waste Management (Facility Permit and Registration) Regulations 2007; and
- EC (Good Agricultural Practice for Protection of Waters) Regulations 2010.

Measures identified under Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulations will provide a high level of control on the use of chemicals and will therefore reduce the possibility of harmful contaminants entering the marine environment.

Plant Protection Product Regulations and Biocidal Product Regulations will continue to prevent the use of legacy pesticides with persistent bioaccumulative toxic properties.

Descriptor 8 measures also incorporate implementation of the OSPAR Hazardous Substances Strategy, and a progressive application of the OSPAR Offshore Oil and Gas Industry Strategy. The objective of the OSPAR Hazardous Substances Strategy is the prevention of marine pollution through the continuous reduction of discharges, emissions and incidental losses of hazardous substances, thereby achieving environmental concentrations of near background levels for naturally occurring substances and close to zero for man-made substances. The objective of the OSPAR Offshore Oil and Gas Industry Strategy is to prevent and ultimately eliminate pollution originating from offshore activities.

The measure identified under the Control of Major Accident Hazards involving Dangerous Substances regulations will ensure operators take all necessary measures to prevent major accidents and limit their consequences for human health and the environment.

Ireland is a signatory to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), which seeks to minimise marine pollution from dumping, oil and airborne contaminants. MARPOL is divided into six Annexes, individually dealing with:

- Prevention of pollution by oil & oily water;
- Control of pollution by noxious liquid substances in bulk;
- Pollution by sewage from ships;
- Pollution by garbage from ships; and
- Prevention of air pollution from ships.

All Annexes of MARPOL are applied in Irish waters.

Overall, concentrations of synthetic and non-synthetic contaminants in water, shellfish and to a lesser extent sediments are within acceptable limits determined under the current criteria used in OSPAR assessments, indicating that few problems exist for the Irish marine area. There is little evidence for prevailing trends over time for non-synthetic contaminants but there is some evidence for an on-going decline in concentrations of synthetics such as PCBs and organochlorine pesticides. While imposex in dog whelk is still evident for Irish waters, the situation continues to improve following regional and global bans on TBT use as an antifoulant.

Although contaminants exhibit a stable or declining trend it has not been possible to assess whether GES targets are currently being met at this time. This is because of data limitations, coupled with a lack of adequately developed methodology to determine GES for the entire Assessment Area.

The measures referred to above will, however, make a significant contribution in the movement towards the overall achievement of GES in coastal and marine waters. The details of the individual measures that are proposed to achieve the targets set for Descriptor 8 Contaminants are provided in **Appendix A**.

3.2.2.6 Descriptor 9 Contaminants in Seafood

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

Analysis of measure contribution towards achieving/maintaining GES

Contaminants originate from a variety of sources, both naturally occurring (such as heavy metals and hydrocarbons) and man-made (atmospheric emissions, pesticides, PCBs and flame retardants). Once released to the environment, these substances can end up in sea water and sediments and be accessible for uptake by living organisms. Fish and shellfish can accumulate contaminants in their tissues which can potentially be transferred to humans after consumption.

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

contaminant levels in fish and shellfish are compliant with the maximum limits specified in Commission Regulation (EC) 1881/2006.

To ensure compliance, the following legislative tools are presently enforced:

- Regulation (EC) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs;
- Regulation (EC) No 178/2002 laying down the General Principles and requirements of food law;
- Regulation (EC) No 854/2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption; and
- Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

The WFD (2000/60/EEC) and Dangerous Substances Directive (67/548/EEC), implemented through national statutory instruments, are key Descriptor 9 measures that reduce the levels of contaminants entering the marine environment, thereby removing contaminants that could find their way into fish and shellfish caught or harvested for human consumption.

The measure identified under the Co-ordinated Local Aquaculture Management Systems (CLAMS), a nationwide initiative to manage the development of aquaculture throughout Ireland at a local level while integrating such local management systems with relevant national policies, aids the management of aquaculture in bays and inshore waters.

The regulatory measure identified under the WFD, Foreshore and Dumping at Sea (Amendment) Act 2009 and Dumping at Sea Act 1996 (as amended) control discharges containing harmful contaminants from entering the marine environment.

Overall, concentrations of contaminants in water and shellfish are within acceptable limits as determined under the current criteria used in OSPAR assessments, suggesting few problems exist for the Irish marine area. Moreover, seafood (fish and shellfish) landed or harvested in Ireland is consistently within the current EC maximum limits for mercury, cadmium, lead, PCBs, and dioxins. Contaminant concentrations in fish and shellfish in the Irish Assessment Area are therefore currently within the maximum limits specified under Commission Regulation (EC) 1881/2006, meeting the GES target for Descriptor 9.

The measures referred to above will make a significant contribution in continuing to meet GES targets for this Descriptor. The details of the individual measures that are proposed to achieve the targets set for Descriptor 9 Contaminants in Seafood are outlined in **Appendix A**.

3.2.2.7 Descriptor 10 Marine Litter

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

Analysis of measure contribution towards achieving/maintaining Good Environmental Status

Marine litter can occur on the seabed, in the water column and on the coastline, with direct impacts ranging from aesthetic degradation, damage to equipment and vessels, through to risks to human

health. It can pose a risk to a wide range of marine organisms such as seabirds, marine mammals, fish and turtles, through ingestion and entanglement. Marine litter, in the form of micro-plastics, can carry and release chemical contaminants into the marine environment or transfer them directly to marine organisms after ingestion.

At present, the relationship between the types and amounts of marine litter in the environment and the degree of harm caused to marine habitats, communities or populations is not fully understood and an assessment of current status against the GES characteristics of this Descriptor cannot be undertaken. Research is on-going on this subject and Ireland contributes to and supports this work at a national and European level.

Measures listed under Descriptor 10 are principally aimed at reducing litter levels through waste management for both sea-based and land-based sources of litter in conjunction with enforcement, beach cleaning and education, so that marine litter is reduced.

As waste prevention is to be preferred to any waste management option, Ireland will continue to implement measures that guide actions in this area under its National Waste Prevention Programme. This includes improving resource efficiency and a progression towards a circular economy.

For land-based sources of litter Ireland's marine strategy focuses on the implementation of measures through a combination of existing legislation and new initiatives identified under waste strategies and marine litter action plans. The EC (Waste Directive) Regulations and Waste Management Act will play a significant role in reducing the amount of litter generated through increased reuse and sustainability incentives, including treating waste as a resource.

Ireland will continue to promote greater reuse and recycling of goods and materials and contribute to a low carbon economy by treating waste as a resource as outlined in Ireland's waste management policy "A Resource Opportunity" (July 2012). The Irish policy statement expresses Ireland's commitment to implement the waste hierarchy set out in the Waste Framework Directive (2008/98/EC) by aiming for more prevention, reuse and recycling to reduce the impact of waste on the environment and to move Ireland towards becoming a recycling society, with a focus on resource efficiency.

The Waste Management Act, 1996 established a legislative basis for producer responsibility initiatives (PRIs). These promote more efficient and effective waste management practices in business and industry to reduce litter generation in, for example, the farming, electrical equipment and vehicle sectors. In addition, there will be continued efforts to improve business attitudes around marine litter, incorporating the Irish Business Against Litter and corporate social responsibility initiatives.

