Marine Institute
Foras na Mara

Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Marine Strategy Framework Directive Article 11 Monitoring Programmes

Responses to Submissions – MSFD Article 11 Public Consultation

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1 INTRODUCTION

1.1 BACKGROUND

The Marine Strategy Framework Directive (MSFD) requires Member States to take the necessary measures to achieve or maintain Good Environmental Status (GES) in the marine environment by the year 2020 at the latest. The aim of the Directive is to protect Europe's marine waters by applying an ecosystem-based approach to the management of human activities while promoting the sustainable use of the marine environment for present and future generations. Responsibility for the implementation of the MSFD in Ireland rests with the Department of Environment Community and Local Government (DECLG).

The assessment of GES is undertaken by reference to eleven descriptors which are described as "qualitative descriptors". Good environmental status requires that:

- Biological diversity is maintained;
- The introduction of non-indigenous species by human activities does not adversely alter the ecosystem;
- Populations of all commercially exploited fish and shellfish are within safe biological limits and are indicative of a health stock;
- Elements of marine food webs are at normal abundance and diversity;
- Human-induced enrichment of water by nutrients (eutrophication) is minimised;
- Sea floor integrity is at a level that ensures the structure and functions of ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected;
- Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems;
- Concentrations of contaminants do not give rise to pollution effects;
- Contaminants in fish and other seafood for human consumption do not exceed relevant standards;
- Properties and quantities of marine litter do not cause harm to the coastal and marine environment; and
- The introduction of energy, including underwater noise, is at a level that does not adversely affect the marine environment.

1.2 PROGRESS TO DATE

The first steps in the implementation of the MSFD in Ireland was the undertaking of an Initial Assessment of Ireland's marine waters (Article 8), the definition of the characteristics of GES for each of the eleven descriptors (Article 9) and the establishment of a comprehensive set of environmental Targets and Indicators (T&Is) to guide progress towards achieving GES (Article 10). Ireland submitted their Article 8, 9 and 10 reporting to the European Commission (hereafter referred to as the Commission) in April 2013 in the form of 117 individual technical reports are available on the DECLG's website – http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/PublicConsultations/MSFDReportingSheets/.

These reports were summarised under a single cover for the Initial Assessment Article 19 Report (http://www.environ.ie/en/Publications/Environment/Water/FileDownLoad,34365,en.pdf) which included:

- A broad description and status assessment of the predominant, natural physical and oceanographical features, together with the ecological characteristics (species and habitats) present;
- An assessment of the human-induced pressures and impacts affecting environmental status, and
- An evaluation of the socio-economic significance of Ireland's marine environment.

1.3 ARTICE 11 REPORTING & PUBLIC CONSULATION

Article 11 of the MSFD requires Member States to establish and implement coordinated monitoring programmes for the on-going assessment of the environmental status of marine waters. In July 2014 the DECLG compiled an Article 11 Monitoring Programme Public Consultation report (see - http://www.environ.ie/en/Publications/Environment/Water/FileDownLoad,38589,en.PDF) outlining the elements being considered by Ireland for inclusion in the MSFD Monitoring Programmes. In addition, the report included updates in relation to further development work associated with targets and indicators since the Initial Assessment.

On the 24th July 2014, the DECLG launched a Public Consultation process on the Article 11 Monitoring Programme. Interested parties were invited to submit written comments on the Article 11 Monitoring Programme Public Consultation report to a dedicated email address: msfd@environ.ie, or *via* the Replies Template provided on the website. The consultation process ran for a period of 7 weeks ending on the 12th September 2014.

This document contains the DECLG responses to the Public Consultation submissions received.

1.4 OVERVIEW OF SUBMISSIONS

1.5 SUBMISSIONS

A total of 12 submissions were received from stakeholders including Government Departments and Agencies, environmental Non-Governmental Organisations, maritime sector organisations and academics (see **Table 1.1**).

Table 1.1 - Individuals and organisations from which submissions were received during the Consultation period.

Submission Reference Code:	Submitting Organisation
MSFD_Art.11_001	Bird Watch Ireland
MSFD_Art.11_002	Environmental Protection Agency
MSFD_Art.11_003	Department of Agriculture, Food & the Marine (Bord Iascaigh Mhara)
MSFD_Art.11_004	Irish Farmers Association Aquaculture

MSFD_Art.11_005	Irish Wildlife Trust
MSFD_Art.11_006	Sustainable Water Network
MSFD_Art.11_007	Galway-Mayo Institute of Technology
MSFD_Art.11_008	Department of Communications, Energy and Natural Resources (Petroleum Affairs Division)
MSFD_Art.11_009	Irish Whale and Dolphin Group
MSFD_Art.11_010	Submission from private individual (Brendan Price)
MSFD_Art.11_011	An Taisce
MSFD_Art.11_012	Submission from private individual (Brendan O'Keeffe)

1.6 THE CONTEXT WITHIN WHICH RESPONSES ARE PROVIDED

The main aim of this Public Consultation was to facilitate stakeholder engagement on the establishment and implementation of monitoring programmes in support of the ongoing assessment of the environmental status of Ireland's marine waters. The received submissions embraced a wide range of issues, comments and suggestions of relevance to the proposed monitoring programmes and these are addressed in the responses set out in the following sections. A small number of submissions, however, fell outside of the remit of the current consultation, most commonly because they related to the previous phase (the Initial Assessment), a future phase (the Programme of Measures), or because they could not be interpreted in the context of marine monitoring at all. In these cases (listed in **Appendix A**) no formal response has been attempted but, where appropriate, each comment will be passed to relevant authorities for consideration as part of the ongoing and future development and implementation processes of the MSFD.

The key monitoring-related issues raised in the submissions were collated under the following subject headings:

- Monitoring Programme/Descriptor;
- Pressures;
- Public Consultation;
- Other Issues.

Note that all comments presented in this document are presented as submitted to the DECLG by the respondent, including spelling or grammatical errors and emboldened or italicised text.

2 SUBMISSIONS & RESPONSES

2.1 MONITORING PROGRAMME/DESCRIPTOR

2.1.1 D1 & 4 Marine Birds

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_001 [C09(g)]	Bird Watch Ireland	The MSFD should act as a driver for the development of a Ireland wide, national **seabird bycatch action plan**, following the EU Plan of Action to examine the measures that may need to be included, not just in responding to the EU Plan but also to fulfil the obligations under the MSFD, as the UK are currently doing. The UK is also currently doing is a risk analysis by assessing known bycatch data, fishing effort and seabird density by GIS layers for UK waters, this should be underway for Ireland.	Although there is currently no dedicated bycatch monitoring programme for seabirds in Irish marine waters seabird bycatch is recorded on: ▪ the fisheries observer programme which formed part of the Data Collection Framework Directive (DCF) No. 665/2008 of the 14 July 2008 (run by the Marine Institute); ▪ the cetacean bycatch observer programme run by Bord Iascaigh Mhara in support of requirements under Council Regulation (EC) No 812/2004, and ▪ any fisheries surveys on chartered commercial vessels. A Seabird Action Plan was adopted by the EC in November 2012, and under current reform of the Common Fisheries Policy (CFP), the EC are considering whether data collection requirements should be placed on Member States in relation to incidental catches of seabirds in fishing gears. There are also discussions on whether such an observer programme should have

			increased sampling effort in high risk fisheries. The monitoring of pressures relating to fishing activities (bycatch, disturbance and resource competition) are under consideration in Ireland as part of mitigation and monitoring programme.
MSFD_Art.11 _001 [C09(a)]	Bird Watch Ireland	In terms of the risks outlined for Marine Birds, we consider competition for food resources between marine birds and fisheries as an important issue and requires monitoring to ascertain how availability or lack of key prey (e.g. forage fish) for marine birds can impact on their populations (see Section 3.2.1).	Ireland recognises the indirect interaction of fisheries with marine seabirds through resource competition. OSPAR working groups are developing a set of common biodiversity indicators to allow a coherent and consistent approach towards assessing the achievement of GES. A number of bird related indicators based on the indirect interaction of fisheries have been proposed by OSPAR including one that relates seabird colony breeding failures to changes in food availability. These will be considered in due course.
MSFD_Art.11 _001 [C09(c)]	Bird Watch Ireland	Under Section 3.2.6 – can clarification be provided on the Birds Directive not requiring a 'Status Assessment'? What is this in reference to – Conservation Status? Note, the Article 12 Reporting process looks for considerable detail on populations, distributions and trends in marine birds.	It is simply referring to the fact that the Birds Directive (at the time of the compilation of the Art. 11 report) does not require an assessment of conservation status for bird species in the same way that the Habitats Directive does for specific listed habitats and species (i.e. the Article 17 assessment of Favourable Conservation Status).
MSFD_Art.11 _001 [C09(d)]	Bird Watch Ireland	Also under this section [Section 3.2.6} the current programme of monitoring and survey work for key marine birds is outlined. We feel strongly that this section should also highlight that this programme of work is not comprehensive i.e. there are gaps in relation to monitoring of seaducks and divers for example; gaps in terms of geographical spread) and that the frequency of the programme of work is also inadequate in some cases (i.e. National Seabird Monitoring Programme (every 15 years)). Other surveys listed on page 13, have been one-offs surveys (Low-tide Baseline Monitoring Programme (2009-12), thus far.	The MSFD bird monitoring programme is still under development. However, it is intended to utilise monitoring from the Birds Directive, when available, for reporting under Article 11 of the MSFD. It is anticipated that any gaps identified in the bird monitoring programme will be addressed in future cycles of the MSFD.

2.1.2 D1 & 4 Mammals & Reptiles

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_009[C01]	Irish Whale and Dolphin Group	The Irish Whale and Dolphin group (IWDG) welcome the opportunity to comment on the proposed delivery of the MSFD Directive in Ireland in relation to monitoring and reporting on marine mammals. This is a very important directive and appropriate implementation will ensure the future of our seas and coasts.	Comment acknowledged.
MSFD_Art.11_009[C02]	Irish Whale and Dolphin Group	Reporting under MSFD seems to be completely reliant on current monitoring and reporting under the Habitats Directive. Under Table 3.2 which is critical, the objectives under 1.1 and 1.2 are too vague and the "relevant temporal scale" needs to be defined so we can assess if it is sufficient. Under 1.3 this should include post-mortem examination of stranded cetaceans to identify fisheries bycatch as a cause of death otherwise sampling is biased to specific fisheries and locations which can facilitate observer programmes. A sample of 10-20 individuals *per annum* examined in collaboration with the regional vet labs would soon provide good sample sizes and cost very little if incorporated into the vet labs existing obligations. 1.1 Species distribution Distributional range and distributional pattern within range, at the relevant temporal scale, of cetacean species regularly present	The targets outlined in Table 3.2 of Ireland's MSFD Article 11 Monitoring Programme Public Consultation Document were proposals by OSPAR ICG-COBAM and ICES (2013). ICES has subsequently updated and revised its observations and recommendations on these targets within the Working Group on Marine Mammal Ecology (WGMME). ICES issued advice on the following main themes: • Advise on appropriate management units for grey and harbour seals in the OSPAR Maritime area; • To provide technical and scientific advice on options for ways of setting targets for the OSPAR common MSFD indicators for marine mammals; • To provide an overview of existing monitoring per OSPAR common MSFD indicator and marine mammals species; and • To provide an overview of possible future monitoring requirements and methodology per OSPAR common

		1.2 Population size Abundance, at the relevant temporal scale, of cetacean species regularly present 1.3 Population condition Bycatch mortality of cetacean species, at the relevant temporal scale, in relation to population size	MSFD indicator and marine mammal species. The ICES advice is currently under review by OSPAR and on completion of that review Ireland will be in a better position to decide on the appropriate targets and indicators for marine mammals.
MSFD_Art.11_009[C03]	Irish Whale and Dolphin Group	It would be useful to list the "eighteen species (5 mysticete, 13 odontocete) have commonly been recorded in Ireland's coastal/marine waters" so we know which species are obliged to be monitored.	The monitoring programme for D1, 4 Mammals and Reptiles will be based on monitoring currently undertaken for the Habitats Directive. Ten species (Harbour porpoise, Atlantic white-sided dolphin, White-beaked dolphin, Bottlenose dolphin, Common dolphin, Risso's dolphin, Killer whale, Northern bottlenose whale, Long-finned pilot whale and Sperm whale) are thought to be present year-round while it is possible that Cuvier's beaked whale and Sowerby's beaked whale are also resident in deep-water gullies off the western seaboard. Six species (Minke whale, Blue whale, Fin whale, Sei whale, Humpback whale and Striped dolphin) are thought to be seasonally present. In addition to these eighteen species, a further six species (Northern right whale, White whale or beluga, False killer whale, Gervais' beaked whale, True's beaked whale and Pygmy sperm whale) are thus far classified as rarely occurring or vagrant. (http://www.npws.ie/marine/marinemammals/cetaceans/). The status of all listed species is reported to the European Commission under Article 17 of the Habitats Directive (http://www.npws.ie/publications/article17assessments/article172013assessmentdocuments/Article17PrintVol3reportspeciesv11.pdf).

MSFD_Art.11_009[C04]	Irish Whale and Dolphin Group	Two species listed on Annex II of the Habitats Directive (bottlenose dolphin and harbour porpoise) have SACs designated to protect a representative range of their habitats in Ireland. A coherent monitoring programme with targets and a power analysis is required to examine whether this is sufficient to reach MSFD obligations.	The Habitats Directive requires surveillance to be undertaken and this is happening. The relationship between the Habitats Directive and the MSFD is being developed at EU level. When the development phase is complete, Member States will have a clearer understanding about the extent to which monitoring in relation to the Habitats Directive may contribute to related requirements, if any, under the MSFD.
MSFD_Art.11_009[C05]	Irish Whale and Dolphin Group	IWDG note that "DAHG are currently undertaking a review and re-evaluation of Ireland's cetacean survey and monitoring commitments, including international practice and future requirements". Without this review being available it is difficult to comment on whether it is sufficient so this submission is constrained.	Comment acknowledged.
MSFD_Art.11_010[C01]	Private submission	After 30 years advocacy for marine mammals, wildlife and environment, I'll repeat some observations and recommendations made many times over the years relevant to Seals in particular, other marine mammals, reptiles and wildlife in general and relevant to those Descriptors. The Irish Seal Sanctuary (ISS) with which much of my work was done and which I was proud to represent, continues to advocate on behalf of seals and others. ISS documents also follow. As background it took all of those years to secure even census work in Ireland and ISS lobbied and contributed it's pup records to this initially. The PDV outbreak was not acknowledged by the authorities till the ISS engaged the public and a specimen was sent north for confirmation.	Comment acknowledged.
MSFD_Art.11_010[C02]	Private submission	Only recently are resources being allocated to seals; fisheries science research with ISS collecting information but fishery POs not contributing. The ISS has sought to engage with all and make most efficient use of resources. Resources have all too often been the excuse for not monitoring populations, fisheries	Comment acknowledged.