The Litter Pollution Acts, 1997 to 2009, make littering an offence and include disincentives to litter such as fines. Ireland will continue to apply these measures as well as continuing the programme of beach cleaning (with Local Authority operational cleaning of the foreshore), litter enforcement and the provision of appropriate infrastructure for the proper litter disposal and recycling including signage and bins.

Measures identified under the WFD (2000/60/EC) and Urban Waste Water Treatment Directive (91/271/EEC) will reduce the litter entering rivers by addressing surface water runoff, storm overflow control and drainage, which are potential sources of marine litter.

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

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

The strategy for this Descriptor also includes measures to support educational programmes, campaigning activities and research into achieving the necessary behaviour change regarding marine litter. This includes developing a *Green Schools* module on marine litter with An Taisce, as the basis for an international Eco-School project in conjunction with EU Life, the World Wildlife Fund and the Celtic Seas Partnership. Other measures raising awareness to tackle the sources of marine litter include An Taisce's Ocean Literacy Programme, the Blue Flag Beach and Green Coast awards, and the #2minutebeachclean initiative. In addition, there will be promotion of the use of the National Environmental Complaints Line and the National Litter Pollution Monitoring System.

At an international level, Ireland continues to develop and implement the OSPAR Regional Action Plan on Marine Litter (2014) which covers measures to address land-based and sea-based sources of marine litter and addresses education and outreach measures.

The details of the individual measures that are proposed to achieve the target set for Descriptor 10 Marine Litter are outlined in **Appendix A**.

3.2.2.8 Descriptor 11 Energy Including Underwater Noise

Descriptor 11: Introduction of energy, including underwater noise, is at levels that does not adversely affect the marine environment.

Analysis of measure contribution towards achieving/maintaining GES

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

At present, our knowledge of the current status of underwater noise and the data that underpins it remains poor. The single GES target for Descriptor 11 is dependent on the establishment of a noise register in support of a better understanding of the levels and risks associated with the underwater noise pressure. It is anticipated that threshold levels that distinguish between benign sound and

harmful noise levels will eventually be determined as more information becomes available through the register.

Measures listed under Descriptor 11 are principally aimed at using best practice to control and reduce underwater noise and vibrational energy to mitigate possible impacts on marine organisms and in particular marine mammals, together with facilitating improved data collection and collation in order to better inform the assessment process.

One of the key measures in support of the Descriptor 11 GES target is the establishment and maintenance of a register of noise in the Irish Assessment Area. This will make a substantial contribution to the understanding of the current levels and trends of anthropogenic noise in the Assessment Area.

The NPWS document “Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters”⁵ provides best-practice and knowledge-led guidance for managing developments and activities that have the potential to affect sensitive marine mammal species and the recommendations contained within it are integrated into the consents and licensing conditions for all planning applications.

The application of the International Marine Organization I817:2014 Code of Practice On Noise Levels On Board Ships⁶ acts primarily to protect the ship personnel from noise and vibration on board the ship, but will also reduce the amount of noise and vibration that is transferred from the ship’s hull to the water column.

At present, Ireland’s waters are considered to be a low noise environment within a Regional Seas context, but the addition of the measures referred to above will make a significant contribution towards the achievement of GES in coastal and marine waters.

The details of the individual measures that are proposed to achieve the GES target set for Descriptor 11 Energy (incl. Underwater Noise) are outlined in Appendix I.

3.3 MARINE PROTECTED AREAS

Ireland’s existing network of Marine Protected Areas (MPAs) will play a significant role in supporting the achievement of a number of the GES characteristics and targets, in particular for Descriptor 1 (Biological Diversity) and Descriptor 6 (Sea-floor Integrity). The MPA network forms an integral element of the proposed programme of measures for GES, contributing to the Directive’s requirements to put in place spatial protection measures which contribute to a coherent and representative network of MPAs.

Currently, the Irish MPA network includes *Natura* 2000 sites designated under the BD (92/43/EEC) and HD (2009/147/EC), as well as sites designated under OSPAR. These cover predominant habitats, special habitats and species. Future extension of the network will require further information based

⁵ NPWS 2014. Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. http://www.npws.ie/sites/default/files/general/Underwater%20sound%20guidance_Jan%202014.pdf

⁶ International Marine Organization Code on Noise Levels on Board Ship (2014 Edition). ISBN:978-92-801-1578-9. <http://www.imo.org/en/Publications/Documents/Newsletters%20and%20Mailers/Mailers/I817E.PDF>

on on-going data collection and surveying to ensure it is coherent and representative. The specific management measures needed to achieve the site conservation objectives are, in many cases, still under development. Further to this, Ireland will implement Art. 11(4) of the CFP (1380/2013) and it is intended to develop a national strategy for the creation and management of Ireland's network of MPAs.

3.4 ADEQUACY OF PROGRAMME OF MEASURES

The PoM as reported in EIONET is considered to be sufficient to contribute to the achievement or maintenance of GES and associated targets.

There are no new measures within the PoM and there are no exceptions requested.

The way in which the PoM will contribute to achieving targets and GES is discussed in sections **3.2.1** and **3.2.2** of this document.

Through the ongoing process of implementation of the MSFD we have identified gaps in our understanding and knowledge of the marine environment. We have committed to closing these gaps through research (both at a national, regional and EU level), additional monitoring, feasibility studies, collaboration *via* OSPAR and EU Common Implementation Strategy working groups and technical groups. In terms of how we have addressed these knowledge gaps in our programme of measures we have sought to include measures which we feel contribute to the achievement of GES but which may not have a direct link towards a specific target. We have also adopted a precautionary principle approach to the emerging pressures (litter, noise) and have included measures which we identified and commissioned in 2014 prior to the PoM development process. In time we will understand more about the pressure-response relationship and we can create more targeted measures for these descriptors.

3.5 LINKS TO OTHER POLICIES

A considerable number of measures in Ireland's PoM are directly linked to the requirements of EU legislation. EU legislation and policies (as well as national legislation) are the primary tools under which MSFD PoMs are implemented and enforced by the relevant government departments and agencies in Ireland and throughout other EU Member States. **Table 3.2** provides a list of relevant EU legislation directly related to measures in the PoM under each Descriptor.

Table 3.2: EU legislation directly related to Ireland's MSFD PoM, coordinated by Descriptor.