		or interactions throughout the years of economic boom and even more so now. The ISS is not without understanding of this but supportive nevertheless of the European Commission DG Mare and DG Env, who have now made it clear, lack of resources can not longer be an excuse.	
MSFD_Art.11_010[C03]	Private submission	In Ireland Seals have been the most neglected, misrepresented and persecuted of all marine wildlife. They are barely counted and follow up research is poorly funded and poorly dispersed. Their status, role as indicators and descriptors of good env. status is poorly understood.....yet they are repeatedly and systematically blamed for problems in fisheries and subject of uninformed calls for culls and illegal culls. The authorities do not conduct P.M.s even of animals struggling ashore alive with evident bullet wounds, to say nothing of others in suspicious circumstance or just baseline monitoring. The ISS with the Veterinary School, UCD has built up records and expertise in both PMs and treatments but this has mostly been of pups. They have offered to provide PM services to the state repeatedly. Even in a recent Blasket cull, the ISS had to engage a local vet before the authorities would even accept a cull had occurred.	Comment acknowledged.
MSFD_Art.11_010[C04]	Private submission	The ISS in the last 2 years has commenced a Dead Seal Database (DSD) with the public, which is providing information and strengthening case for closer monitoring, protection and understanding of our seals. The ISS is just a voluntary ENGO but repeatedly has to lead the way.	Comment acknowledged.
MSFD_Art.11_010[C05]	Private submission	Recommendations: Improved monitoring of seals as obliged by law; Improved protection of seals as obliged by law: If state authorities unresourced or simply not up to the task, they engage with ENGOs and public to fulfil their responsibilities and resource them to assist and create synergies; All seal deaths be recorded; All bye catch be recorded and circumstances by which caught; fisheries to report all bye catch, including seals,	Bord Iascaigh Mhara in association with the Marine Institute monitors interactions between Irish fisheries and species protected under the Habitats Directive (92/43/EEC) and the Council Regulation on measures concerning incidental catches of cetaceans in fisheries (EC) 812/2004. In Ireland monitoring of bycatch of protected species primarily focuses on pelagic trawl and

		cetaceans, birds and reptiles; ISS be resourced to develop and sustain DSD : NPWS to PM or commission PMs of all suspect dead animals whether by foul or accidental means and representative other deaths; Resources be provided Vet College to conduct these PMs ; NPWS to provide treatment and/or secure rehabilitation for injured or orphan seals if viable; Full impact assessments of all fisheries sectors on seals et al (recent research points unsustainable attrition , where tangle nets are deployed and DSD results to dangers of pair trawling inshore); research of ecology, needs and vulnerability to human activity across exploitative, extractive, transport, tourism sectors etc.; where resources are lacking EMFF,ESF,ERDF funds be drawn on to complement wildlife budgets and ecosystem approach; Irish Sea be adopted as pilot study area for application of descriptors and return to good env. quality and multi-species fishery.	set net fisheries *via* observer programmes, technical trials, fisheries surveys and the data collection framework (further information of on-going annual monitoring and reporting is available at http://www.bim.ie/our-work/projects/monitoringinteractionsbetweenirishfisheriesandprotectedspecies/).
MSFD_Art.11_010[C06]	Private submission	These recommendations and more require cross cutting measures for env.protection and sustainable fisheries, form the basis of descriptors for seals, marine wildlife and good env. quality, are neglected in Ireland and may have relevance to other MSs.	Measures will be dealt with during the next phase of the MSFD implementation process, under Article 13 Programme of Measures.
MSFD_Art.11_001 [C10(a)]	Bird Watch Ireland	BWI support the point made in the initial assessment and public consultation as to the importance of Irish waters for cetacean species and that there needs to be an understanding of knowledge gaps and how to work towards fulfilling these in order to achieve GES by 2020. BWI encourage liaison with the IWDG and the Irish Seal Sanctuary for these issues.	Comment acknowledged.

2.1.3 D1 & 4 Fish & Cephalopods/ D3 Commercial Exploitation of Fish & Shellfish

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_001 [C04]	Bird Watch Ireland	**Setting correct fishing opportunities is fundamental to achieving the objectives of the newly reformed Common Fisheries Policy (CFP)**, (the mechanism by which descriptor 3 can also be achieved), namely to end overfishing and to restore and maintain fish stocks above levels capable of producing the Maximum Sustainable Yield, MSY. **Many stocks are still outside safe biological limits and to restore these should be a priority under the MSFD**. Indeed, it is extremely well known the detrimental effects of overfishing on the whole ecosystem and that this effects the oceans capacity to support us (Worm et al. 2006), with the effects of overfishing extending well beyond the fish themselves into the marine ecosystem (Scheffer et al. 2005). There is an abundance of evidence illustrating the damage caused in the marine ecosystem by the removal of top level predators (e.g. Pauly et al. 1998; Myers et al. 2007), however there is also evidence that even temporary collapses in low-trophic level fishes can cause ecosystem-wide effects reducing food to larger fish, seabirds and marine mammals (Pinsky et al. 2011). Hence the need to really **make sure that the implementation of the MSFD ensures that there will be a building of productivity, resilience and biodiversity in the marine ecosystem**.	The targets to end overfishing (MSY at 2015 where possible and for all stocks at 2020) are built into the reformed common fisheries policy (Article 2 of EU 1380/2013 and are adopted as D3 MSFD targets by Ireland. Progress towards the CFP targets is monitored annually under the reporting requirements of the CFP (Article 50). The state of European fisheries is reported annually to the EU council and Parliament, while the state of fish stocks of Irish interests is reported in relation to the CFP and MSFD targets in the MI annual stock book.
MSFD_Art.11_001 [C05(a)]	Bird Watch Ireland	Regarding **descriptor 4**, if industrial overfishing continues, it is a real cause for concern in evolutionary terms as due to its intensity and size-selectivity, it can lead to the earlier maturation in certain fish species, for example cod, *Gadus morhua* (Jørgensen et al. 2009). This **age truncation is known to destabilize fished populations, increasing their potential to**	The query addresses Descriptor 3 Criterion 3.3 (size and age structure representative of a healthy stock) and not Descriptor 4 (marine foodwebs). Currently Criterion 3.3 indicators are used as surveillance indicators and their trends and ranges are monitored whilst progressing towards targets under Criteria 3.1 and 3.2 targets of

		collapse (Hixon et al. 2013). There are many biological and ecological reasons to insure that the MSFD is implemented effectively, which in turn, will result in higher and more effective economic returns, but this is only true if the **ecological foundation is given top conservation priority**. Smaller fish also do not hold the same amount of eggs and have a lesser reproductive potential than larger older fish and the larvae or larger fish also grow faster and withstand starvation better (Hixon et al. 2013). With increasing climate change, elevated temperature can also affect some fish's ability to reproduce e.g. Arctic cod (*Boreogadus saida*) causing spawning to occur earlier and increasing mortality and deformity in larvae (Graham and Hop, 1995).	sustainable exploitation and biomass levels. Criterion 3.3 includes the indicator "Size at first sexual maturation", which may reflect the extent of undesirable genetic effects of exploitation. Ireland is actively engaged in the current scientific review process by ICES to identify suitable indicators and targets for Criterion 3.3: a. select the most suitable indicators under Criterion 3.3 which reflect healthy size and age structures of populations. b. identify reference levels that reflect the healthy size and age structures of a population. c. determine whether meeting targets for Criteria 3.1 and 3.2 are sufficient in guaranteeing achievement of Criteria 3.3 or whether additional targets need to be set for Criteria 3.3.
MSFD_Art.11_001 [C11(e)]	Bird Watch Ireland	We reiterate the comments above and the importance of the MSFD of having targets that rebuild populations (in reference to ecologically sustainable and resilient populations) rather than just maintain the status quo using inappropriate baselines that do not take into account any historical reference to the large fish indicator size, length or weight for example. (Please refer to Hixon et al. 2013).	
MSFD_Art.11_001 [C15(d)]	Bird Watch Ireland	Finally to refer to the size and age structure target, this would be a very useful target as it would be able to be linked to a more historical/recent past reference, we therefore encourage the determination of this target with reference to GES and we point to the scientific literature on the need to preserve big old fecund female fish in any healthy ecosystem (Field et al. 2008). This method also takes age structure of the population into account unlike SSB which can be biased towards the large numbers of young first year spawners, especially in populations that have been heavily exploited (Field et al. 2008).	
MSFD_Art.11_001 [C09(a)]	Bird Watch Ireland	In terms of the risks outlined for Marine Birds, we consider competition for food resources between marine birds and fisheries as an important issue and requires monitoring to	Ireland recognises the indirect interaction of fisheries with marine seabirds through resource competition and bycatch. OSPAR working groups are developing a

		ascertain how availability or lack of key prey (e.g. forage fish) for marine birds can impact on their populations (see Section 3.2.1).	set of common biodiversity indicators to allow a coherent and consistent approach towards assessing the achievement of GES. A number of bird related indicators based on the indirect interaction of fisheries have been proposed by OSPAR including one that relates seabird colony breeding failures to changes in food availability. Other OSPAR indicators are based on bird abundance, distribution and bycatch rates. As part on on-going investigative work Ireland is assessing the suitability of existing Birds Directive monitoring datasets and programmes to provide for OSPAR bird related indicators. Ireland is investigating possible re-stratification of fisheries observer programmes to enhance the monitoring of fisheries which have a high bycatch of marine mammals, seabirds, and/or PET (protected, endangered, threatened) species. This program is to be part-funded by the EMFF.
MSFD_Art.11 _001 [C09(e)]	Bird Watch Ireland	Under **Bycatch Monitoring** – (page 14). BirdWatch Ireland strongly supports measures to identify and address any bycatch in relation to fisheries and marine birds. As part of a global BirdLife Partnership, which has dealt with similar issues in other jurisdictions, the expertise in managing such a programme of work (monitoring, technical measures etc), is available and should be utilised to help redress the current lack of adequate marine bird bycatch monitoring in Irish waters.	
MSFD_Art.11 _001 [C11(c)]	Bird Watch Ireland	We also support the statement from the initial assessment public consultation that **information to support descriptors 1 to 4 was insufficient and would encourage the appropriate bodies to provide supports to help address the data gaps regarding fisheries and fisheries interactions with other biodiversity (including seabirds, marine mammals & cephalopods) as soon as possible.**	
MSFD_Art.11 _001 [C11(d)]	Bird Watch Ireland	Regarding the target for 1.2 population size, **BWI supports that the fishing mortality should be below F_{MSY} in the medium to long term to allow for scientific uncertainty and natural variability, however we would encourage that it is below F_{MSY} and not equal to F_{MSY}.**	Comment acknowledged.
MSFD_Art.11 _001 [C15(a)]	Bird Watch Ireland	The **current state of overfishing of stocks has increased from 39 to 41 percent in the North East Atlantic and adjacent waters** since last year and the rate of overfishing has also risen. In 2012, fisheries Ministers set fishing limits an average of 11 percent above scientific advice and in 2014, 35 percent above advice (European Commission, 2014) – a three fold increase in discrepancy. If anything, TACs should be getting closer to the scientific advice to help the recovery and regeneration of	TACs and quotas are agreed annually by the Council of the European Union. The Council jointly with the Parliament has also agreed on the targets to end overfishing (MSY at 2015 where possible and for all stocks at 2020). These are built into the reformed Common Fisheries Policy (Article 2 of EU 1380/2013 and are adopted as Descriptor 3 MSFD targets by Ireland. Progress towards the CFP targets is monitored

		stocks. According to the latest advice for Ireland, **there is still much work to do to ensure that all stocks are fished below F_{MSY}** (fishing mortality) and so maintaining the spawning stock biomass necessary to keep above the relevant ICES reference points for individual fish stocks. We also encourage that all stocks should be included under the targets for descriptor 3. To reverse this trend of overfishing and deliver more ecologically sustainable fisheries the European Commission and the Council of Fisheries must: ensure that Ireland's TACs and Quota are agreed in accordance with scientific advice (not above it) so that fish stocks can recover above levels capable of producing the maximum sustainable yield, or MSY. This, and the assurance that stocks are fished below F_{MSY}, must be achieved by 2015 where possible and progressively and incrementally for all stocks no later than 2020. For those stocks where the Irish Fisheries Minister is requesting delays in ending overfishing in 2015, it will be necessary to request the supply of evidence of any serious social and economic hardship to the fishing fleets involved. Any delay must provide clear plans on how to progressively and incrementally end overfishing for the relevant fish stocks as soon as possible.	annually under the reporting requirements of the CFP (Article 50). The state of European fisheries is reported annually to the EU council and Parliament, while the state of fish stocks of Irish interests is reported in relation to MSY in the MI annual stock book.
MSFD_Art.11 _001 [C15(b)]	Bird Watch Ireland	Any increase in quota for stocks subject to the **discards ban on unwanted fish**—the landing obligation—is subject to supporting evidence from ICES and should be limited in scope to ensure that the total out-take will not prejudice the CFP objective to attain F_{MSY} by keeping incentives to fish more selectively and to enhance monitoring of the landing obligation. It is essential that any quota uplifts remain compatible with the attainment of the MSY objective. **In mixed fisheries, fishing rates should be set according to the most vulnerable stock, which is best practice in fisheries management, as this will also minimise discards**. This will ensure a future profitable fishing industry and an ecologically sustainable marine environment.	The Framework agreed under the new CFP sets out the principles and approaches to reduce discards and to manage mixed fisheries sustainably. The issues raised in the query are dealt with in Article 2, 9, 15 and 16 of the newly reformed CFP (EU 1380/2013).
MSFD_Art.11	Bird Watch	ICES advice, the provisions of the CFP regulation, and funding	

_001 [C15(g)]	Ireland	available under the EMFF should encourage (and potentially incentivise) developments in selectivity to help the reduction of bycatch and discards e.g. use of the Swedish grid. BWI also reiterates the importance of **having fully documented fisheries and catches** fully monitored and accounted for to ensure effective implementation of the discards ban.	
MSFD_Art.11 _001 [C15(f)]	Bird Watch Ireland	With reference to the **climate change** research on stocks, it would be also important **to look further down the food chain where the changes may appear first and examine the plankton (not only the fish stocks)**. Finally we support the on-going work to fill in data gaps for stocks which are incomplete and in the event of this incomplete data the precautionary approach should be applied.	The Department anticipates that future water column habitats monitoring will incorporate plankton community surveillance alongside physico-chemical monitoring, providing the opportunity to determine possible climate change related trends

2.1.4 D1 & 4 Water Column Habitats

Submission Code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_ 001 [C12]	Private submission	Water column habitats are vitally important in maintaining the balance of the lowest trophic levels in the marine environment as well as their role in climate change, transport of marine larvae and juveniles and as early indicators of change. BWI supports the development of further targets to develop this, particularly as changes can occur more rapidly and can go unnoticed at the lowest levels of the ecosystem if not adequately monitored. BWI supports the need to include indicators for ocean acidification particularly as this is an increasing threat with very wide ranging impacts on a number of calcifying marine species (Orr et al. 2005; Doney et al. 2009).	The Department recognises that ocean acidification is an important issue and Ireland is working at both national and international levels to develop the means to establish extent, impact and present trends Ocean acidification (OA) is a longer term threat to the marine environment that moreover will act in concert with other stressors, potentially causing wide scale damage to the marine environment. Ireland has a currently active research and baseline monitoring of OA status in place (Ni Longphuirt et al (2010)[1], O'Dowd et al. (2011)[2], McGrath et al. (2012)[3], McGrath et al. (in press)[4]. OSPAR is developing an approach for

[1] Ní Longphuirt, S., Stengel, D., O'Dowd, C. and McGovern, E. (2010). Ocean Acidification: An Emerging Threat To Our Marine Environment. Marine Foresight Series No. 6. Marine Institute, Galway http://oar.marine.ie/handle/10793/80

[2] O'Dowd C., Cave R., McGovern E., Ward B., Kivimae C., McGrath T., Stengel D. and Westbrook G. (2011). Impacts of Increased Atmospheric CO_2 on Ocean Chemistry and Ecosystems Marine Research Sub-Programme (NDP2007-2013) Series. Marine Institute http://oar.marine.ie/handle/10793/703

[3] McGrath T., Kivimäe C., Tanhua T., Cave R. R. and McGovern E. (2012). Inorganic carbon and pH levels in the Rockall Trough 1991–2010. Deep Sea Research Part I: Oceanographic Research Papers. doi: 10.1016/j.dsr.2012.05.011

[4] McGrath, T., McGovern, E., Cave, R. R. and Kivimae, C. (in press). The inorganic carbon chemistry in coastal and shelf waters around Ireland. *Estuaries and Coasts* DOI: 10.1007/s12237-015-9950-6

McGrath,T., McGovern, E., Nolan G. and Dwyer, N. (2013). 3.3 Ocean Acidification and Carbon Dioxide Concentrations in The Status of Ireland's Climate, 2012. Compiled by Ned Dwyer. Climate Change Research Programme - CCRP Report 26. EPA Wexford

			coordinated OA monitoring on the basis of an OSPAR/ICES study group report [ICES (2014)[5], co-chaired by Ireland]. The report indicates that this is a rapidly developing field of research and that, while there is scope for progressing coordinated chemical monitoring within OSPAR, suitable indicators of OA impacts cannot currently be recommended.
MSFD_Art.11_ 011[C03]	An Taisce	Ireland has a legal obligation under EU law to provide an effective and compliant strategy to (i) meet the obligations of the Marine Strategy Framework Directive, (ii) to maintain the Good Environmental Status of the marine ecosystem, (iii) to apply the precautionary and polluter pays principles in achieving this, and (iv) to set out environmental targets and indicators to achieve and maintain the Good Environmental Status of the marine environment by 2020. This should be a key part of Ireland's wider role in promoting action on the overriding threats to the global marine environment through climate change, ocean warming, ocean acidification, overfishing, marine litter waste and pollution, both through national initiative, through membership of the EU and taking a proactive role in the UN IPCC process, OSPAR, ESPOO and other international structures. Major leadership is required to reduce carbon emissions in order to reverse ocean acidification as much as climate warming. The most recent UN data published in September 2014 is alarming (see Appendix 1). It addresses the converging impact of anthropogenic greenhouse gas on increasing ocean temperatures, and the inability of the ocean to absorb additional C02, causing acidification and the accelerated damage to the marine ecosystem.	Climate change is an issue that largely falls outside of the stated "ecosystem-based management" aims and objectives of the MSFD and ocean acidification, for example, is not a listed pressure in Annex III of the Directive. Ireland did, however, recognise climate change as a significant concern in its Initial Assessment and a capability to directly establish climate change effects, (increase dissolved CO_2, pH change, elevated water temperature) is being integrated into the monitoring of water column habitats and potentially vulnerable species groups. Ireland is also widely engaged in international efforts to develop improved monitoring methods and measures to reduce the range of threats that the marine environment currently faces. These measures will be reflected in the next phase of the Directive.

[5] ICES (2014). Final Report to OSPAR of the Joint OSPAR/ICES Ocean Acidification Study Group (SGOA). ICES CM 2014/ACOM:67. 141 pp. http://ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2014/SGOA/sgoa_finalOSPAR_2015.pdf

2.1.5 D1, 4 & 6 Seabed Habitats

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_ 008[C02]	Department of Communications, Energy and Natural Resources (DCENR) – (Petroleum Affairs Division)	Section 3.6.7: The last bullet on the Petroleum Infrastructure Programme should include a reference to 2014 projects also: "In 2013 and 2014, a number of projects were funded aimed at inter alia improving knowledge of petroleum systems and exploration potential offshore Ireland and developing environmental monitoring techniques."	Correction acknowledged. Corrected text has been applied to the final Commission submission.
MSFD_Art.11_ 008[C07]	DCENR – (Petroleum Affairs Division)	Additional relevant work: A DCENR scoping process is underway to identify requirements for acquisition of baseline information on marine species along identified slope/shelfal areas in the Atlantic Margin.	This point is acknowledged and, although not fully stated in the public consultation document, it is reflected in the document intended for submission to the Commission with the following text with regard to offshore seabed habitats: "*A data gap has been recognised with respect to deeper water habitats within Ireland's MSFD Assessment Area. As part of a broader offshore energy programme, Ireland's Petroleum Affairs Division (PAD) has established the Petroleum Infrastructure Programme (PIP). The PIP programme which facilitates collaborations between oil/gas exploration companies and researchers, aims to improve offshore environmental knowledge. A DCENR scoping process is underway to identify requirements for acquisition of baseline information on marine [benthic] species along identified slope/shelf areas in the Atlantic Margin.*"

			In addition, DCENR has recently commissioned a series of static and transect-based towed acoustic surveys to collect baseline information on the abundance and distribution of cetaceans (i.e. whales, dolphins, porpoises) in the waters of the Atlantic Margin.
MSFD_Art.11_ 001 [C13(b)]	Bird Watch Ireland	The cumulative effects of human impacts need considered and the precautionary approach applied as the very nature of the seabed is harder to observe than any terrestrial counterpart. Seagrasses, as an example, have declined vastly globally (Orth et al. 2006; Waycott et al. 2009), and the main causes of declines in Ireland are anthropogenic including land reclamation, coastal development, boating and fishing activity, sewage discharge and agricultural run-off (Spalding et al. 2003 in Dale et al. 2007). Seagrasses are not only an excellent indicator species, they are essential habitats for ecological services such as organic carbon production and export, nutrient cycling, stabilisation of sediment, increased biodiversity, fish nurseries, and trophic transfers to nearby habitats (Orth et al. 2006). The current baseline being established at the moment should include an examination of habitat distribution into the recent past to ensure that an accurate baseline is taken and not an underestimation of the habitat distribution as this will allow the recovery of damaged areas.	The Department agrees that seagrasses are an important biological element of Ireland's marine environment. For this reason intertidal seagrass monitoring currently undertaken under the WFD is under investigation for incorporation into the MSFD monitoring programme with proposals for targets and indicators currently being developed.
MSFD_Art.11_ 001 [C13(c)]	Bird Watch Ireland	Regarding the remote sensing/seabed scan data questions must also be asked has this been ground truthed? If not then one cannot assume that all the Irish seabed habitats are healthy as there is not the data there to prove it. We support the statement that fishing is the most widespread of activities with the potential to physically damage the seabed and hence the need for an ecologically coherent network of marine protected areas as part of the MSFD program. BWI supports the proposals for investigations into further indicators of	While it is accepted that there is evidence to indicate that demersal fishing may impact benthic habitats, communities and species, methodologies to quantify these effects, at the broad scale required for the MSFD, are currently not available. Progress on this is been made in OSPAR and ICES using fishing vessel satellite tracking data and the resilience and recoverability of benthic habitats to bottom fishing pressures. This information is needed before credible,

		seabed habitat.	evidence-led targets, that are consistent with ecosystem-based management, can be put in place. Ireland is actively participating in this work with our international partners.
MSFD_Art.11_ 001 [C15(c)]	Bird Watch Ireland	Regarding the concern put forward in the initial assessment public consultation, BWI supports that there is not enough data on elasmobranchs, however the second concern stating that there is **a lack of understanding in relation as to how different habitats are impacted by fishing**, we would refer to the wealth of scientific literature on this topic and emphasize the application of the precautionary approach. **We do not agree that there is a lack of understanding on this, rather there is a lack of action to implement the changes needed**. There are serious examples of ecosystems being changed creating environments whereby the commercial species of interest have been wiped out without the potential for recovery as it's too late and the ecosystem has shifted beyond the point of no return (Travis et al. 2014). This paper puts it very much into perspective and in summary we reiterate the statement by Travis et al. (2014) that unless fisheries science and management can "develop a sharper focus on species interactions and how disrupting these interactions push ecosystems in which fisheries are embedded past their tipping points" applied through the ability of the MSFD to achieve GES through proper implementation it will not be fit for purpose.	While the Department accepts that there is evidence to indicate that demersal fishing may impact benthic habitats, communities and species, there are currently little or no data that directly link fishing intensity and spatial extent, as measured by vessel satellite tracking data, with quantifiable effects, such as resilience and recoverability. This information is needed before credible, evidence-led targets, that are consistent with ecosystem-based management, can be put in place for suspected vulnerable species or habitats. Ireland is currently working with European partners to develop methodologies to determine these parameters as a matter of urgency.
MSFD_Art.11_ 001 [C15(e)]	Bird Watch Ireland	Regarding section 4.2.6. [D3 Commercial Exploitation of Fish and Shellfish Monitoring Programme Elements under Consideration] we would be interested in seeing further details of the pressure monitoring that examines the effect on benthic habitats through the temporal and spatial footprint of vessels with bottom contact fishing gear.	The use of spatial and temporal data on fishing intensity derived from fishing vessel satellite tracking and the possible correlation with effects on seabed habitats is presently the subject of development work, both within Ireland and internationally under OSPAR and ICES. It is anticipated that the results of such work will be made publicly available through reports and the scientific literature in due course.

2.1.6 D2 Non-indigenous species

Submission Code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_ 003 [C03]	Department of Agriculture, Food & the Marine (Bord Iascaigh Mhara)	In relation to the second bullet point of 4.1.1, which highlights that *Didemnum vexillum* is a high risk species, it is worth noting that BIM are currently working with UCD and the aquaculture sector to improve awareness of *Didemnum vexillum* and test control methods for use on aquaculture facilities where it has potentially serious consequences for stock quality and survival. BIM are also involved with a UK and Ireland network through the Pathways project where information on current work is shared and various other experiments are carried out on a range of invasive species. Suggest including this information in 4.1.7 Ongoing additional work.	Reference to on-going work by BIM, UCD and the aquaculture sector in relation to Non-indigenous species has been included within Ireland's Article 11 Descriptor 2 Monitoring Programme, together with reference to engagement with the UK and Ireland Marine Pathways project. In addition, the Department of the Arts Heritage and the Gaeltacht (DAHG) commissioned and delivered a report titled "Risk assessment of non-indigenous marine species in Ireland" in late 2014.
MSFD_Art.11_ 001 [C14(a)]	Bird Watch Ireland	While BWI supports the need to support and develop the 'blue growth' economy, this should not be to the detriment of Ireland's natural habitats. For example the projected growth in aquaculture in Ireland is large, as is the projected €1000 million target in exports for the seafood sector (Department of Agriculture, Food and the Marine, 2014) and without the appropriate monitoring in place to ensure that further non-native species are not introduced and those that are present are managed appropriately, caution should be exercised in pushing ahead to obtain economic targets without appropriate measures to protect the environment in place. As mentioned previously the cost of recovery or clean-up operations is often much more than the cost of protecting the environment in the first place, in addition, the benefits of preserving ecosystems often far outweigh the costs of attempting recovery of damaged marine ecosystems.	Under the Alien and Locally Absent Species in Aquaculture regulation (Regulation EC 708 (2007), amended by Regulation EU 304 (2011)) Member States must take all appropriate measures to avoid adverse effects on biodiversity resulting from the movement of aquatic organisms for aquaculture purposes and from the spreading of those organisms from closed aquaculture facilities and during transport to and from such facilities. In addition, DAHG has commissioned and delivered a report titled "Risk assessment of non-indigenous marine species in Ireland" in late 2014. This report examines the principal pathways through which non-indigenous species (NIS) are spread, what the impacting species are likely to be and how and/or where they might be detected on the island of Ireland.

		On an aside, aquaculture does not provide a solution to the decline in fisheries or the increasing need to conserve wild fish stocks to produce more fish for the increasing population growth. With regard to fish species BWI encourages native species such as the native oyster *Ostrea edulis* over other Pacific or foreign varieties that are now breeding in areas of Irish waters competing with native species.	This reflects the European Commission's requirement for the monitoring of NIS under Descriptor 2 of the Marine Strategy Framework Directive (MSFD). Aquaculture is examined as a pathway for NIS, and its risk assessed.

2.1.7 D5 Eutrophication

Submission Code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C15]	An Taisce	A major extension of caged salmon breeding is proposed the first between Galway Bay and the Aran Islands and two others to follow. This has major issues on scale of nutrient source required for caged fish breeding, lice infestation and risk.	The obligation on Ireland under the MSFD is to have in place the necessary measures to achieve or maintain GES by 2020. The licensing and regulation of all activities affecting GES, including aquaculture, will be subjected to these requirements. MSFD requirements will be addressed in the development of the National Strategic Plan for Aquaculture and associated SEA, which will inform future MSFD assessments. Recently, the result of a five-year Pilot Investigation by the European Commission into the potential impact of sea lice on wild salmon stocks in Ireland has concluded with the finding that the Irish State has no case to answer. The investigation was launched in 2009 following complaints by Salmon Watch Ireland and Friends of the Irish Environment (FIE). The case was initially closed in 2012 but was reopened later that year after FIE provided the Commission with additional information, including a report from Inland Fisheries Ireland. The MSFD monitoring programme for D5 eutrophication measures the concentration of nutrients and the direct and indirect effects of nutrient enrichment in transitional and coastal waters. The programme also measures winter nutrient concentrations in offshore waters. Information for the assessment of trophic status is taken from the national Water Framework Directive (WFD) monitoring

			programme for transitional and coastal waters and the annual winter environmental survey of coastal and offshore waters. The OSPAR Common Procedure is used to provide an integrated assessment of the eutrophication status of Irish waters and waters across the OSPAR maritime area. Any issues associated with nutrient concentrations will be identified through these monitoring programmes.
MSFD_Art.11_012[C16]	Private submission	Making all this look trivial is the fact the present Administration with the help of Marine Institute and BIM are promoting a third salmon farm in the bay. According to Scottish Scientists one average size Salmon Farm generates Nitrate-Phosphate equivalent of Sewage generated by 50,000 people. Using scientific adjustment levels of 85-95% level of certainty or CV these are unacceptable numbers. See Nov. 21/2013 issue of Nature-Marine Ecosystems-Nutrient threat of seafood farms. More than 20% of dissolved nutrients in coastal waters derive from sea food farming.	The MSFD monitoring programme for D5 eutrophication measures the concentration of nutrients and the direct and indirect effects of nutrient enrichment in transitional and coastal waters. The programme also measures winter nutrient concentrations in offshore waters. Information for the assessment of trophic status is taken from the national Water Framework Directive (WFD) monitoring programme for transitional and coastal waters and the annual winter environmental survey of coastal and offshore waters. The OSPAR Common Procedure is used to provide an integrated assessment of the eutrophication status of Irish waters and waters across the OSPAR maritime area. Any issues associated with nutrient concentrations will be identified through these monitoring programmes.