Descriptor No.	Topic	EU and other international legislation & policies
1	Biological Diversity	Birds Directive (2009/147/EC); Habitats Directive (92/43/EEC); Maritime Spatial Planning Directive (2014/89/EU); Water Framework Directive (2000/60/EEC); Environmental Impact Assessment Directive (2011/92/EU); Strategic Environmental Assessment Directive (2001/42/EC);

Descriptor No.	Topic	EU and other international legislation & policies
		<p>Common Fisheries Policy (1380/2013);</p> <p>Marine Strategy Framework Directive (2008/56/EC);</p> <p>Environmental Liability Directive (2004/35/EC) (as amended);</p> <p>Safety of Offshore Oil and Gas Operations Directive (2013/30/EU);</p> <p>Council Regulation (EC) No. 812/2004 laying down measures concerning incidental catches of cetaceans in fisheries.</p>
2	Non-indigenous Species	<p>Birds Directive (2009/147/EC);</p> <p>Habitats Directive (92/43/EEC);</p> <p>Council Directive (2006/88/EC) on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animal;</p> <p>Environmental Liability Directive (2004/35/EC) (as amended);</p> <p>EC, 2014, Regulation (EU) No. 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species;</p> <p>Council Regulation (EC) No 708/2007 concerning use of alien and locally absent species in aquaculture (as amended).</p>
3	Commercial Fish & Shellfish	<p>Common Fisheries Policy (1380/2013) [including supporting Sea-Fisheries (Technical Conservation Measures) Regulations];</p> <p>European Maritime and Fisheries Fund Regulation (EU) No 508/2014;</p> <p>Council Regulation (EU) 2016/72 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters;</p> <p>Council Regulation (EC) No. 1005/2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU Regulation);</p> <p>Commission Regulation (EC) No. 1010/2009 of laying down detailed rules for the implementation of Council Regulation (EC) No 1005/2008;</p> <p>Council Regulation (EC) No. 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy;</p> <p>Commission Implementing Regulation (EU) No. 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No. 1224/2009;</p> <p>Council Regulation (EC) No. 2347/2002 establishing specific access requirements and associated conditions applicable to fishing for deep-sea stocks;</p> <p>Environmental Liability Directive (2004/35/EC) (as amended);</p> <p>Council Regulation (EC) No. 809/2007 as concerns drift nets;</p> <p>Council Regulation regarding establishing measures for the recovery of the stock of European eel (Regulation No. 1100/2007);</p> <p>Birds Directive (2009/147/EC);</p>

Descriptor No.	Topic	EU and other international legislation & policies
		Habitats Directive (92/43/EEC).
4	Food Webs	Birds Directive (2009/147/EC); Habitats Directive (92/43/EEC); Maritime Spatial Planning Directive (2014/89/EU); Water Framework Directive (2000/60/EEC); Environmental Impact Assessment Directive (2011/92/EU); Strategic Environmental Assessment Directive (2001/42/EC); Common Fisheries Policy (1380/2013); Marine Strategy Framework Directive (2008/56/EC); Environmental Liability Directive (2004/35/EC) (as amended); Safety of Offshore Oil and Gas Operations Directive (2013/30/EU); Council Regulation (EC) No. 812/2004 laying down measures concerning incidental catches of cetaceans in fisheries.
5	Eutrophication	Water Framework Directive (2000/60/EC); Nitrates Directive (91/676/EEC); Urban Waste Water Treatment Directive (91/271/EEC); Maritime Spatial Planning Directive (2014/89/EU); Industrial Emissions Directive (2010/75/EU); National Emissions Ceiling Directive (2001/81/EC); Regulation (EU) No. 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD).
6	Sea-floor Integrity	Birds Directive (2009/147/EC); Habitats Directive (92/43/EEC) ; Water Framework Directive (2000/60/EEC) ; Environmental Impact Assessment Directive (2011/92/EU); Maritime Spatial Planning Directive (2014/89/EU); Strategic Environmental Assessment Directive (2001/42/EC); Common Fisheries Policy (1380/2013); Marine Strategy Framework Directive (2008/56/EC); Environmental Liability Directive (2004/35/EC) (as amended); Safety of Offshore Oil and Gas Operations Directive (2013/30/EU).
7	Hydrographical Conditions	Environmental Impact Assessment Directive (2011/92/EU); Strategic Environmental Assessment Directive (2001/42/EC); Maritime Spatial Planning Directive (2014/89/EU); Water Framework Directive (2000/60/EC);

Descriptor No.	Topic	EU and other international legislation & policies
		<p>Marine Strategy Framework Directive (2008/56/EC);</p> <p>Habitats Directive (92/43/EEC);</p> <p>Birds Directive (2009/147/EC);</p> <p>Environmental Liability Directive (2004/35/EC) (as amended).</p>
8	Contaminants	<p>Water Framework Directive (2000/60/EC);</p> <p>Biocidal Product Regulation (EU) No. 528/2012;</p> <p>Ship-source pollution and criminal penalties Directive 2005/35/EC (as amended);</p> <p>Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation (EC) No. 1907/2006;</p> <p>Classification, Labelling and Packaging (CLP) Regulation (EC) No. 1272/2008;</p> <p>Persistent Organic Pollutants Regulation (EC) No 850/2004 as amended by Regulation (EU) No. 519/2012 (particularly Annex I);</p> <p>Priority Substances Directive 2013/39/EU amending the Directives 2000/60/EC and 2008/105/EC;</p> <p>Sustainable Use of Pesticides Directive (2009/128/EC);</p> <p>Integrated Pollution Prevention and Control - Industrial Emissions Directive 2010/75/EU;</p> <p>Dangerous Substances Directive (2006/11/EC);</p> <p>Control of major accident hazards involving dangerous substances Directive (2012/18/EU);</p> <p>EC Port Reception Facilities Directive (2000/59/EC, amended in 2002/84/EC, Directive 2007/71/EC);</p> <p>Environmental Liability Directive (2004/35/EC) (as amended);</p> <p>Safety of Offshore Oil and Gas Operations Directive (2013/30/EU);</p> <p>Regulation (EC) No. 1107/2009 concerning the placing of plant protection products on the market.</p>
9	Contaminants in Seafood	<p>Regulation (EC) No. 1881/2006 (as amended) setting maximum levels for certain contaminants in foodstuffs;</p> <p>Regulation (EC) No. 178/2002 laying down the General Principles and requirements of food law, establishing the EFSA and procedures in matters of food safety;</p> <p>Regulation (EC) No. 854/2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption;</p> <p>Regulation (EC) No. 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules;</p> <p>Water Framework Directive (2000/60/EC);</p> <p>Dangerous Substances Directive (76/464/EEC);</p>

Descriptor No.	Topic	EU and other international legislation & policies
		Animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals Directive (2006/88/EC); Safety of Offshore Oil and Gas Operations Directive (2013/30/EU).
10	Marine Litter	Waste Framework Directive (2008/98/EC); Urban Waste-Water Treatment Directive (1991/271/EEC); Water Framework Directive (2000/60/EC); Integrated Pollution Prevention and Control Directive (Directive 96/61/EC); Port Reception Facilities for Ship-generated Waste and Cargo Residues Directive (2000/59/EC); Waste Management (Waste Electrical and Electronic Equipment (WEEE) Directive (2012/19/EU); Restriction of Hazardous Substances (RoHS) Directive (2002/95/EC); Environmental Liability Directive (2004/35/EC) (as amended); Safety of Offshore Oil and Gas Operations Directive (2013/30/EU); Batteries and Accumulators Directive (2006/66/EC); End-of-life vehicles Directive (2000/53/EC).
11	Energy (incl. Underwater Noise)	Habitats Directive (92/43/EEC); Marine Strategy Framework Directive (2008/56/EC); Maritime Spatial Planning Directive (2014/89/EU); Environmental Liability Directive (2004/35/EC) (as amended); Environmental Impact Assessment Directive (2011/92/EU); Strategic Environmental Assessment Directive (2001/42/EC).