2.1.8 D8 Contaminants

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_008[C06]	DCENR – (Petroleum Affairs Division)	Include a reference to the Safety of Offshore Oil and Gas Operations Directive with respect to pollutants (as the Directive's aim is to reduce the occurrence of major accidents related to offshore oil and gas operations and to limit the consequences of such accidents).	Comment acknowledged and incorporated into Ireland's Article 11 Monitoring Programme for Descriptor 8 Contaminants (Q8a). This may also be relevant to future Article 13 reporting.
MSFD_Art.11_009[C06]	Irish Whale and Dolphin Group	A commitment should be made to screen a sample of cetaceans for persistent pollutants. As top predators that accumulate lipo-philic compounds they are good indicators of the overall health of Irish waters. A sampling programme for inshore and offshore species including deep-diving a baleen whales would be a very useful contribution to delivery on this descriptor (8.2). Samples could be obtained from the IWDG Cetacean Stranding Scheme at no cost.	Determination of lipophilic contaminants and assessment of their potential effects in cetaceans and potentially other mammals does provide a very useful complementary dataset to judge the overall health of marine ecosystems within the context of the MSFD. Moreover there is a link to Descriptor 1 as this is a specific pressure on mammals. There are some challenges in relation to monitoring contaminants in cetaceans within the scope of Criteria 8.1 and 8.2 monitoring as envisaged through Com Decision 2010/477 for assessment of trends and/or determination of GES. The issues include the difficulty and often opportunistic nature of sampling, the multiple factors influencing the variance and the lack of criteria against which to assess GES. Moreover, they are not within the coordinated monitoring of OSPAR. Consequently, these are not proposed as main-stream monitoring indicators at present.
MSFD_Art.11_001 [C18]	Bird Watch Ireland	As contaminants have the potential to be lethally dangerous in small quantities BWI is supportive of the ongoing monitoring on both the concentration of contaminants and their effects. We	We concur that this is an important issue but it presents implementation challenges in a monitoring programme due to the many uncertainties. Work is

		would also point out the importance of research into in-combination effects of contaminants, particularly coupled with unfavourable environmental conditions making species less resilient and we would support work on the potential gaps examining higher trophic level biota and offshore monitoring.	ongoing through, for example, OSPAR for integrated monitoring of contaminants and their effects, but this is not at the stage where it has been widely incorporated in regional monitoring as yet. This is an area of active research e.g. MI-EPA funded project on biological effects of contaminants; Giltrap *et al*. (2014)[6] and references within.
MSFD_Art.11_001 [C19]	Bird Watch Ireland	BWI commends that there has been 100 percent compliance with levels of mercury, cadmium and lead, as well as synthetic substances, in marine and shellfish. Due to the ability of chemical contaminants to bioaccumulate in the food web, BWI would ask that although this is tested for human consumption, have the levels consistently been within the safe levels for other smaller animals within the ecosystem for example marine birds? In relation to future developments on the production of seafood such as organic salmon, regarding contaminants, we are concerned that the farms are kept to the highest standards and not rushed through for short –term gain or for economic reasons alone that would result detrimental effects on the environment in the long term.	Compliance under Descriptor 9 represents compliance with human health maximum limits for seafood as set out in Commission Regulation 1881/2006 as amended. Assessment under Descriptor 9 has no role in assessing the risks from contaminants to marine ecosystems and organisms within, as that is carried out under Descriptor 8. WFD Environmental Quality Assessment (EQS), set for biota and water, and OSPAR Environmental Assessment criteria (EACs) in biota and sediment provide toxicologically-based thresholds indicative of safe levels for marine ecosystem. These will be applied, where appropriate, in the context of Descriptor 8 monitoring.

[6] Giltrap, M., McHugh, B., Ronan, J., Wilson, J. and McGovern, E. (2014). Biological Effects and Chemical Measurements in Irish Marine Waters. Technical Report Marine Institute. http://hdl.handle.net/10793/974

2.1.9 D9 Contaminants in Fish & Shellfish

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_001 [C19]	Bird Watch Ireland	BWI commends that there has been 100 percent compliance with levels of mercury, cadmium and lead, as well as synthetic substances, in marine and shellfish. Due to the ability of chemical contaminants to bioaccumulate in the food web, BWI would ask that although this is tested for human consumption, have the levels consistently been within the safe levels for other smaller animals within the ecosystem for example marine birds? In relation to future developments on the production of seafood such as organic salmon, regarding contaminants, we are concerned that the farms are kept to the highest standards and not rushed through for short –term gain or for economic reasons alone that would result detrimental effects on the environment in the long term.	Compliance under Descriptor 9 represents compliance with human health maximum limits for seafood as set out in Commission Regulation 1881/2006 as amended. Assessment under Descriptor 9 has no role in assessing the risks from contaminants to marine ecosystems and organisms within, as that is carried out under Descriptor 8. WFD Environmental Quality Assessment (EQS), set for biota and water, and OSPAR Environmental Assessment criteria (EACs) in biota and sediment provide toxicologically based thresholds indicative of safe levels for marine ecosystem. These will be applied, where appropriate, in the context of Descriptor 8 monitoring.
MSFD_Art.11_012[C11]	Private submission	Kelly Conway (EPA) *"I have difficulty with Mr Conway's use of the word "satisfactory" (in reply to Sean Kelly MEP) in light of the fact that all raw sewage from Glengarriff Village and surrounding area flows untreated into Glengarriff Harbour*." The smell is atrocious, the appearance is unsightly, the water is polluted and dangerous. The outlet of the discharge pipe is 50 paces from the licensed Mussel beds. These Mussels are exported and served in local restaurants. The local children's designated swimming area was this summer moved closer to this area and refurbished with slip and pontoon, the location of which is dangerously close to a hole in the discharge pipe which continuously and visibly gush raw sewage. Local boatmen say this gusher has been there for years (Photo). In the summer time the area is brown with floating dead	Shellfish production areas around the coast of Ireland are monitored for their sanitary quality using *E. coli* as an indicator of sewage contamination. The Sea-Fisheries Protection Authority (SFPA) classifies shellfish production areas based on the sanitary quality of the waters from which they are taken. Monthly samples are taken from all production areas and tested for *E. coli* in one of the Marine Institute's contracted national laboratories. The results from these analyses are used to classify the area according to criteria set down in EU Regulation 854/04. Areas from which shellfish are harvested for human consumption are classified as being Class A, B or C. Shellfish harvested from Class A areas (*E. coli* level <230 MPN/100g) are fit to be marketed for direct

		floc or nocardia. Culture taken in the winter time in that area revealed astronomical levels of faecal e-coli, so high that other tests such as BOD, DOD, TSS were irrelevant. Local divers say they would not risk swimming in the harbour. Many resort homes in this area have their own septic tanks with over flow pipes going into the harbour. There are estates that have never been connected to the main pipes, whose sewage flows into the river at the Barony Bridge. The main pipe to the pump station by the Eccles Hotel leaks into a stream going into Traglahan strand, several complaints by a local resident were ignored. How can these residents be required to replace their systems in this environment. The local people were ignored when the present system was installed. To-day we feel we still have no say in the matter. Local business people work hard at keeping Glengarriff a prime tourist destination and deserve more. Many residents have complained to the Co. Co. in particular relating to the houses not connected to the system and the leak into Traglahan strand. They are fearful of going on record, I myself felt the same way having complained that Marine Harvest were pumping water from an unused quarry, using that water to wash fish that were dying from amoebiasis and dumping the remaining sewage water into the Bay. The reply below indicated the opposite. Local Hoteliers complain that pump stations malfunction and back up into guest rooms but they seem not to want to formally complain. Practically all residents complain about the smell, especially in the children's playground, which is next to the septic tank.	human consumption. Shellfish harvested from Class B (*E. coli* level <4,600 MPN/100g) or C (*E. coli* level <46,000 MPN/100g) areas require further purification or treatment before being placed on the market. Glengarriff is currently classified as a Class B area which requires the shellfish to be depurated, heat treated or relayed to meet Class A requirements prior to being marketed. This monitoring forms part of Ireland's MSFD Descriptor 9 Contaminants in Fish and Other Seafood Monitoring Programme. Ireland's full Article 11 Monitoring Programme is available for viewing on the DECLG website (http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/). In relation to the quality of the water for bathing purposes, this currently falls outside the scope of the MSFD Article 11 Monitoring Programmes and therefore is not addressed. Issues associated with waste water discharges from businesses or domestic properties also falls outside the scope of the MSFD Article 11 Monitoring Programmes. Such pressures on water quality are covered under the Water Framework Directive.
MSFD_Art.11_012[C14]	Private submission	Having read all the documents on the EPA web site pertaining to the Glengarriff agglomeration one can only wonder what the rationale is for testing. Must we assume that raw sewage is harmless unless it makes people sick or kills somebody? Even though this is the worse outcome from this type of pollution it is difficult to prove cause and effect. Keeping in mind that there are licenced Mussel farms within 50m of the raw sewage outflow	Refer to response provided for MSFD_Art.11_012[C11] above. The illness and health warnings referred to here were a result of biotoxin problems and were not related to microbiological contamination from wastewater.

		(not shown on EPA maps) there are food safety issues, the US Food Safety issued health warnings for Bantry Bay mussels in 2008 and fines on Bantry Bay Seafood as a result of illness in French consumers. The mapped sampling point for mussel farms is at a point far outside Glengariff Harbour, 2-3miles from the sewage outflow when the nearest licenced mussel farm is only 50 meters away from where the raw sewage inters the harbour. A water sampling point in text and marked on map is irrigated or washed by the cleanest river entering the harbour.	Sampling points for shellfish areas under the hygiene regulations (Regulation (EC) No. 854/2004) are determined by the Sea Fisheries Protection Authority (SFPA). Under this Regulation, these sampling points should be determined following a sanitary survey to identify representative (worst case) sampling points.
MSFD_Art11._004 [C02]	Irish Farmers Association Aquaculture	Contamination of bivalve molluscs - both farmed and wild - by Norovirus (Norwalk/Winter Vomiting) carried in untreated human sewage is (A) an indicator of severe deficiencies in the protection of inshore waters from contaminants arising from domestic and urban sewage and (B) poses a significant threat to consumers through the ingestion of these viruses and potentially other human-related pathogens such as Hepatitis.	Norovirus (NoV) contamination of shellfisheries is recognised as a significant public health risk in Irish waters. The Marine Institute completed a study aimed at assessing the level of sewage treatment required and the location of sewage outfalls to prevent or reduce NoV contamination in shellfisheries and other sensitive marine environments titled “Assessing the impact of Waste Water Treatment Plant effluent on norovirus contamination in shellfisheries” (2013) – see http://www.epa.ie/pubs/reports/research/water/STRIVE_109%20Norovirus%20in%20Wastewater%20and%20Shellfish.pdf The report concluded that significant reductions of infectious NoV, F-specific RNA (FRNA) bacteriophage were achieved by secondary treatment in association with UV disinfection. New EPA licences for wastewater treatment plants require a study to be undertaken to assess the microbiological impact of the discharge on shellfish growing areas. This includes viruses. Where an impact is demonstrated further treatment (disinfection) is required.
MSFD_Art11.	Irish Farmers	While it is correct to point out that the Shellfish Waters Directive	Since publication of the Art 11 Public Consultation

_004 [C03]	Association Aquaculture	is now integrated into the Water Framework Directive, it is significant to note that (a) during the integration, specific targets for faecal coliforms were deleted from the original Directive 79/923 (b) a more accurate and fully transposed EU Regulation (854/2004) is in place for monitoring and classification of shellfish areas which uses e.coli as the indicator of potentially harmful pathogens in the food chain which could be transferred via bivalve molluscs harvests in an area polluted by human sewage. The Classification approach is based on a rolling analysis of three years of monthly sampling in each of the shellfish production areas around the coast which is reviewed on an annual basis by the SFPA, Food Safety Authority, Marine Institute and BIM.	report (July 2014), Ireland has integrated a sub-programme for monitoring of *E. coli* in bivalve molluscs harvested from shellfish growing waters under the Descriptor 9 Fish and Shellfish Contamination monitoring programme. Ireland's full Article 11 Monitoring Programme is available for viewing on the DECLG website (http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/). The primary aim of the programme is to ensure consumer safety under regulation 854/2004/(EC). The programme covers all commercial bivalve shellfish production areas including both aquaculture and wild fisheries. On the basis of the results obtained, shellfish production areas are classified as Category A, B or C outlining the extent of treatment required prior to consumption on the basis of *E. coli* levels. *E. coli* levels are an indicator of faecal contamination of aquatic environments. The Sea Fisheries Protection Authority collects samples and data. The Marine Institute is responsible for sample analysis.
MSFD_Art11._004 [C04]	Irish Farmers Association Aquaculture	Inclusion of both the Regulation on microbiological criteria for bivalve molluscs (854/2004) and the annual classification review of shellfish harvesting areas should be included as indicators of compliance with the Objectives of D.9. The targets under D.9 should be augmented to include Improvements on an annual basis of classifications (more A class areas, fewer B and C class) in addition to a review of the discharge licences granted for sewage outfalls into the inshore environment granted by the Environmental Protection Agency	See response provided under MSFD_Art11._004 [C03]. Appropriate targets and indicators for the purposes of the determination of Good Environmental Status under the MSFD, require further consideration amongst the relevant Government Departments and State Agencies and will be advanced going forward.

2.1.10 D10 Marine Litter

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_007[C01]	Galway-Mayo Institute of Technology	I think it is valid to consider the OSPAR fulmar monitoring in Ireland as well. Ireland has an estimated population of 32,918 fulmars (Seabird 2000: 1998 -2002). According to the Guidance on Monitoring Marine Litter in European Seas (MSDF Technical Subgroup on Marine Litter, 2013), "a sample size of 40 or more birds is recommended for a reliable annual average of a particular area". The document however also states that also smaller sample sizes can be used for analysis of trends. I currently study debris ingestion by sea birds in Ireland and I would be willing to help/support this important study that would put Ireland in compliance with the MSFD, while being a strategy that has been tested by other regions and has been proved to be effective.	Ireland has removed this target and indicator from its set of targets and indicators defined under Article 10 as no development work has been carried out to confirm that it is suitable for Irish coastal conditions. Ireland has commissioned GMIT (Galway-Mayo Institute of Technology) to carry out further development work on a biota indicator for seabirds. This work will be on-going in 2015 and 2016 and will be presented to OSPAR ICG-ML and ICG-COBAM. The results of this research will allow Ireland to determine whether the OSPAR common indicator for fulmars is suitable for Ireland and if not, what alternatives are suitable.
MSFD_Art.11_009[C07]	Irish Whale and Dolphin Group	As part of ongoing monitoring to examine the effect of marine litter on marine life (10.2) quantification of the incidence and extent of marine litter in cetaceans should be included as part of a post-mortem programme. A sample of 10-20 individuals per annum examined in collaboration with the regional vet labs would soon provide good sample sizes and cost very little if incorporated into the vet labs existing obligations.	The Technical Subgroup Marine Litter (TSG ML) developed guidance on the monitoring of marine litter in European seas (http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/30681/1/lb-na-26113-en-n.pdf). In this guidance, the TSG ML considers ingestion of litter by marine mammals as an option for monitoring marine litter in biota. TSG ML states: "*Ingestion of litter by a wide range of whales and dolphins is known. Although known rates of incidences of ingested litter are generally too low to justify a standard MSFD monitoring recommendation at this*

			point, it can also be argued that the number of pathologically studied animals is low as well. Dead marine mammals should, whenever possible, become subject to pathologic investigations which need to include an assessment for the cause of disease and death and the relevance of ingested marine macro- and microliter in this connection. *Therefore the development of a monitoring protocol for the ingestion of marine litter in the different size categories by marine mammals will be considered in the next report of the TSG ML*". The outcome of the next TSG ML report will better inform the debate on whether ingestion of litter by mammals is a cost-effective means of monitoring impacts of marine litter on biota and therefore any consideration of this as a monitoring tool should occur after this report is published. Moreover, the development of an MSFD Protocol for the monitoring of litter ingested by seabirds is much more advanced than proposals for monitoring of litter ingested by mammals. Ireland is assessing the feasibility of monitoring litter particles in seabirds (see response provided to MSFD_Art.11_007[C01] above).
MSFD_Art.11_001 [C20]	Bird Watch Ireland	Marine litter has the potential to be lethal for a number of marine species including birds, fish and lower trophic level organisms especially in the form of microplastics. For example nylon fibres have been found in the gut of the commercial species *Nephrops norvegicus*, the Dublin Bay prawn (Wright et al. 2013). Browne et al. (2013) found that large concentrations of microplastic and additives when ingested can harm	Ireland is supporting and participating in research and policy work on microplastics that will help to develop a target for microplastics in the future (OSPAR, national research & JPI Oceans). Other elements of this observation that relate to the development of a Programme of Measures (PoM) for

		ecophysiological functions performed by marine organisms. Plastic is one of the most common forms of marine litter and one of the concerning facts is the ability of microplastics to hold vastly increased concentrations of toxic chemicals that have the ability to bio-accumulate up the food web. Maximum concentrations of these microplastics can reach 100,000 particles per m3 and they may not only affect individual organisms but have the potential to modify population structure (Wright et al. 2013). BWI encourage the reduction of plastics and plastic products through research into other materials that may biodegrade and be able to take their place in the long term. We also encourage the reduction of plastics from all land based sources e.g. microbeads, loom bands and marine based sources. We fully support the current research into the monitoring of micro-plastics, and their ecotoxicological effects, as this is urgently needed to establish the impact on the marine food web. BWI would encourage the future development of a target under the MSFD for microplastics and a discussion as to how this will be met considering the target used regarding plastic litter in fulmar stomachs has been removed (pg 61)?	MSFD will be catalogued and considered during the PoM development and the public consultation phase of the PoM process.