3.6 REGIONAL COOPERATION AND TRANSBOUNDARY IMPACTS

3.6.1 (Sub) regional Coordination

Ireland's draft programme of measures was developed in close coordination with the other member states of the Celtic Seas sub-region (France and UK) and includes measures that are based on wider regional agreements. Some examples of this coordination include:

- Annual trilateral meetings between UK, Ireland and France to agree useful areas to cooperate together (for example, how to cooperate on areas of emerging pressures such as noise and litter)
- The incorporation of [OSPAR acquis](#) and measures and actions on marine litter and on species and habitats.
- Contribution to the OSPAR ICG-MSFD [joint documentation on the coordination of measures](#)

- A detailed mapping exercise to compare the UK and French draft MSFD measures to the proposed Irish draft measures. This exercise produced a long list of over 600 potential overlapping actions and measures. Following an aggregation and relevancy assessment this list was reduced to a more manageable level (approximately 230 measures). This exercise showed a high level of comparability and compatibility in the strategies and descriptor level actions and measures being proposed by each of the three countries.
- Active participation (observer board and *via* direct engagement) in the EU-LIFE funded WWF Celtic Seas Partnership which brought together regional stakeholders to work on developing measures. This work identified measures in several areas. Ireland has included one of these measures in our PoM (the development of an international eco-school module for Marine Litter).
- Coordination with the devolved administration in Northern Ireland in relation to specific all-Ireland measures (e.g. Descriptor 2 NIS).
- During the development of the draft PoM an assessment of the policy documents on MSFD measures by eNGO Seas-at-Risk and the national affiliate (SWAN) was carried out to assess the scope and scale of eNGO proposed measures against the Irish draft PoM.

3.6.2 Transboundary Impact Assessment

There were no transboundary impacts from the development of the Irish programme of measures. The PoM is based on the existing regulatory architecture and the emerging and transboundary pressures have been identified and are being addressed at sub-regional level.

3.7 STAKEHOLDER AND PUBLIC CONSULTATION

The formal stakeholder and public consultation on Ireland's draft Programme of Measures was undertaken for a period of 10 weeks, from 27th November 2015 to 5th February 2016 and included: the publishing of a dedicated information document outlining the PoMs process and presenting Ireland's proposed measures; a facility for on-line or email submissions and regional public information meetings.

Prior to this formal process a collaborative approach had been adopted for the development of the draft Programme of Measures. This participatory approach involved on-going collaboration with other policy streams (other Government Departments and Agencies) and the eNGO sector in relation to specific measures development.

From the 27th November 2015 the Public Consultation document was available for viewing at:

http://www.environ.ie/sites/default/files/public-consultation/files/marine_strategy_framework_directive_programme_of_measures_november_2015.pdf

It was also available in hard-copy (on request) and as a pdf file on a consultation specific USB flash drive.

Other Member States in the Celtic Seas (UK and France) were notified about Ireland's consultation *via* email on the 4th December 2015.

An advert was published in the Irish Times on the 1st December 2015 to advertise the link to the online Public Consultation document, to invite submissions, and to advertise the dates for the public meetings. Public meetings took place on the 8th, 12th and 14th of January 2016 in Cork, Galway and Dublin respectively, to facilitate feedback on the programme of measures proposed. The devolved administration in Northern Ireland was invited to attend (and did attend) the public meeting in Dublin on 14th January 2016.

The Consultation document included a web-link to a comment form for submissions as well as an email address and postal address for submission of comments and responses. Submissions on the draft PoM were accepted between 27th November 2015 and 5th February 2016 inclusive.

All consultation submissions were individually evaluated and comments and observations relevant to the PoMs process were taken forward for further assessment and consideration by appropriate personnel, depending on the technical or policy-driven nature of the submission. Submissions were prioritised according to relevance and whether they concerned changes/recommendations to individual measures as well as proposals for new measure. In some cases, further clarification was sought from respondents in order to confirm the intent of issue(s) referred to in their comments and/or observations.

As a result of the assessment of the stakeholder and public consultation responses a total of 1 measure was added and 61 measures were modified. A Public Consultation response document was published on the DECLG website on the 5th July 2016 and is available here: http://www.environ.ie/sites/default/files/public-consultation/files/msfd_programme_of_measures_public_consultation_response_to_submissions.pdf.

3.8 ADMINISTRATIVE PROCESSES

The Department of Environment, Community and Local Government (DECLG) is the Competent Authority. This authority is provided for under Article 7 of the Directive and by the European Communities (Marine Strategy Framework) Regulations S.I. No. 249 of 2011. It is intended that the implementation of the MSFD PoMs in Ireland will be coordinated across all relevant Government Departments and agencies. The implementation will be managed in tandem with other relevant policies. These include:

- Implementation of the WFD (overseen by the DECLG), through the River Basin Management Programme;
- Implementation of the HD (92/43/EEC) and BD (2009/147/EC), by the National Parks and Wildlife Service of the Department of Arts, Heritage and the Gaeltacht (DAHG);
- Common Fisheries Programme and Ireland's aquaculture management programmes, which are overseen by the Department of Agriculture Food and the Marine, with the assistance of the Sea Fisheries Protection Agency (CFP enforcement), the Marine Institute (research) and Bord Iascaigh Mhara (fishing industry and aquaculture management);
- Implementation of the Maritime Spatial Planning Directive (2014/89/EU) which is currently being transposed into Irish law and overseen by the DECLG;
- National Waste Prevention Programme (NWPP) - the latest NWPP, '*Towards a Resource Efficient Ireland*', is led by the Environmental Protection Agency (EPA) in association with DECLG, with oversight and direction for the programme led by the National Waste Prevention Committee;

- Requirement for environmental impact assessments, which is incorporated into Irish planning laws and managed by the EPA;
- Implementation of Environmental Liability directive (2004/35/CE as amended) for which the EPA is the competent authority in Ireland; and
- Harmonisation with policy implementation under other maritime environmental commitments such as OSPAR (DECLG) and MARPOL (Department of Transport, Tourism and Sport).

4 LIST OF MEASURES

Ireland's extensive programme of measures (**Appendix A**) has been entered into the online EIONET reporting system. A draft set of new WFD measures is scheduled to be published at the end of 2016 and the finalised measures will be published by the end of 2017. There have been no new measures reported or exceptions requested.