2.1.11 D11 Underwater Noise

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_008[C03]	DCENR – (Petroleum Affairs Division)	Section 4.8.1: Bullet 2: this appears to be a misinterpretation of the actual text from the register of impulsive noise from seismic surveys in the GMIT report on 'Assessment and Monitoring of Ocean Noise in Irish Waters'. The actual text states that '*In the past decade, there has been a substantial rise in licence applications for offshore exploration and developments in Irish Waters*'. Request that the text from the GMIT report is used as this is more accurate than current bullet 2.	Correction acknowledged and text amended in Article 11 Monitoring Programme documentation.
MSFD_Art.11_008[C04]	DCENR – (Petroleum Affairs Division)	With reference to 4.8.2 bullet 1, it should be noted that measures to avoid potential cumulative effects during seismic survey activities are included in seismic survey permit requirements.	Comment acknowledged. Comment will inform the Article 13 Programme of Measures reporting in the future.
MSFD_Art.11_008[C05]	DCENR – (Petroleum Affairs Division)	2014 Petroleum Infrastructure Programme funding includes project work on acoustic monitoring during seismic survey activities.	Correction acknowledged and text incorporated into Article 11 Monitoring Programme documentation.
MSFD_Art.11_009[C08]	Irish Whale and Dolphin Group	In summary it is quite hard to comment constructively on implementation of these descriptors [D11] without more detail being provided.	At the time of the Article 11 Public Consultation, all available information and progress in relation to the development of a monitoring programme for underwater noise was summarised, and published. Since then, further development of a strategy towards underwater noise for the MSFD in the Irish context and at a European level has emerged. A detailed account of these developments is summarised in the monitoring programme submitted to the European Commission, and is available for download from the

			DECLG website.
MSFD_Art.11_009[C09]	Irish Whale and Dolphin Group	If offshore authorisations for seismic surveys have been steadily increasing since 2002, will this continue to increase and what thresholds have been set? What impact will there be if such trends continue on the offshore cetacean population especially low frequency cetaceans?	As stated above, under submission MSFD_Art.11_008[C03], this text was a misinterpretation within the Article 11 Public Consultation report. The actual text from the register of impulsive noise from seismic surveys in the GMIT report on 'Assessment and Monitoring of Ocean Noise in Irish Waters' states that "*In the past decade, there has been a substantial rise in licence applications for offshore exploration and developments in Irish Waters*".
MSFD_Art.11_009[C10]	Irish Whale and Dolphin Group	It is not clear why there are gaps in data collection/availability for example pile driving. Why are these data not available if such work is licensed? What about other sources of noise such as underwater blasting, why does this not form part of the current assessment?	To clarify this statement within the Article 11 Public Consultation Report, the gap refers to the compilation of impulsive sound generating activities information, within a 'register' for use for MSFD assessment purposes. The scope of the GMIT report on 'Assessment and Monitoring of Ocean Noise in Irish Waters' was to develop a register of impulsive sound from seismic surveys only. Since publication of the Article 11 Public Consultation Report, Ireland now proposes to expand this database or 'register' to include further sources of impulsive noise, working in collaboration with our Celtic Seas neighbours. Data collection will be based on licencing and consents submitted to authorising authorities, which will be collated into this proposed database or 'register'. Further information in relation to these developments are summarised in the monitoring programme submitted to the European Commission, and is available for download from the DECLG website.
MSFD_Art.11_009[C11]	Irish Whale and Dolphin	Data from pleasure crafts and other sources of traffic in the coastal environment should also be assessed and would most likely have severe seasonal shifts. Monitoring programmes	Underwater noise generated from pleasure crafts and other sources of traffic are classified as ambient noise under the MSFD. Ireland does not routinely monitor

	Group	should be devised to take this into consideration.	underwater ambient noise. The governing factors in setting up an underwater noise monitoring programme are the cost implications associated with monitoring and the extent of Ireland's MSFD Assessment Area. An approach based on modelling with model calibration using monitoring data is seen as the most cost-effective approach at this time. The databuoy infrastructure could also potentially be used for underwater noise monitoring. Future potential developments in monitoring platform technology (more reliable, more cost effective) will inform and may change this approach.
MSFD_Art.11_009[C12]	Irish Whale and Dolphin Group	At the Initial Assessment stage, it was not possible to assess the overall extent of sound generating activities and the corresponding environmental impacts in Irish marine waters but how will this be addressed in the future. Will the monitoring programme target this assessment?	At the time of the Article 11 Public Consultation, all available information and progress in relation to the development of a monitoring programme for underwater noise was summarised, and published. Since then, further development of a strategy towards underwater noise for the MSFD in the Irish context and at a European level has emerged. A detailed account of these developments are summarised in the monitoring programme submitted to the European Commission, and is available for download from the DECLG website.
MSFD_Art.11_009[C13]	Irish Whale and Dolphin Group	The Article 12 technical assessment pointed out the lack of targets under this descriptor and the assessment recognised the on-going research activities presented by Ireland, which should lead to the development of quantitative targets and indicators. It is still unclear what approach Ireland is currently or aiming to undertake to achieve this and how the impacts on marine mammals be measured.	At the time of the Article 11 Public Consultation, all available information and progress in relation to the development of a monitoring programme for underwater noise was summarised, and published. Since then, further development of a strategy towards underwater noise for the MSFD in the Irish context and at a European level has emerged. A detailed account of these developments are summarised in the monitoring programme submitted to the European Commission, and is available for download from the DECLG website. This work includes the establishment of a target to develop an impulsive noise register for

			Ireland.
MSFD_Art.11_009[C14]	Irish Whale and Dolphin Group	It is stated in the public consultation document that human activities introducing loud, low and mid-frequency impulsive sounds into the marine environment are managed to the extent that no significant long-term adverse effects are incurred at the population level, or specifically to vulnerable / threatened species and key functional groups. It is impossible to state this as no evidence was presented to prove that this is in fact the case. How have we assessed the increasing trend of seismic surveys on marine mammals and their distribution and abundance? No such studies have been carried out in Irish waters therefore this statement is inaccurate. Continuous low frequency sound inputs do not pose a significant risk to marine life at the population level, or specifically to vulnerable / threatened species and key functional groups. Again there is no evidence to prove this.	The text this comment refers to is Ireland's GES Characteristics for Descriptor 11 Underwater Noise. GES characteristics are Ireland's stated objectives (i.e. what constitutes "Good" status) rather than a portrayal of the current situation or the present level of knowledge. The Descriptor 11 characteristics of GES for Ireland have been defined as follows: *"Loud, low and mid frequency, impulsive sounds and continuous low frequency sounds introduced into the marine environment through human activities do not have adverse effects on marine ecosystems:* • *Human activities introducing loud, low and mid-frequency impulsive sounds into the marine environment are managed to the extent that no significant long-term adverse effects are incurred at the population level, or specifically to vulnerable/ threatened species and key functional groups.* • *Continuous low frequency sound input do not pose a significant risk to marine life at the population level, or specifically to vulnerable/ threatened species and key functional groups*."
MSFD_Art.11_009[C15]	Irish Whale and Dolphin Group	DoE should liaise with the IWDG when devising a monitoring programme as information on critical offshore cetacean habitat would allow for the assessment of noise in such areas and therefore contribute important information to support some of the statements above.	The NPWS / DAHG are the competent authority for monitoring cetaceans. Furthermore they have developed guidance to manage the risk to marine mammals from man-made sound sources in Irish waters.
MSFD_Art.11_001 [C21]	Bird Watch Ireland	As seismic surveys have been steadily increasing since 2002 and the ability of noise to spread in water is 4.3 times greater than air, special consideration needs given to the precautionary	As stated above under submission MSFD_Art.11_008[C03], this text was a misinterpretation within the Article 11 Public

		approach of these effects in particular relation to animals such as cetaceans for example. BWI supports the points made in the initial assessment public consultation that cumulative noise should be taken into account and further work is needed on this, including a potential pilot project for Irish waters to fully understand these issues. We support the ongoing work to develop appropriate targets and indicators for monitoring elevated sounds and continuous low frequency sounds in the marine environment.	Consultation report. The actual text from the register of impulsive noise from seismic surveys in the GMIT report on 'Assessment and Monitoring of Ocean Noise in Irish Waters' states that "*In the past decade, there has been a substantial rise in licence applications for offshore exploration and developments in Irish Water*". Monitoring of noise in Irish waters to date has predominantly been activity-based monitoring undertaken on a project specific basis e.g. for seismic campaigns and drilling projects for the offshore oil and gas industry (licenced by the Minister for Communications, Energy and Natural Resources), or associated with the dredging, drilling, pile driving, geophysical acoustic surveys and blasting. Notwithstanding the above, Ireland has made significant advances in relation to the control of impacts and monitoring of underwater noise. In 2014, the Department of Arts, Heritage and the Gaeltacht (DAHG) published guidance to manage the risk to marine mammals from man-made sound sources in Irish waters[7], which covers potential or described direct effects on marine mammals (e.g., physical harm, detrimental changes to, or interference with, natural behaviour) of man-made sound arising from licensable plans or projects. The guidance has been prepared as part of Ireland's requirement under Article 12 of the 1992 EC Habitats Directive (92/43/EC) to establish a strict protection regime for all cetaceans in the Irish Exclusive Economic Zone. It specifies the requirement for Marine Mammal Observers (MMO's) i.e. trained

[7] http://www.npws.ie/media/npwsie/content/files/Underwater%20sound%20guidance_Jan%202014.pdf

			and experienced personnel to provide effective means of detecting marine mammals in the vicinity of coastal and marine plans or projects; it outlines strict mitigation associated with different activities and compels MMO's to complete reporting forms following their surveys and submit them to DAHG, *via* the Competent Authority (e.g. DCENR, local authority or Foreshore Unit etc.). DAHG uses the information, combined with research programmes data, to compile the cetacean atlas, and assess mitigation measure effectiveness. In addition, DCENR's Petroleum Infrastructure Programme (PIP) is currently funding project work on acoustic monitoring during seismic survey activities. Moreover, Ireland engages with the Technical Subgroup (TSG) Underwater Noise at a European level to advance recommendations for underwater noise under the MSFD implementation programme.
MSFD_Art.11_001 [C10(b)]	Bird Watch Ireland	BWI also would like to see a section on marine mammals and noise, also relating to descriptor 11, including the implementation of the precautionary approach in the face of not enough evidence seismic and military testing should not go ahead.	Research on the effects of anthropogenic noise on marine mammals is still at an early stage and there is currently insufficient knowledge to establish a practical monitoring programme that directly determines impacts on cetacean species. Work is, however, progressing on developing methodologies and protocols to establish the scale of the problem and this is outlined in Section 4.8 of the Article 11 Public Consultation Report. Please also refer to the Descriptor 11 monitoring programme submitted to the European Commission, which is accessible *via* the weblink provided in Chapter 1.
MSFD_Art.11_009[C16]	Irish Whale and Dolphin Group	It is also unclear what Ireland's representation is at the TSG. What groups are represented?	Ireland has been represented at the Technical Steering Group Noise over the past number of years.