APPENDIX A
LIST OF MEASURES

Code	Measure	Relevant Descriptor(s)
M001	Continue to apply the <i>Natura</i> Directives (Birds Directive [2009/147/EC] and Habitats Directive [92/43/EEC]) and associated national regulations as laid down in S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011.	1, 4, 6
M002	Complete the identification of Special Areas of Conservation by the end of 2015.	1, 4, 6
M003	Continue the protection of species and habitats listed in Annex I and II of the Habitats Directive (92/43/EEC) through the designation of Ireland's network of Special Areas of Conservation.	1, 4, 6
M004	Continue implementing an appropriate monitoring and assessment strategy addressing the distribution, extent and condition of habitats and species to support conservation status assessment under the Habitats Directive (92/43/EEC).	1, 4, 6
M005	Continue to apply the requirement for Appropriate Assessment of activities within <i>Natura</i> sites as required under Article 6(3) of the Habitats Directive (92/43/EEC).	1, 4, 6
M006	Continue the protection of wild bird species through the designation of Ireland's network of Special Protection Areas under the Birds Directive (2009/147/EC).	1, 4, 6
M007	Update regional lists of protected plant species and propose protection status for other species and habitats on the scale of the marine subregion.	1, 4, 6
M008	Continued implementation of OSPAR recommendations for Threatened and/or Declining habitats and species.	1, 4, 6
M009	To continue to investigate the distribution of habitats through seabed surveys and monitoring through initiatives such as the INtegrated Mapping FORe the Sustainable Development of Ireland's MARine Resource (INFOMAR) Programme.	1, 4, 6
M010	To continue to report data on habitat distribution to the OSPAR habitat mapping database.	1, 6
M011	Implementation of the Water Framework Directive (2000/60/EEC) River Basin Management Plans which include measures aimed toward the achievement of Good Ecological Status of coastal and transitional intertidal waters bodies.	1, 4, 5, 6, 8, 9
M012	Maintain the Water Framework Directive River Classification Scheme and associated management measures.	1, 4, 5, 6, 8, 9
M013	Continue to implement Environmental Impact Assessment Directive (85/337/EEC) in order to identify, minimise and mitigate potential adverse environmental impacts.	1, 4, 5, 6, 7, 8, 10, 11
M014	Continue to implement the Strategic Environmental Assessment Directive (2001/42/EC) in order to identify, minimise and mitigate potential adverse environmental impacts.	1, 2, 3, 4, 5, 6, 7, 8, 10, 11
M015	Awareness and training of best practices in maritime and coastal activities and preservation of the marine environment.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M016	Continue to ensure coherence of Ireland's network of marine protected areas by setting up increased protection areas using tools such as habitat protection orders, no-take zones etc.	1, 4, 6
M017	To continue to consider whether sites justify selection as Marine Protected Areas.	1, 3, 4, 6, 7
M018	Set up (temporary or permanent) Marine Protected Areas in functional zones for fish.	1, 3, 4, 6
M019	Develop a national strategy to create and manage Ireland's network of Marine Protected Areas.	1, 4, 6
M020	To continue to develop shellfish stock assessments which take into account requirements for protected bird species at national level within 6 nautical miles.	1, 4, 6
M021	Promote site-specific measures to protect island bird colonies from invasion by non-indigenous predatory mammals.	1, 2, 4
M022	Continue to be informed by the Action plans developed by BirdWatch Ireland.	1, 4, 6

Code	Measure	Relevant Descriptor(s)
M023	Continue to implement ongoing measures to protect sites important for marine waterbird species including Natural Heritage Areas, Wildfowl Sanctuaries and Irish wetlands designated under the Ramsar Convention on Wetlands.	1, 4, 6
M024	Continue to apply the Wildlife Acts 1976 to 2012.	1, 4, 6
M025	Fulfil the obligations for the protection of migratory waterbird species.	1, 4
M026	Continue to apply the regulations that enforce the Wildlife Acts and Regulations which makes it an offence to kill, injure or capture marine mammal species, and to cause damage to certain areas used by the species for shelter or protection, or to disturb animals occupying such areas.	1, 4
M027	Continue to enforce legislation which makes it an offence to intentionally kill, injure, take, disturb, possess or trade species listed under the Wildlife Act.	1, 4
M028	Continue to enforce Wildlife Acts and Regulations which makes it an offence to kill, injure or capture birds and to cause damage to and their nests and eggs.	1, 4
M029	Continue to implement the licensing process controlling the possession of certain birds or animals.	1, 2, 4
M030	Continue to implement the licensing process controlling the import/export trade of certain birds or animals.	1, 4
M031	Continue to implement the licensing process controlling hunting of certain birds or animals.	1, 4
M032	Continue to implement the licensing process governing disturbance of protected plant and animal species.	1, 4, 6
M033	To apply guidance in place for carrying out activities (e.g. pile driving, seismic survey) in Irish marine waters which have the potential to kill, injure or disturb a marine European species (i.e. any cetacean or bird species).	1, 11
M034	Promote wildlife watching Codes of Practice to minimise risk of disturbance to marine wildlife including birds and mammals.	1
M035	Continue to implement Ireland's Cetacean Conservation Plan.	1, 4, 10, 11
M036	Continue the National Marine Mammal By-catch Monitoring Programme.	1, 4
M037	Manage the risk posed by sea fisheries to protected cetaceans in accordance with the Risk Assessment for Special Areas of Conservation.	1, 4
M038	Maintain the use of acoustic deterrents ("pingers") in identified fisheries on vessels larger than 12m in accordance with EU regulations.	1
M039	Complete the designation process for proposed Special Areas of Conservation for harbour porpoise and bottle nosed dolphin in Irish waters.	1
M040	Maintain the moratorium on commercial whaling within the fisheries limits of the State (i.e. out to 200 miles from the coast) and to continue to prohibit the hunting by Irish registered ships of certain whales, including right whales and female whales accompanied by calves, outside the fisheries limits of the State.	1
M041	Continue to effectively control and promote compliance in accordance with the EU fisheries legislation.	1, 3, 4, 6
M042	To apply the Precautionary Principle to fisheries management to ensure that the exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the Maximum Sustainable Yield.	1, 3, 4
M043	Continue to support the development and implementation of Multi Annual Plans at EU level.	1, 3, 4
M044	Continue to develop fishery closure areas and seasonal closures in conjunction with the Regional Groups of Member States and Advisory Councils based on the best available advice.	1, 3, 4, 6

Code	Measure	Relevant Descriptor(s)
M045	Continue to examine and develop, where appropriate, closures of spawning and nursery grounds to preserve sensitive stocks at the national level, where sites are within the 6 nautical mile limit, and at the EU level.	1, 3, 4, 6
M046	Implementation of the Landing Obligation to help eliminate waste, protect young fish, rebuild fish stocks and ensure a sustainable future for the fishing industry.	1, 3, 4
M047	Setting and enforcing of annual Total Allowable Catches and quotas.	1, 3, 4
M048	Setting of conservation reference sizes to help lead to the reduction in overall fishing pressure on target species, including sensitive species.	1, 3, 4
M049	Continue to implement local conservation reference sizes stocks/species under national measures within the 6 nautical mile limit.	1, 3, 4
M050	Promote the use of selective fishing gear in order to reduce high levels of unwanted catches and to gradually eliminate discards.	1, 3, 4
M051	Promote activities that reduce catch of juvenile fish (e.g. avoidance of nursery/spawning grounds and juvenile fish aggregations). Supporting technical measures may include regulation of net size.	1, 3, 4
M052	To continue to examine and develop, where appropriate, the use of different types of fishing gear at the national level within the 6 nautical mile limit, and at the EU level.	1, 3, 4, 6
M053	To develop and implement fishery management measures for Marine Protected Areas (MPAs) at national level where sites are within the 6 nautical mile limit and at regional EU level for MPAs outside the 6 nautical mile limit.	1, 3, 4, 6
M054	To deliver compliance with legislation which prohibits the removal of shark fins at sea and other measures which support the conservation of elasmobranch species.	1, 3, 4
M055	Regulate recreational and commercial fisheries to support conservation and sustainable exploitation.	1, 3, 4
M056	Continue to implement the salmon licensing and log book reporting scheme.	1, 3, 4
M057	Apply the compulsory management schemes for species below their conservation objectives.	1, 3, 4
M058	Continued implementation of Ireland's Eel Management Plans in line with the requirements of Council Regulation (No. 1100/2007).	1, 3, 4
M059	Continue to manage the impacts of sea-fisheries and aquaculture in Special Areas of Conservation and Special Protection Areas.	1, 2, 3, 4, 5, 6
M061	Ensure that operators restore shellfish growing areas once production ends.	1, 3, 4, 6
M062	Continue to implement the EU fishery management measures for the protection of relevant habitats included on the OSPAR Threatened and/or Declining list.	1, 6
M063	Continue to implement the EU fishery management measures for the protection of relevant species included on the OSPAR Threatened and/or Declining list.	1, 3, 4
M064	To continue to support effective conservation methods for elasmobranch species delivering on the EU Action Plan for the Conservation and Management of Sharks.	1, 3, 4
M066	Apply Environmental Liability Directive (2004/35/EC) as appropriate.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M067	Implementation of Directive 2013/30/EU on safety of offshore oil and gas operations within Irish Legislation. This ensures protection of the marine environment through implementation of safety measures/mechanisms for offshore oil and gas operations. This includes, <i>inter alia</i> , as per Article 8 of Directive 2013/30/EU, the appointment of the Commission of Energy Regulation (CER) as the competent authority responsible for regulatory functions in this regard.	1, 6, 8, 10, 11

Code	Measure	Relevant Descriptor(s)
M068	Ensuring on-going implementation of guidelines for the assessment of dredged material for disposal in Irish waters, the application of the Foreshore Acts and the licensing, permitting and enforcement of activities under the Dumping At Sea Act.	1, 6, 7, 8, 10
M070	Continue to enforce Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC) and associated national Regulations with respect to the control of invasive species.	2
M071	Continue to develop invasive species action plans. Implement commitment to develop an (Aquaculture) Industry Code of Practice for Invasive Alien Species.	2, 6
M072	Continue to apply Council Directive 2006/88/EC & national regulations with regard to the movement of aquaculture species [European Communities (Health of Aquaculture Animals and Products) Regulations 2008 (S.I. No. 261 of 2008) as amended].	2
M074	Continue to apply to aquaculture licences for the cultivation of finfish and shellfish the condition that the Licensee shall comply with any regulations in force governing the movement of cultured marine species.	2, 3
M075	The implementation of the Regulation (EU) No. 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species.	2
M076	Continue to promote the Invasive Species Ireland's All-Island (Republic of Ireland and United Kingdom) Code of Practice for Water Users as a source of guidance on how to act responsibly within the law to prevent the introduction and manage the spread of alien invasive species.	2
M077	Maintain and expand as necessary a watch and alert system for non-indigenous species.	2
M078	Upon the ratification of the International Maritime Organization (IMO) Ballast Water Convention and its implementation under Irish law by statute Ireland will apply IMO and OSPAR Guidelines for the control and management of ship's ballast water to minimise the transfer of harmful aquatic organisms and pathogens.	2
M079	Continue to apply the Alien and Locally Absent Species in Aquaculture Regulations (708/2008).	2
M080	Continue to promote local action groups to engage the support of the third sector in controlling invasive non-indigenous species and in promoting key messages.	2
M081	Continue to promote awareness of invasive non-indigenous species to the public and marine/maritime professionals.	2
M082	Continue to apply Regulations which require land owners, or occupiers of a premise, to take action with respect to invasive species.	2
M083	To continue to apply the new Common Fisheries Policy (1380/2013) which entered into force on 1 January 2014.	3
M084	Continued regulation of fishing equipment, vessels, duration and species to regulate the pressures on the environment.	1, 3, 4, 6
M085	In accordance with the Common Fisheries Policy (1380/2013), through the application of the Precautionary Approach to fisheries management, to aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield.	3
M086	To implement a regional approach to fisheries management in line with Article 18 of the Common Fisheries Policy (1380/2013).	3
M087	Setting total annual catch at EU level with regard to scientific advice from scientists to provide for the protection of vulnerable marine ecosystems and species.	1, 3, 4
M088	Manage the fishing capacity of the fleet with regard to fishing opportunities over time in accordance with the Common Fisheries Policy (1380/2013).	3

Code	Measure	Relevant Descriptor(s)
M089	Continue to manage the sea-fishing fleet in line with the Entry/Exit Scheme as set out in the Common Fisheries Policy (1380/2013).	3
M090	Continue to ensure that the capacity of the sea-fishing fleet does not exceed the capacity ceiling set out in Regulation (EU) No. 1380/2013.	3
M091	To continue to support the Responsible Irish Fish (RIF) label and sustainability certification schemes (e.g. fisheries with Marine Stewardship Council certification).	1, 3, 4
M092	In co-operation with the European Commission, to utilise the European Maritime and Fisheries Fund to support the effective delivery of the reformed Common Fisheries Policy.	3
M093	To implement Council Regulation (EC) No. 2347/2002 establishing specific access requirements and associated conditions applicable to fishing for deep-sea stocks and support strengthened measures in any amendment to the Regulation.	3, 4
M098	Continue to prohibit drift netting at sea.	1, 3, 4
M100	Continue the precautionary management approach of prohibiting the commercial fishing and marketing of sea bass by Irish vessels. Support and implement measures adopted at EU Member State meetings to address the declining stocks of sea bass	3
M101	Replenishment of depleted inshore stocks in order to improve environmental sustainability.	1, 3, 4
M102	Continue to develop closure areas and seasonal closures in conjunction with the Regional Groups of Member States and Advisory Councils based on the best available scientific advice.	1, 3, 4
M103	To continue to work with the Regional Inshore Fisheries Forums and local stakeholders to develop and implement locally informed management plans for inshore fisheries within 6 nautical miles.	3
M104	To continue to work with the National Inshore Fisheries Forum to develop inshore fisheries policy within 6 nautical miles.	3
M105	Continue to implement effort management for crab fisheries in line with EU regulations.	1, 3, 4, 6
M106	To continue to enforce the protection measures for juvenile shellfish species set out in Council Regulation 850/98 as amended.	1, 3, 4, 6
M107	Continued effort management of Scallop fishing in line with EU legislation.	1, 3, 4, 6
M108	Implement national restrictions on fishing vessels participating in the scallop fishery, as follows. Vessels greater than or equal to 10m Length Overall must hold an Authorisation in order to retain on board or land a quantity of Scallop that is greater than 10% by live weight of the total quantity of all species of fish retained on board or landed on that occasion. To qualify for an Authorisation, a vessel must either have: (i) carried out scallop fishing activity for at least 50 days at sea in the two and a half years up to 30 June 2005, or (ii) have sourced 100% replacement capacity from a vessel(s) which carried out scallop fishing activity for at least 50 days at sea in the two and a half years up to 30 June 2005.	1, 3, 4, 6
M109	To continue to develop and to apply protection measures for shellfish species in accordance with EU and national legislation such as v-notching, minimum & maximum landing size for lobsters, minimum landing size for brown crab, spider crab crawfish, closed season for shrimp, monitoring, reporting & spawning closure for bivalve fisheries.	1, 3, 4, 6