2.2 PRESSURES

2.2.1 Aquaculture

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Draft response
MSFD_Art11._004 [C05]	Irish Farmers Association Aquaculture	This review has highlighted the unnecessarily complex and disjointed approach to the monitoring of a relatively small industry (aquaculture) by a wide array of agencies, involving a plethora of reporting structures, responsibilities and stand-alone programmes which together create a significant volume of data annually which stored apart and looked at piecemeal and in isolation (if at all) is significantly devalued and underutilised by the fact that it is so difficult to access, compare, process or grasp the logic behind the division of such intense labour for what should be a straightforward task of monitoring a relatively small sector. The aquaculture industry, the regulatory bodies that govern its development and the protection of the environment as well as the general public would be better served by the provision of a one stop information shop for monitoring data under the WFD and other environmental and regulatory requirements by a scientifically competent and multi-disciplinary body (without adding to the number of agencies and public servants overall) which would be capable of delivering integrated responses using publically available information to industry, the general public, regulators and R&D performers.	The strategy being developed under the MSFD will bring better coordination and will facilitate better dissemination of information relating to marine data and regulation. The Initial Assessment, the Monitoring Programmes, the Programme of Measures and Ireland's Marine Atlas developed under the first cycle of the MSFD implementation, taken together, is important progress towards this and will continue to evolve in the coming cycles. The comprehensive nature of the 11 Descriptors within the Directive is intended to identify areas of concern, for example in terms of biodiversity, food webs, non-indigenous, eutrophication and contamination. Where concerns are identified, the contribution of different pressures and activities needs to be established so that risked-based measures are put in place. This is in addition to the sector-based assessment, permitting and management of all marine based activities, including aquaculture, and their pressures on the marine environment.
MSFD_Art.11_001 [C15(h)]	Bird Watch Ireland	BWI would argue that aquaculture should be included as an element to be included in MSFD Monitoring Programmes. Aquaculture should also be considered as it can influence both directly and indirectly the ecosystems of coastal areas (e.g.	Direct monitoring of aquaculture installations is not included within the biodiversity-related monitoring programmes, because it is addressed as an activity that is subject to established regulatory controls.

		addition of structures, interactions with birds, nutrient enrichment, escapes, non-natives e.g. Pacific oysters) and the offshore marine environment (fishing of seed mussels, fish capture for feed production). In coastal/intertidal areas the addition of structures, interactions with birds, nutrient enrichment, non-natives e.g. Pacific oysters, changes in benthic process and effects on benthic invertebrate community composition may all initially be regarded as localised pressures not extending to the wider marine environment, but as estuaries are important nursery grounds for fish, potential impacts could have far wider consequences. Aquaculture practices in open marine waters such as fish farms may lead to pressures such as sedimentation, introduction of chemicals, transmission of pathogens, escapes and the risk of interbreeding with wild population. While the impacts of aquaculture may be influenced by a range of factors including type, size/scale, husbandry practices, hydrographic conditions, and geography, whether the impacts are localised or wider will depend on site location, production scale, management approach and assimilative capacity of the surrounding environment (PARM, 2006). Badly sited aquaculture operations can also have negative effects on the facility itself.	Consistent with all other activities, the management of aquaculture will be consistent with the requirements of the MSFD.
MSFD_Art.11_001 [C15(i)]	Bird Watch Ireland	While aquaculture is subject to appropriate assessment where it takes place in or near a Natura 2000 site, many operations outside Natura 2000 sites, and particularly shellfish aquaculture operations, are not subject to environmental impact assessment, and importantly the cumulative impacts caused by aquaculture for example relating to many single licenses within a single bay, are not assessed. Therefore a strategic approach to the sustainable development of aquaculture, based on the sound monitoring of environmental effects, would be welcomed.	The ecological and environmental effects of all aquaculture licence application are considered irrespective of their location with respect to *Natura* 2000 sites. In response to EU 2020 and the EU Integrated Maritime policy, aquaculture is identified as an area for sustainable growth and development. At the National level, Ireland is implementing the equivalent EU polices *via* the National Seafood Policy (2014 – 2020) and a National Strategic Plan for Aquaculture (2014 – 2020) include the national sustainable development of aquaculture. A Strategic

			Environmental Assessment and Appropriate Assessment are currently being prepared by Bord Iascaigh Mhara in relation to the National Strategic Plan for Aquaculture.
MSFD_Art.11_011[C15]	An Taisce	A major extension of caged salmon breeding is proposed the first between Galway Bay and the Aran Islands and two others to follow. This has major issues on scale of nutrient source required for caged fish breeding, lice infestation and risk.	Comment addressed with respect to D5 Eutrophication (see Section 2.1.7)

2.2.2 Energy (Renewable and Non-renewable)

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C16]	An Taisce	The scale and impact of deep sea drilling in areas covered by exploration licences by Department of Communications, Energy and Natural Resources is not addressed.	All activities with the capability of modifying marine environmental conditions, including deep-sea drilling will be addressed through an integrated monitoring programme presently under development and reported under Descriptor 7 Hydrographical Changes. This programme will take the following approach: Plans or projects large enough to have the potential to alter hydrographical conditions, either at a broad scale or through acting cumulatively with other existing or proposed plans or projects, will be monitored through collation of data from Environmental Impact Assessments (EIA), Strategic Environmental Assessments (SEA), the Water Framework Directive (WFD) and the Habitats Directive (HD) processes. Any additional physical monitoring is likely to be specific to a proposed project or activity and will require the application of consistent methodologies and approaches to the identification of permanent alterations to physical and chemical conditions and a capability of evaluating ecosystem risk. In addition, the programme also incorporates national seabed mapping efforts under the Irish National Seabed Survey (INSS) and its successor Integrated Mapping For the Sustainable Development of Ireland's Marine Resource (INFOMAR). The objective of these mapping programmes is the creation of integrated mapping products relating to the physico-chemical
MSFD_Art.11_011[C17]	An Taisce	The impact of large-scale wind energy and future development of wave and tidal energy needs to be assessed, including sound impact on cetaceans.	

			and biological features of the seabed in Irish waters. See also response to MSFD_Art.11_008[C07] under Section 2.1.5 - D1, 4 & 6 Seabed Habitats.

2.2.3 Cultivation of Marine Biomass

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C18]	An Taisce	The potential impact of future marine biomass cultivation of pharmaceutical, food nutrient or bio energy use needs to be addressed.	All activities with the capability of modifying marine environmental conditions, including marine biomass cultivation, will be addressed through an integrated monitoring programme presently under development and reported under Descriptor 7 Hydrographical Changes.

2.3 PUBLIC CONSULTATION AND MOVING FORWARD

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C01]	An Taisce	Ireland, as one of Europe's leading maritime countries and with a marine jurisdiction ten times the land area, should be setting an exemplary standard in the implementation of the Marine Strategy Framework Directive. The report published for this consultation by the Department of the Environment Community and Local Government, in association with the Department of Arts Heritage and Gaeltacht, Department of Agriculture and Food and the Marine, and Department of Transport Tourism and Sport is not fit for purpose. It significantly fails to meet the legal obligation under Article 11 of the Directive for environmental targets and associated indicators.	Please note that Article 11 of the MSFD, and the current public consultation phase is concerned specifically with the identification and establishment of monitoring programmes. The requirement as stated in the Directive is as follows: "*On the basis of the initial assessment made pursuant to Article 8(1), Member States shall establish and implement coordinated monitoring programmes for the ongoing assessment of the environmental status of their marine waters on the basis of the indicative lists of elements set out in Annex III and the list set out in Annex V, and by reference to the environmental targets established pursuant to Article 10*". Environmental targets and associated indicators have been previously addressed under Article 10 and was the subject of an earlier public consultation stage as required by the Directive. The development of targets and indicators is, however, a necessarily iterative process and the emerging implications for monitoring efforts, both in terms of resourcing and methodological considerations are presently under constant review. As the Directive is implemented on a cyclical basis each element of the process (Assessment, Monitoring Programmes, Programmes of Measures) will be reviewed during the cycle and modified or updated

			where necessary.
MSFD_Art.11_011[C11]	An Taisce	The document published by Ireland under Article 11 of the Directive in July 2014 does not meet the requirements of the Directive. It follows a wider trend of producing strategies being not fit for purpose, being neither scientifically grounded, nor integrated with other Government policies and without legally effective timetables or targets to achieve key objectives. Deference to sectoral interests pursuing unsustainable resource exploitation prevails in this case the fishing industry. This has also occurred with two other current draft strategies on Peatland or Landscape produced by the Department of Arts Heritage and the Gaeltacht. Producing strategies without being informed by adequate baseline scientific information, clear measurable targets and where required legally enforcement is a bureaucratic sham. Ireland's attempts to comply with the Marine Strategy Framework Directive to date are merely a paper exercise. There is no horizontal integration with the ongoing policies and action of other Government departments advancing the objectives of "Our Ocean Wealth 2012". Increasing oil and gas drilling and marine life exploitation and aquaculture is being promoted and facilitated. Climate, ocean acidification and biodiversity impacts are being systemically disregarded. However, in the case of the Marine Strategy Framework Directive there are legal obligations under EU Law as well as scientific imperatives.	The implementation of MSFD is based on the baseline scientific data utilised to prepare the Initial Assessment. Gaps in the scientific knowledge such as the frequency of arrival and impacts of NIS and, the distribution and vulnerability of some Predominant Habitat Types have been highlighted at both the Initial Assessment and Monitoring Programme phases of the Directive. Knowledge gaps will be addressed through continued engagement in the development of the MSFD processes.
MSFD_Art.11_005 [C01]	Irish Wildlife Trust	IWT made a submission to the Article 19 Initial Assessment Report, at no stage was there any agreement that any of our points were valid. Not one word of the initial assessment report has been altered as a result of the process. It is understood that the European Commission has serious reservations about the	Comments made by the IWT on the Initial Assessment were taken into consideration and responses were made publically available through the DECLG website (see Response to Submissions – MSFD Initial Assessment Consultation

		Assessment Report as submitted and we will be encouraging them to reject it.	http://www.environ.ie/en/Publications/Environment/Water/FileDownLoad,38199,en.pdf).
MSFD_Art.11_005 [C02]	Irish Wildlife Trust	This current consultation is a bureaucratic exercise which allows a box to be ticked.	The DECLG has undertaken public consultation on both Initial Assessment and Monitoring elements of MSFD. DECLG is endeavouring to evolve / improve its approach to public consultation over time and as such welcomes comments / views from interested parties on the processes undertaken.
MSFD_Art.11_005 [C03]	Irish Wildlife Trust	In the absence of any opportunity to influence the outcome of the next stage it is to be noted we will not be commenting directly on the contents of Article 11.	The MSFD is a cyclical directive based on a 6-year timeline. The development of targets and indicators, together with the initiation and maintenance of the monitoring programmes that drive them, is necessarily an ongoing and iterative process. Opportunities to input suggestions or propose improvements and modifications will be possible at each stage of the MSFD process through Public Consultation campaigns going forward. We are disappointed that the IWT does not wish to engage with the process at this stage, but hope that they will be willing to contribute to any future MSFD developments.
MSFD_Art.11_005 [C04]	Irish Wildlife Trust	The dept can voluntarily withdraw the Initial Assessment Report and engage in meaningful consultation with stakeholders	The Initial Assessment was submitted in accordance with the requirements of the MSFD. The cyclical nature of the MSFD allows for updates and continuous engagement on MSFD. The DECLG intends to undertake public consultation at each stage of the MSFD cycle and envisages continuous improvement in the implementation of MSFD at each stage. The conclusions of the Initial Assessment were based on data and information that was available at the time and the results of the Public Consultation on that

			phase are available on the DECLG website. In keeping with the cyclical design of the MSFD programme, it is anticipated that the next status assessment will be improved with the incorporation of the results that emerge from the currently proposed monitoring regimes together with the implementation of the associated targets and indicators. Further public consultation processes will be undertaken at future stages in the implementation of the MSFD.
MSFD_Art.11_006 [C04]	Sustainable Water Network	SWAN would strongly contend, as we did for the Initial Assessment phase, that the [Article 11] monitoring consultation does not offer an opportunity for 'early and effective' participation.	The public consultation process for Article 11 of MSFD was initiated on 24th July 2014 and remained open for comments / input for 7 weeks until 12th September 2014. During this period the DECLG met with SWAN and Coastwatch to discuss the approach to the development of the monitoring programme.
MSFD_Art.11_006 [C05]	Sustainable Water Network	The possibilities for public participation are especially positive for the monitoring phase of the MSFD and there are excellent opportunities for citizen monitoring of certain indicators. These can range from the general public engaging in coastal biodiversity and litter surveys to environmental and fisheries stakeholders contributing specialist expertise and targeted data gathering... SWAN requests and proposes that: * feedback from the current consultation be given full consideration, with bilateral communications and/or other engagement with stakeholders where necessary to clarify issues; * outputs from this consultation should be reflected in final monitoring programme where feasible, or a clear explanation provided in follow-up engagement (beyond a consultation digest), as to why certain stakeholder proposals were not	This report presents the outcome of the public consultation process. Where feasible, input from the public consultation process has been taken into account in the Article 11 Monitoring Programme.

		adopted; * the monitoring programme submission to the Commission be delayed if necessary to facilitate this engagement with interested parties. * the monitoring programme and Initial Assessment be assigned an interim status only until a full Aarhus-compliant public participation exercise is carried out. * The opportunity for public participation in citizen monitoring should also be explored in consultation with citizen monitoring experts, including with SWAN member organisations.	
MSFD_Art.11_006 [C03(a)]	Sustainable Water Network	The concern of SWAN members here is two-fold. In the first instance, this [Article 19 Public Consultation] feedback was not addressed and the Initial Assessment (and other Article 19 elements) was not reviewed to reflect stakeholder input. We note the suggestion in the 'Response to Submissions – MSFD Initial Assessment Consultation' that 'Where it is considered that amendment to targets or indicators are useful for improving our definition of GES and our ability to achieve it, then this will take place following confirmation with the European Commission that amendment is possible' . It is regrettable that the monitoring programme does not build on this in terms of identifying areas where this approach would be useful, in the context of refinement of assessment in light of monitoring. It is also unfortunate that DELG did not communicate further with consultees on this, following confirmation from the Commission, if indeed this has been forthcoming from the Commission. SWAN would like to request an update on this from DECLG.	Ireland is currently compiling an update of its initial Article 10 submission. This update will include new targets and indicators, which have been developed subsequent to the Initial Assessment. The updated Article 10 submission will be reported and made publicly available through the EIONET platform. Most of these (targets and Indicators) have been outlined in the relevant sections of the public consultation document. The development of targets and associated indicators is an on-going and iterative process and new possibilities are emerging from research and collaborative discussion, much of it driven by MSFD priorities.
MSFD_Art.11_006 [C03(b)]	Sustainable Water Network	Secondly, The Article 19 consultation page of the Department's website stated that 'Comments and submissions received will inform the next phases of implementation of the Marine Strategy Framework Directive in relation to the development of a	The SWAN submissions made during the Initial Assessment Public Consultation embraced a wide range of issues, all of which were carefully considered and responses set out in the subsequent Public

		Monitoring Programme under Article 11 due mid-year 2014 and a Programme of Measures under Article 13, to be developed by 2015..". In addition, the monitoring consultation document states that comments made during the Initial Assessment 'are being taken into consideration as part of the development of Art 11 MSFD monitoring Programmes for Ireland'. It is clear from reviewing the draft Monitoring programme that neither of these things have happened, since SWAN cannot see any of our comments reflected in the proposed programme.	Consultation Report (see http://www.environ.ie/en/Publications/Environment/Water/FileDownLoad,38199,en.pdf). Where possible, elements have been taken forward (such as a more detailed examination of knowledge gaps and data issues) and are reflected in the Article 11 reporting.
MSFD_Art.11_006 [C03(c)]	Sustainable Water Network	For the above reasons SWAN members are unhappy with the consultation process and at this stage wish to have their serious misgivings about the inadequate and apparent 'box-ticking' approach to public consultation on the MSFD in Ireland formally registered. A number of SWAN members have decided not to engage in the consultation on this phase of MSFD implementation, because their comments in the last phase were effectively ignored which leads them to believe that a submission at this stage would be a waste of their (extremely limited) time. For this reason, there will be gaps in the SWAN response as expertise from a number of members will be missing. SWAN however makes the current submission in good faith, in light of our positive meeting with DECLG, on the understanding that the content will be given serious consideration and taken into account where appropriate before the draft Monitoring programme is finalised.	While there has been criticism of previous public consultation processes the DECLG is endeavouring to engage in a meaningful way. This was highlighted to SWAN when the DECLG met with them (5th September 2014). Non engagement by SWAN members is disappointing as the DECLG is endeavouring to gather the broadest possible inputs to ensure that more robust engagement processes are in place.
MSFD_Art.11_011[C02]	An Taisce	It does not resolve the critical analysis provided by the European Commission on environmental targets and associated indicators published under Article 12 of the Directive in February 2014 titled "Article 12 Technical Assessment of the MSFD obligations Ireland".	The purpose of the Article 11 Monitoring Programme Public Consultation document was to present the elements being considered by Ireland for inclusion in our MSFD Monitoring Programmes and to provide interested parties with an opportunity to comment on, and contribute to, these Monitoring Programmes. This document was not intended to be a response to the Commission's Article 12 report. Aspects outside the
MSFD_Art.11	An Taisce	The February 2014 Commission evaluation under Article 12	

_011[C05]		shows large-scale failure or inadequate action by Ireland. This is summarised in the introduction in pg. 5 under the following headings: • Overall Approach • “No targets and associated indicators for biodiversity and water noise" • Socio Economic Analysis • “No clear conclusions available“ • Data and Knowledge Gaps In general, it considered the “overall the report does not identify concrete actions and plans to resolve the gaps/ knowledge”.	scope of MSFD monitoring programmes are not under consideration at this point.
MSFD_Art.11 _011[C06]	An Taisce	The report [EC's Article 12 report] evaluates the targets for achieving Good Environmental Status under eleven separate descriptives D1 to D11. A four level matrix is provided: • Good Practise • Adequate • Partially Adequate • Not reported None of the targets for eleven descriptives met Good Practice standard. Only one was deemed Adequate, six were deemed only partly adequate.	

MSFD_Art.11_011[C07]	An Taisce	With regard to D2 on non-indigenous species, the information was stated [in the EC's Article 12 report] to be “vague”.	
MSFD_Art.11_011[C08]	An Taisce	For D2 on commercially exploited fish and shellfish it was stated [in the EC's Article 12 report], “it was not clear which stocks were covered.	
MSFD_Art.11_011[C09]	An Taisce	For D10, on marine litter, the information was stated [in the EC's Article 12 report] to “lack threshold values and baselines”.	
MSFD_Art.11_011[C10]	An Taisce	Most seriously, for four descriptives, namely D1, D2 and D6 in relation to Biodiversity and D11 on marine noise no targets were provided. The report [EC's Article 12 report] concludes with positive and “Negative Elements" the latter set out as follows: • Overall lack of ambition e.g. Ireland do not go beyond existing standards at EU or RSC level • When using OSPAR and EU requirements and standards e.g. for D8, Ireland does not address potential issues of complementarity • GES is defined at the descriptor level and often integrates some elements of the criteria and is generally only qualitative • Impacts from pressure are not systematically reported on • A number of targets and the associated indicators to these targets still need further development and are expected to be operational only in 2014 or 2018 • No new assessment seems to have been made specifically for the implementation of the MSFD with some exceptions in relation to emerging issues e.g. marine litter • While data and knowledge gaps are described in detail, Ireland does not always specify how they will be addressed and	

		sometimes relies on developments at EU or regional level, without always clear deadlines • Lack of targets for Descriptors 1, 4, 6 and 11 • A large number of GES definitions and targets are not sufficiently clear or SMART to be measurable.	
MSFD_Art.11_011[C14]	An Taisce	The objective should be meet Good Practice standard defined by the European Commission for all 11 target descriptives, to resolve the deficiencies set out in the February 2014 European Commission Article 12 evaluation.	

2.4 OTHER ISSUES

2.4.1 Assessment Area

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_008[C01]	DCENR – (Petroleum Affairs Division)	Figure 2.1 requires revision as the EEZ element of the area has since been amended (ref S.I. 86 of 2014).	The amendment to the Ireland's EEZ has been applied to Figure 2.1. The revised figure will be used going forward, where relevant. . The former EEZ will also be replaced by the amended EEZ on Ireland's Marine Atlas (http://atlas.marine.ie/#/Map).

2.4.2 Climate Change

Submission code [Comment code]	Submitting organisation/ Agency	Comment	Response
MSFD_Art.11_011[C03]	An Taisce	Ireland has a legal obligation under EU law to provide an effective and compliant strategy to (i) meet the obligations of the Marine Strategy Framework Directive, (ii) to maintain the Good Environmental Status of the marine ecosystem, (iii) to apply the precautionary and polluter pays principles in achieving this, and (iv) to set out environmental targets and indicators to achieve and maintain the Good Environmental Status of the marine environment by 2020. This should be a key part of Ireland's wider role in promoting action on the overriding threats to the global marine environment through climate change, ocean warming, ocean acidification, overfishing, marine litter waste and pollution, both through national initiative, through membership of the EU and taking a proactive role in the UN IPCC process, OSPAR, ESPOO and other international structures. Major leadership is required to reduce carbon emissions in order to reverse ocean acidification as much as climate warming. The most recent UN data published in September 2014 is alarming (see Appendix 1). It addresses the converging impact of anthropogenic greenhouse gas on increasing ocean temperatures, and the inability of the ocean to absorb additional C02, causing acidification and the accelerated damage to the marine ecosystem.	Climate change is an issue that largely falls outside of the stated "ecosystem-based management" aims and objectives of the MSFD and ocean acidification, for example, is not a listed pressure in Annex III of the Directive. Ireland did, however, recognise climate change as a significant concern in its Initial Assessment and aspects of climate change and ocean acidification monitoring are being considered in the context of D1, 4 Water Column monitoring which is still under development. Ireland is also engaged in international efforts to develop improved monitoring methods for ocean acidification and its associated effects through participation in specialist groups such as those established under OSPAR and ICES.

2.4.3 Policies

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C04]	An Taisce	As in the expansion of agriculture in Ireland through "Food Harvest 2020", current Irish Government policies for the marine environment are directly contrary to the imperative of stabilising global climate and ocean acidification and maintaining biodiversity. The target and objectives set out in the 2012 publication of "Our Ocean Wealth" in promoting oil and gas exploration and the increased commercial exploitation of marine life, have not been subject to any environmental constraint evaluation. Similarly, the European Commission is advancing the concept of "Blue Growth" without reconciliation of compatibility with the Marine Strategy Framework Directive objectives and provisions.	The implementation of sustainable development in the marine environment is not contrary to the implementation of MSFD. Ireland's marine environment has very low levels of development and associated pressures in comparison to other EU Member States. Any proposals for developments / exploration in Ireland's MSFD area will be subject to the requirements of Appropriate Assessment, Environmental Impact Assessment and any regulations associated with the sector in question. Furthermore economic growth objectives and sustainable development can co-exist within well regulated and controlled sectors.

2.4.4 Compliance with the MSFD

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_011[C12]	An Taisce	The following actions are required to effect compliance with the requirements of the Directive 4.1. Legal implementation, resource provision and horizontal integration between Government Departments and agencies • Identification and provision of all new and amended regulatory provisions required to implement the MSFD. • Adequate provision of resources for providing baseline data, monitoring and meeting of targets. • Integration for MSFD with legal remit plans and programmes of Government Departments and agencies.	• It is expected that all new and amended regulatory provisions required to implement the MSFD will be identified through the implementation of Article 13 Programme of Measures which is scheduled to commence in late 2014/ early 2015. • In the first cycle of the development of MSFD Monitoring Programmes, priority areas requiring resourcing for baseline data collection, monitoring and meeting of targets have been identified and are being considered by the DECLG. • The integration of the MSFD with legal remit plans and programmes of Government Departments and agencies will occur through the implementation of the Programmes of Measures (PoM) to maintain or achieve GES by 2020. The PoM must be developed by December 2015 and implemented by December 2016.
MSFD_Art.11_011[C13]	An Taisce	The following actions are required to effect compliance with the requirements of the Directive 4.2 Assembly and Maintenance of Baseline data • Achievement of adequate baseline data on the status of the Irish marine eco system within 2020 timeframe including: • Marine food web, including maintenance of feed sources for	The establishment of baselines from which the current environmental status can be determined is a complex task, requiring reliable data and a sound scientific basis for baseline adoption. The Department has worked with scientists, State Agencies and other interested parties to establish data availability and reliability for all of the areas listed in the An Taisce submission and the results of this collaboration constitutes the basis of Ireland's suite of targets and indicators and the monitoring programmes that

		birds. • Seabed habitat including biogenic reefs deepwater coral. • Evaluation of deep trawling impact on sea bed • Accurate monitoring data on the population stability of all commercially fished species in Irish waters. • The cumulative impact of aquaculture on foreshore on the marine environment including fish feed and nutrient impact on sea floor and interaction with other species and escapee impact or threat. • Mobility and feeding patterns for cetaceans. • Changing patterns in migration of non-indigenous species • Sources of marine litter.	support them. The Department recognises, however, that considerable gaps in knowledge and monitoring ability remain and work to resolve these is ongoing, both at national level and through collaboration with other Member States.

2.4.5 Approach to Monitoring

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_006 [C02]	Sustainable Water Network	The success of MSFD depends largely on a robust, science-based monitoring regime which identifies and is designed to address these gaps in knowledge, which is appropriately targeted and which provides the necessary baseline information on the health and trends in the marine environment. Unfortunately, the draft programme as proposed falls far short of doing that because it neither identifies the gaps clearly nor proposes adequate monitoring, including the necessary substantial resources and research time needed, to address these.	The currently reported monitoring programme represents a comprehensive account of Ireland's ongoing marine monitoring at this point in time. All available relevant resources have been incorporated, drawing from work undertaken under a wide range of other international obligations, Directives and initiatives as well as highlighting the use of national research and regulatory data. The Department does, however, recognise that both knowledge and methodological gaps exist and will be working to quantify and address those gaps in the future. We note that the Public Consultation document was a summary of Ireland's monitoring programmes and as such may not include the more technical evaluation of gaps that will be made available to the Commission. The issues of resources, funding and research commitments that support monitoring is an on-going concern, which will be kept under continuous review by the Department.
MSFD_Art.11_006 [C06]	Sustainable Water Network	SWAN is concerned that there is no analysis offered which links the proposed programme to its significant place in the broader implementation of the directive: In particular there is little or no linkage with the knowledge gaps identified in the Article 19 assessment where for example, ecosystem-based descriptors biodiversity, food-webs and seabed integrity have not been fully assessed nor targets set for them due to lack of data.	Monitoring programmes, together with targets and indicators addressing biodiversity elements of the Directive, are unsurprisingly proving particularly challenging to develop for all Member States. Gaps in knowledge and new methodological approaches are currently being investigated at a national and international level, with OSPAR and ICES taking the lead in many cases. There are significant scientific

		Furthermore, given that the Article 19 report highlighted the lack of baseline data and identified this as significant impediment, it is unacceptable in SWAN's view that: * there is no critical assessment of the degree to which what is being proposed in the draft Monitoring Programme would fill in these gaps and thus contribute to the overall requirements of the MSFD, namely achieving GES. * the draft monitoring programme proposes no new monitoring initiatives, despite the fact that the current programmes have resulted in the identified data gaps. If it is deemed that the current programme is sufficient, then it must be clearly demonstrated that this is adequate to address the gaps identified in the Article 19 report and to fulfil the onerous assessment requirements of the directive. SWAN proposes that the monitoring programme should be re-drafted to include the following steps: 1. Identify 'known' knowledge gaps and make preliminary comments about potential 'unknown unknowns' based on scientific judgement; 2. Set out a monitoring action plan for each descriptor including a tabulated list of selected indicators for each descriptor with summary rationale for their use; 3. Provide a brief analysis / critical comment, based on current knowledge and expert judgement, of the degree to which the proposed action plans (monitoring programmes) for each descriptor will address the knowledge gaps and fulfil the requirements of the directive; 4. Set out the data gaps that will not be addressed by the proposed monitoring programme and the reasons why (cost-effectiveness etc.);	hurdles and insufficient progress has been made on many of the biodiversity target and indicators under development to confidently adopt them as GES assessment tools. Work is continuing on developing, refining and testing new indicators and this will probably continue for some time to come. The cyclical nature of the MSFD ensures that targets and indicators are kept in continuous review to ensure that a dynamic process exists for the evaluation of GES within Ireland's MSFD area. This continuous review will critically analyse gaps and evaluate options for addressing them. The objectives and rationale for this task are very similar to the approach proposed by SWAN. With respect to monitoring, our first priority was to identify when existing monitoring could be used more effectively. In the process of developing the monitoring programme areas requiring new monitoring initiatives have been identified, especially in respect s of Water Column Habitat and Benthic Habitats. However a critical evaluation (technical, financial and resources) of these initiatives needs to be carried out to ensure comprehensive and robust monitoring is developed.

		5. Provide a timeline and plan of action for addressing this i.e. will it be done in the next cycle of implementation or before; 6. Provide an action plan / research programme to identify the 'unknown unknowns'; 7. Public participation at all above stages of this process.	
MSFD_Art.11_006 [C07]	Sustainable Water Network	A key element of the design and implementation of an effective monitoring programme is capacity. The lack of resources being committed to the implementation of the MSFD, and specifically in the context of this consultation, the monitoring programme, is of grave concern to SWAN. It appears that MSFD implementation is being piggy-backed on current marine work with no commitment to necessary additional financial and human resources. Marine monitoring is an extremely specialised scientific area of expertise and yet the monitoring programme appears to be being conducted as an administrative exercise only by an extremely small team of DECLG staff. This team are extremely committed, but they are not marine scientists and do not appear to have been given the scientific support necessary to develop a comprehensive science-based monitoring programme tailored to the needs of the MSFD. This indicates a worrying lack of political support for the MSFD, and for the DECLG's best endeavours to implement it. This is in stark contrast to the government commitment to Harnessing Our Ocean Wealth and 'Blue Growth'. The MSFD is the environmental pillar of the EU Integrated Maritime Policy (IMP), (the other being economic development, or 'Blue Growth') and it is only through protection of the marine resource and its ecosystem services that sustainable maritime growth can be achieved.	The DECLG has implemented all aspects of the MSFD with the support and participation of experts from government departments, state agencies, consultants, academics and non-governmental organisations. The reduction in public service numbers over the past number of years has necessitated the engagement of consultants to support the delivery of the MSFD. Specialist scientific expertise (public and private) has been engaged in the development of the monitoring programme.

MSFD_Art.11_006 [C08]	Sustainable Water Network	At present a diverse range of government agencies and departments have a remit in marine management and assessment. It is clear that an integrated approach is needed to co-ordinate marine monitoring efforts and to ensure that they feed into the MSFD implementation process, filling knowledge gaps, refining the environmental targets and assessment of cumulative pressures and informing the selection of measures. In the absence of an integrated approach to marine management (recommended by SWAN in the past) it is vital that as a minimum an MSFD unit is established to oversee implementation and to act as a coordination hub in order to deliver an integrated monitoring programme and indeed, integrated MSFD implementation.	There are numerous state agencies and government departments with responsibilities in the marine area including: DECLG, DAFM, DCENR, DATTS, EPA, MI, IFI, BIM, SFPA. However, the Marine Coordination Group under the direction of Minister Coveney is a high level co-ordination group concerned with all aspects and activities in the Marine Sector. The coordination of high level policy initiatives for the maritime sector is undertaken through the Marine Co-ordination Group and the DECLG keeps this group informed of developments and initiatives relating to MSFD. In addition, the DECLG, with the support of the MI, has undertaken the development of MSFD works under the guidance of the MSFD Steering Group, the members of which are drawn from the list of Departments given above.
MSFD_Art.11_006 [C10]	Sustainable Water Network	This section [Section 2.3. MSFD Competent Authorities] is inadequate as it only lists the government departments and agencies with a role in MSFD. This needs to be elaborated to include the full list of agencies who may be involved and more importantly, it is necessary that it is made clear the specific responsibilities for elements of the monitoring programme and who will be delivering them, specifying the sections within the government departments.	The MSFD under Article 7(1) requires Member States to designate the authority or authorities competent for the implementation of this Directive with respect to their marine waters. The European Communities (Marine Strategy Framework) Regulations 2011 (S.I. 249 of 2011) provide that the Minister for the Environment, Community and Local Government is designated as the authority competent for the implementation of the regulations and the Directive in respect of the marine waters to which the regulations apply. Section 2.3 outlines departments with whom the DECLG shares functions and responsibilities for the implementation of the Directive. The designation of what departments or agencies are responsible for elements of the monitoring programme is separate from the Competent Authorities for the MSFD.