Code	Measure	Relevant Descriptor(s)
M111	To continue to prevent pollution of surface waters from agricultural sources and to protect and improve water quality through the application of Ireland's Nitrates Action Programme. This will continue to promote more efficient and effective fertiliser and manure management and farm management practices to reduce nutrient run-off (applying codes of good agricultural practice).	5
M112	To continue to support the Agricultural Catchments Programme that aims to maximize the effectiveness of Nitrates Action Plan by encouraging farmer participation and disseminating information from the programme to a wide audience.	5
M113	To continue to reduce nutrient inputs arising from Waste Water Treatment Plants through the application of the EC Urban Waste Water Treatment Directive (91/271/EEC).	5
M114	To continue to reduce the emissions of nutrients to the atmosphere through the setting of appropriate emission limits through the Industrial Emissions Directive (2010/75/EU) which sets emission limits for nitrogen in line with the best available abatement technologies.	5
M115	To reduce emissions of nitrogen oxides and ammonia through the application of the National Emissions Ceiling Directive (2001/81/EC) which sets emission ceilings on forms of nitrogen (nitrogen oxides and ammonia).	5
M116	To continue to control Nitrogen Oxides emissions from ships through the application of the Sea Pollution (Prevention of Air Pollution from Ships) Regulations 2010 (S.I. No. 313/2010).	8
M117	Continue to support the Rural Development Programme (RPD); including its Knowledge Transfer schemes and the implementation of the GLAS (Green Low-Carbon Agri-Environment Scheme) Scheme.	5
M118	To continue to apply PARCOM Recommendation 88/2 on the Reductions in Inputs of Nutrients to the Paris Convention Area (to reduce nutrient inputs to eutrophication problem areas by 50% relative to input levels in 1985, until new reduction targets are set for problem areas to move to non-problem area status).	5
M119	To continue to apply PARCOM Recommendation 89/4 on a Coordinated Programme for the Reduction of Nutrients.	5
M120	Continue to implement the Urban Wastewater Treatment regulations and review and amend as necessary the eutrophic sensitive waters designated under the regulations.	5
M121	Continued Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form implementation of Regulation laid out in MARPOL Annex III (entered into force 1 July 1992) and S.I. No. 510/2013.	8
M122	Continued Prevention of Pollution by Sewage from Ships through the implementation of Regulations laid out in MARPOL Annex IV (entered into force 27 September 2003) and S.I. No. 492/2012.	5
M124	Continue to implement national legislation to appropriately apply licensing, regulation and planning for the marine and coastal environment, including the requirement for applications to be accompanied by the materials necessary for a full assessment of the proposed plan, project or development.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M125	Ensure that appropriate forms and levels of organisational governance are in place to support Foreshore Licensing, Petroleum Exploration/Appraisal/ Production Licensing, and proposed Maritime Option Licensing process.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M126	Ensure that the consenting/ permitting processes, overseen by relevant regulatory bodies/statutory bodies, sufficiently account for the adequate protection of habitats and species.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M127	Develop sector specific guidance documentation and regional strategy plans for renewable energy growth and impact control.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Code	Measure	Relevant Descriptor(s)
M128	To apply the Environmental Impact Assessment Directive and associated legislation in relation to licences and consents.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M129	Continue to develop and implement river basin and shoreline management plans to control impacts and improve environmental status.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M130	Develop and implement marine plans for all of Irish waters by 31st March 2021 at the latest.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M133	Ensure that environmental monitoring and mitigation measures stipulated in Environmental Impact Statements are fit for purpose and when/where deemed necessary are conducted appropriately.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
M134	Continue to enforce statutory codes of practice on the application and use of chemicals (e.g. good agricultural practice on agri-chemicals), which specify how various operations should be carried out to prevent chemicals entering surface waters.	8
M135	Continue to enforce River Basin Management Plans of which measures include legally binding codes of practice detailing storage requirements and nutrient controls (closed periods for manure spreading).	5
M136	Set up and run pollution prevention awareness campaigns, which provide targeted advice and information to householders and those in high risk areas on all rural diffuse pollution issues, in order to prevent and reduce chemicals from entering surface waters and groundwater.	5, 8
M137	Implement Water Framework Directive Environmental Quality Standards for specific pollutants used in assessment of water quality status.	8, 9
M138	To continue to enforce emission and discharge limits from industrial installations, in line with the best available technologies.	8
M139	To continue to prevent the use of legacy pesticide with persistent bioaccumulative toxic properties.	6, 8, 9
M140	Continue to enforce EU Directive on Ship-source pollution and criminal penalties Directive 2005/35/EC (as amended by Directive 2009/123/EC).	8
M141	Continue to register, evaluate, authorise or restrict chemicals in accordance with national and EU legislation.	8
M142	Continue to enforce the ban on production, placing on the market and use (some limited exceptions) of intentionally produced Persistent Organic Pollutants (POPs) substances listed in the Stockholm Convention (SC) and United Nations Economic Commission for Europe (UNECE) Protocol on POPs. Ensure the national action plan and implementation plan on how Ireland is meeting obligations under the SC is maintained and carried out.	8, 9
M143	To continue to review the River Basin Management Plans at the end of each 6-year cycle as outlined in the Water Framework Directive.	1, 3, 4, 5, 6, 8, 9
M144	To continue to implement the requirements of S.I. No. 272/2009, as amended by S.I. No. 386/2015.	8
M145	Ensure shellfish products are fit for human consumption by implementing the Shellfish Waters Directive and its Pollution Reduction Programmes.	9
M146	Ensure stormwater management is employed, particularly where excess loads can occur, by treating where and whenever necessary.	5
M147	To continue to regulate pesticides in accordance with relevant EU and national law.	8, 9

Code	Measure	Relevant Descriptor(s)
M148	Continue to control discharges through existing regulation procedures (licensing and permitting of activities) – Integrated Pollution Prevention and Control licences, Waste Water Discharge Licence, Local Authority Wastewater Authorisation (smaller discharges), Local Authority Waste Licences, Agricultural controls, Single Dwelling House Waste Water Systems and the implementation of Pollution Reduction Plans.	5, 7, 8, 9, 10
M149	Ensure dredging plans are incorporated into port master plans.	6, 7, 8
M150	Implement the OSPAR Hazardous Substances Strategy.	8, 9
M151	Progressively implement the OSPAR Offshore Oil and Gas Industry Strategy.	8, 10
M152	Implement OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals (as amended by OSPAR Decision 2005/1).	8
M153	Implement the OSPAR Recommendation 2005/2 on environmental goals for the use and discharge of OSPAR Priority Chemicals.	8
M154	Apply OSPAR Recommendation 2006/3 on environmental goals for the phasing-out of discharges of substances identified as candidates for substitution.	8
M155	Implement OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended by OSPAR Recommendation 2006/4).	8
M156	Implement OSPAR Recommendation 2003/5 promoting the use and implementation of environmental management systems by the offshore industry.	8, 10
M157	Ensure operators take all necessary measures to prevent major accidents and limit their consequences for human health and the environment.	1, 6, 8, 9
M158	Continue to enforce the Dumping at Sea Act 1996 (as amended), which specifically prohibits the dumping of certain materials at sea and requires any person who wishes to dispose of material at sea to apply to the EPA for a Dumping at Sea permit.	6, 8, 10
M159	Continue to enforce the Sea Pollution Act 1991 to prevent pollution of the sea by oil and other substances.	8
M160	Continue Prevention of Pollution by Oil through the implementation of Regulations laid out in MARPOL Annex I and S.I. No. 542/2010.	8
M161	Continued Control of Pollution by Noxious Liquid Substances in Bulk through the implementation of Regulations laid out in MARPOL Annex II (entered into force 2 October 1983) and S.I. No. 217/2008.	8
M162	Continued Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form implementation of Regulation laid out in MARPOL Annex III (entered into force 1 July 1992) and S.I. No. 510/2013.	8
M164	Continued Prevention of Pollution by Garbage from Ships through the implementation of regulations laid out in MARPOL Annex V (entered into force 31 December 1988) and S.I. No. 372/2012	10
M165	Continued Prevention of Air Pollution from Ships through the implementation of Regulations laid out in MARPOL Annex VI (entered into force 19 May 2005) and S.I. No. 313/2010).	8
M166	Continue to implement the International Convention for the Safety of Life at Sea (SOLAS), 1974. The objective of the SOLAS regard is to attain minimum standards for the construction, equipment and operation of ships, compatible with their safety.	8
M167	Continued provision of port waste reception facilities in commercial and fishing ports.	8, 10
M170	To continue to apply EU and national regulations setting maximum levels for certain contaminants in foodstuffs.	9
M171	To continue to apply EU and national regulations laying down the general principles and requirements of food law.	9

Code	Measure	Relevant Descriptor(s)
M172	To continue to apply EU and national regulations laying down specific hygiene rules for food of animal origin.	9
M173	To continue to apply EU and national regulations on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.	9
M174	To continue to apply the EU Water Framework Directive (2000/60/EC).	1, 3, 4, 5, 6, 8, 9
M175	Continue to implement CLAMS – Coordinated Local Aquaculture Management Systems to ensure adequate supervision and management of shellfish practices, and to empower aquaculture operators to undertake voluntary improvements and facilitate them to recognise and report incidents.	8, 9
M176	Continue to implement the EU Water Framework Directive, Dangerous Substances Directive and associated national legislation in land use planning and for issues relating to single and multi-dwelling unit, waste water collection and treatment.	8
M177	Regulate and appropriately monitor of dredging and disposal under the Foreshore Act 1993 (as amended)	6, 7, 8
M178	Continue to implement EC (Health of Aquaculture Animals and Products) Regulations 2008 (S.I. No. 261/2008) and Council Directive 2006/88/EC.	9
M181	To continue to enforce the Litter Pollution Acts 1997 to 2009, which make littering an offence.	10
M182	To continue to implement regional waste management plans and a national hazardous waste management plan.	8, 10
M183	To continue to promote the use of packaging substitution.	10
M184	To continue to provide appropriate infrastructure for proper litter disposal and recycling including signage and bins.	10
M185	To continue to support initiatives which promote public pride in local amenity/natural beauty or reinforce social norms against littering.	10
M186	To continue to apply disincentives to litter (e.g. fines).	10
M187	To continue to implement the OSPAR Regional Action Plan on Marine Litter	10
M188	To continue to apply Waste Prevention Programmes.	10
M189	To continue efforts to improve business attitudes and behaviours around marine and coastal litter.	10
M190	Continue beach cleaning (with Local Authority operational cleaning of the foreshore) and litter enforcement.	10
M191	To continue to contribute to a low carbon economy by treating “waste as a resource”.	10
M192	Promote greater reuse and recycling of goods and materials and management of waste.	10
M193	To continue to charge for single use carrier bags through the applications of the Plastic Bag (Amendment) (No.2) Regulations (S.I. No. 167/2007), amending Plastic Bag Regulations (S.I. No. 605/2001).	10
M194	To promote the use of the National Environmental Complaints Line and the reporting of environmental pollution, fly-tipping and illegal dumping of waste; including the National Litter Pollution Monitoring System, funded by DECLG, including www.litter.ie .	10
M195	To encourage the reuse and recycling of waste and the reduction of the amount of waste destined for landfill through the application of Waste Management (Landfill Levy) Regulations 2002-2013.	10
M196	To continue to enforce the requirement to put in place a site waste management plan at marine-related developments through the application of the EU Directive 2000/59/EC on port reception facilities for ship-generated wastes and cargo residues.	10

Code	Measure	Relevant Descriptor(s)
M197	Combined Storm Overflow Control (screening & limiting of spills) and application of the discharge licensing requirements set by the Environmental Protection Agency under the Waste Framework Directive and Urban Waste Water Treatment Directive and the Integrated Pollution Prevention and Control Directive.	5, 8, 10
M198	To reduce litter entering rivers and other water bodies by addressing pollution from surface water runoff and drainage through the application of the Water Framework Directive (2000/60/EC).	10
M201	Measures to maintain restrictions on the range of material that can be disposed of at sea from ships; and increase and improve port reception facilities for ship-generated waste; and extend port waste reception facilities to fishermen.	10
M202	To continue to raise awareness to tackle the sources of litter through the Blue Flag Beach and Green Coast Award programmes.	10
M203	Continue to implement the Producer Responsibility Initiative to increase the recycling of waste electrical and electronic equipment.	10
M204	Continue to enforce legislation (S.I. No. 513/2012) restricting the use of hazardous substances in electrical and electronic equipment.	10
M205	To continue to implement the Producer Responsibility Initiative to increase the recycling of farm plastic waste through the application of the farm plastics recovery scheme.	10
M206	Maintain and expand the Fishing for Litter Scheme.	10
M207	Continue to promote and support An Taisce's programme on Ocean Literacy.	1, 4, 6, 10
M208	Maintain sea users' awareness of waste issues and encourage compliance with existing rules.	5, 8, 10
M209	Continue to promote the waste management service in order to provide alternative methods for the disposal of discarded fishing gear.	10
M212	To continue to apply the BIM Responsibly Sourced Standard for wild capture fisheries.	1, 3, 4, 6, 8, 9, 10
M213	To continue to raise awareness to tackle the sources of litter through the international environmental education programme Eco-Schools. This includes developing an international Eco-School module on marine litter with the Celtic Seas Partnership, Eco Schools (FEE - Copenhagen) and An Taisce.	10
M214	On-going implementation of the #2minutebeachclean/#Glantra2noimead initiative and expansion across all blue flag beaches in Ireland.	10
M215	Continue to implement the Producer Responsibility Initiative to increase the recycling of batteries and accumulators.	10
M216	Continue to implement the Producer Responsibility Initiative to increase the recycling of construction and demolition waste.	10
M217	Continue to implement the Producer Responsibility Initiative (PRI) to increase the recycling of packaging waste; and to continue to promote, co-ordinate and finance the collection and recovery of packaging waste in order to achieve the objectives set out in the Packaging Waste Directive.	10
M218	Continue to implement the Producer Responsibility Initiative to increase the recycling of tyres.	10
M219	To continue to implement the Producer Responsibility Initiative to increase the recycling of end – of - life vehicles.	10
M220	Continue to promote the Bord Iascaigh Mhara Environment Management System (EMS) to assist fishermen to implement practices to help minimise the impact of fishing effort on the marine environment.	1, 3, 4, 6, 8, 10
M221	Continue to promote the implementation of the Environment Management System on fish and shellfish farms through the Environment Management System for Aquaculture initiative.	1, 3, 4, 5, 6, 8, 9, 10
M223	To establish and maintain a register of noise in the Irish Marine Assessment Area.	11

Code	Measure	Relevant Descriptor(s)
M224	To continue to apply the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (NPWS 2014).	11
M225	To apply the IMO I817:2014 Code On Noise Levels On Board Ships.	11
M227	Support the Origin Green Initiative National programme to improve sustainability and environmental performance within the Irish Food Sector.	1, 2, 3, 4, 6