MSFD_Art.11_006 [C12]	Sustainable Water Network	SWAN welcomes the statement in this section that 'a review of the characteristics of GES is being undertaken in light of new information and understanding of the implementation of the MSFD as well as comments made through Ireland's public consultation on the Initial Assessment…'. However, it is important that there is public participation in this review and that as a first step in this, information on the review is made available to stakeholders in the interests of transparency.	Reviewing the characteristics of GES is an on-going process due to the cyclical nature of the MSFD. In accordance with the requirements of Article 19 of the MSFD, the DECLG is committed to undertaking public consultation processes in the on-going implementation of the Directive.
MSFD_Art.11_006 [C13]	Sustainable Water Network	It is regrettable that this section [Section 2.7 Aims and objectives of the monitoring programmes] simply reproduces Article 11 of the directive. It is imperative that the report also sets out how it is going to 'ensure that they [monitoring programmes] meet the requirements of the directive' as stated. An assessment of the way in which the presented programme meets the requirements of the directive, in addition to the degree to which it addresses the gaps identified in the Art 19 report and the Commissions Article 12 assessment should also be presented. (See Section 4 above also).	The aims and objectives section necessarily sets out the European context under which this phase of the MSFD was undertaken for those that are unfamiliar with the stated requirements of the Directive. A more detailed technical account of how each of the monitoring programmes contributes to achieving the aims of the Directive are included in the full submission document which was still being prepared at the time of the consultation document release. This was unfortunate, but unavoidable in order to be able to provide timely public access to the content of Ireland's MSFD monitoring programmes which were under development and continuing evaluation at the time of the public consultation.
MSFD_Art.11_006 [C14]	Sustainable Water Network	This should also include as the most immediate next step the detailed consideration of the stakeholder input on the monitoring programme, followed by a review of the final monitoring programme, where appropriate (and explanation to the stakeholder where not) before the programme is notified to the Commission.	The public consultation process underway relates to the MSFD Monitoring Programme. Following this process it is intended to use the feedback received to inform the final Article 11 Submission to the Commission. It will not be practical to have a further dissemination process on the final monitoring programme before submission to the EU Commission due to the tight deadlines involved. Future stages in the MSFD implementation will incorporate public consultation processes.

2.4.6 Cumulative Impacts

Submission code [Comment code]	Submitting Organisation / Agency	Comment	Response
MSFD_Art.11_006 [C09]	Sustainable Water Network	Analysis of predominant pressures and impacts. The MSFD requires that the analysis of predominant pressures and impacts must include 'the main cumulative and synergetic effects'. However a significant shortcoming of the Article 19 report was that such an assessment of cumulative impacts was missing. It is crucially important that the knowledge gap which resulted in this vital element being omitted is addressed in the monitoring programme, with the putting in place of a research programme to address this if deemed necessary.	The Department accepts that the assessment of cumulative impacts is a considerable challenge and Ireland is engaged in ongoing work, both at a national and international level, to improve our understanding and ability to assess cumulative impacts.

3 CONCLUSIONS & NEXT STEPS

The DECLG would like to thank those who participated in the Public Consultation process. Submissions received included many valuable comments and recommendations with regard to the establishment and implementation of a national Monitoring Programme and the development of environmental targets and indicators. Based on these comments and recommendations Ireland's Monitoring and target and indicator proposals have been updated and have now been submitted to the Commission in fulfilment of Article 11 reporting obligations.

The full content of Ireland's Article 11 submission to the Commission has been compiled into a single report which can be downloaded from the DECLG's website – see http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/.

Ongoing MSFD development work is focusing on the establishment of a Programmes of Measures to achieve GES by 2020 through the development of national marine strategies (see Article 13). This phase of work, which must be reported by March 2016, will provide further opportunity for public consultation.

APPENDIX A

Non-monitoring related comments

The following comments were received during the Article 11 public consultation period, but fall outside the scope of this consultation process. They have, however, been included here for completeness.

POPs & PCBs

Submission code [Comment code]	Comment
MSFD_Art.11_012[C04]	Other than the seismic shift in human biology and science since the mapping of the human genome a paper presented by Pamela Lein PhD at the McIlroy Hall on the 7th of March 2014, at the OSU Veterinary Centre's Department of Physiological Sciences entitled "Environmental Risk Factors in Autism, a Case for PCBs" must give us immediate pause and enforce the Precautionary Principle. This Precautionary Principle was called for in 2004 in The Lancet for the same reason, PCBs. Look where the incidence autism has gone since then.
MSFD_Art.11_012[C06]	It is no secret where the PCBs are coming from and where the incidence of autism is heading. PCBs are POPs i.e. persistent organic pollutants so that by the time a woman is 35 y/o she has accumulated a large amount in her fatty tissues. She may inadvertently eat a food high in PCBs around the time of conception ["beef or salmon Mam "at wedding reception] or if she breast feeds up to 50% of her stored PCBs will leave her body in her breast milk and inter the baby at a developmentally critical stage. Dr Lein feels the damage to the brain occurs at both the foetal and infant stage. The infant brain is vulnerable to damage by much lower levels of PCBs. This was the reason The European Food Safety Association could not agree whether to warm women to avoid farmed salmon or any fish for 6 months or 12 months prior to getting pregnant. Sounds like a joke without a punch line.

Wastewater Discharges

Submission code [Comment code]	Comment
MSFD_Art.11_012[C12]	TEST REPORT Sample Description Sea Water Sample Playground - Date Testing Initiated: 18/11/2013 17/11/13 Category: MICRO Sample Condition: Satisfactory Order No.: Not Available Supplier Code: Test Result Unit Method Comments Est. Enterococci (intestinal) 9,700 CFU/100mls MT377 / ISO 7899-2 : water 2000 E.COLI Count - Colilert 98,040 MPN/100mls MTC12/MDW Part 4D (2009) All tests are carried out according to our INAB schedule of accreditation. Comments, opinions, grades and interpretations expressed herein are outside this current scope of INAB accreditation. The Laboratory has tested the material/items supplied by the customer as sampled in accordance with the customers own requirements THIS SAMPLE WAS TAKEN BETWEEN SEPTIC TANK AND DESIGNATED SWIMMING AREA> THIS AREA IS ABOUT ONE ACRE SIZE. Slipway opposite Eccles Hotel (93,672 56,499) Results from sample taken in August: Sample Ambient Sample Code GX972 Sample Date 27/08/2013 Sample Type Grab Flow M3/Day *

Submission code [Comment code]	Comment
	pH 8.2 BOD mg/l 0.05 COD mg/l * Suspended Solids mg/L * TP-P mg/l * O-PO4-P mg/l 0.004 Ammonia-N mg/l 0.011 I.Enterococci (Cfu) 5 TON mg/l 0.055 E.Coli (MPN) <10 Temp * DO * Dissolved Inorganic Nitrogen mg/l 0.066 Results not available from a sample taken last week yet. In contrast to our sample this sample was taken at a point on the natural course of the cleanest rivers running into Bantry Bay and thus protected from any contamination from the sewage flowing into the bay.
MSFD_Art.11_012[C13]	"With regard to the use of water by the fish farm in Adrigole to wash fish, I have been advised by John Falvey (Senior Officer with the SFPA) that a well-boat takes on seawater at the jetty near the quarry, and then travels to the pier at Castletownbere where fish are slaughtered in a processing facility. Ice is added to the water and the slaughtered fish are pumped to the well-boat and it then travels to Donegal for processing. The sea water from the well-boat subsequently passes through a treatment plant before being discharged back to sea. If you wish to discuss this and your other concern relating to vaccinations of fish, John Falvey can be contacted at the SFPA in Castletownbere on 027 70439."
MSFD_Art.11_012[C17]	A treatment plant to cope with this agglomeration would be minimum 16 meters by 10 meters, and the effluent could be used to water the lawns. The actual plant equipment costs 500,000 euros. Just about the cost an average house in the area. It needs to be done soon so as our children and our children's children can use the harbour and bay for what it was intended.

Aquaculture

Submission code [Comment code]	Comment
MSFD_Art.11_012[C01]	On completing the mapping of the Human Genome in April 2003 those involved and the rest of the scientific community were taken aback and disappointed having found only 20,000 active genes. The pay back on the time and expense was anticipated to be in the patenting of over 100,000 genes. The eventual explanation as to why worms such as C.Elegans have more genes than humans is good news for us humans as what has been long suspected has now been demonstrated [beware of dogmas] i.e. we have complete control over 99% of our genes through the EPIGENOME. Dr. Dean Ornish [of low-glycemic fame] and others have shown that by altering your habits and attitude and especially your diet and exposure to environmental toxins you can down regulate oncogenes[cancer genes] and other disease causing genes and up regulate or promote genes that prevent disease all within 2-4 months." DNA is not your Destiny" your epigenome is your destiny. Dr Francis Collins who led the team that mapped the human genome said " Genetics loads the gun, the environment pulls the trigger" Farmed salmon is an environmental toxin to humans and to wild salmon i.e. see the restrictions on disposing of dead farmed salmon. Dead farmed salmon, by law have to be taken to a specified site for toxic material. Another salmon farm at Shot Head, at the mouth of the estuary of the pristine Dromagoulaun river in Bantry Bay is a crime against the human race.
MSFD_Art.11_012[C02]	Kieran O'Shea, chairman of Save Bantry Bay pointed out in his letter to Southern Star that escaped farmed salmon pose a genetic risk to the gene pool of native wild stock. While this genetic risk is biologically inevitable the insult or damage to the human genome and epigenome and the health of those who eat farmed salmon, be they organic, sea or land base produced, has been scientifically proven and biologically mapped. Any person or organisation promoting land based or closed containment fish farming for producing food for human consumption must take the scientific evidence seriously and avoid being labelled disingenuous by the proponents of opened net sea based Aquaculture. Land based sea food farming "Right place. Wrong fish. Wrong feed." The only fish to date that is suitable for opened or closed farming is the Rainbow trout, and with caution, because of PCBs or other pollutants found significantly higher in farmed fish.
MSFD_Art.11_012[C03]	The Precautionary Principle written into law in EC Article 174, Annex 1, Refs. 2 and 3. If this law is to be taken seriously farmed fish should not be sold for human consumption. In brief Article 5.7 states that a production that is not sustainable should not be continued or pursued. Article 5-2-2. requires that the public be informed of possible adverse effects. It states that transparency is essential in every issue [not the opposite as in Castletownbere supermarket, farmed salmon was found labelled "caught north east Atlantic Salmon] . If scientific data is incomplete the EC Precautionary principle states that the ECPP should be kept in place until the science is complete. Annex 1 Ref 1 Article 174 clearly states "Polluter Pays ". Article 152, "A high level of human health protection shall be ensured in the definition and implementation of all community policies and activities". It also states "environmental concerns are excluded from the political agenda ". European Food Law is based on the Principle of Preventive Protection of Human Health. In light of the Territorial Fishing Rights we have sacrificed on entering the EC, surely the EC can now protect our health, our children's health and our oceans wealth by enforcing the law and financing the clean-up.

Submission code [Comment code]	Comment
MSFD_Art.11_012[C07]	"The salmon paradox" makes the farmed or organically farmed salmon the "Arachidonic Monster" as 4ozs of farmed salmon has 1300 mgs of arachidonic acid [AA] and could be lethal in people with a particular gene for heart disease as it narrows the arteries to the heart and brain and causes the blood cells to get sticky and clot i.e. epigenetic effect of farmed salmon on humans. Ominously this epigenetic alteration can be passed to future generations i.e. transgenerational. Agricultural animals have less than 100 mgs of AA and wild salmon 300 or less.
MSFD_Art.11_012[C08]	Article 6.2 of EC Precautionary Principle Legislation refers to "The Triggering Factor" This factor has been reached on 3 major counts. 1. Environmental Damage. 2. Sustainability. 3. Food safety.
MSFD_Art.11_012[C09]	World Food Supply: The Aquaculture industry would have us believe that this ecocidal takeover of our coast line is necessary to feed the world's increasing population. The inadequacy of the world's food supply is a problem of unequal distribution not an inadequate supply. This distribution problem is also worsened by demand for obscene profits. According to the UN FAOSTAT there is more food per capita in the world to-day than any time in history since stats were first recorded, yet 1 billion people world- wide go to bed hungry. It has been reported that 80% of farmed salmon has been for the North American market, and presently they are trying to penetrate the Asian market without consideration as to where the hungry people live. Looking east to China may be because the US has rejected some farmed salmon from Ireland on quality issues, [fact check]. It is worth mentioning that shipping food long distance not alone increases the carbon foot print, it makes the food unsuitable for healthy consumption. This has been very evident in the case of powdered milk [see ref. Aristo Vojdani]
MSFD_Art.11_012[C10]	Discards and by-catch around the Irish coast have in the past reached 2-3 million tons or more per year. These discards are thrown back into the sea are dead fish. Rather than dumping this potential 2-4 Billion euros worth of fish oil, abandoned fish factories around our coast could be used to convert this ocean wealth into purified fish oil omega-3, EPA, DHA, safe for conceiving mothers, infants and all humans. This purified oil would have an enhancing effect on the human epigenome in contrast to the effect of farmed salmon or organic farmed salmon. The jobs generated by this industry would be quality jobs for biochemist etc. and would be located at the fishing ports as the fish need to be processed as close to leaving the water as possible to produce oil suitable for human consumption.

Algal blooms

Submission code [Comment code]	Comment
MSFD_Art.11_012[C15]	"In relation to your concerns about the high incidence of rashes in people swimming in the bay, I have been advised that there is currently an algal bloom in the water that is not toxic but may cause skin irritation. The Marine Institute has recently issued a press release in relation to this. Dr Joe Silke at the Marine Institute is the contact for this (091387200), if you wish to discuss this further." This answer from the Co. Health Dept in 2012 should have read " is potentially toxic" instead of "is not toxic. The Marine Institute promotes Sea Food Farms and polices them at the same time.

Initial Assessment

Submission code [Comment code]	Comment
MSFD_Art.11_001 [C11(a)]	BWI disagrees with the statement in key issues identified through the initial assessment that "populations of shallow and shelf water bony fish are stable....". The recent advice from the Marine Institute (also to be followed by additional advice in October 2014) shows that there **are still species including cod, whiting and sole in the Irish sea**, cod, saithe and herring in the West of Scotland and Rockall and cod, haddock, plaice, bass and herring in the Celtic Sea **that are far from stable**. Many of these species are not only overfished but are below the spawning stock biomass, jeopardising the future of not only commercial fisheries, but the marine ecosystem as a whole (see references above).

Marine Protected Areas

Submission code [Comment code]	Comment
MSFD_Art.11_001 [C11(b)]	We support the statement that elasmobranchs are particularly vulnerable to fishing pressures due to their slow growth, longer time to reproduction and production of fewer young, hence the need to have fully protected areas set aside for the recovery and protection of these vulnerable species.
MSFD_Art.11_001 [C13(a)]	Regarding the first point that Ireland's seabed habitats are generally in a healthy condition, the **Irish Sea for example, is vastly different today than what it was before** (there use to be an area the size of Wales in the Irish Sea of Native oysters) acting as a giant filter and a hard substrate for other animals to attach to (Roberts, 2007). Now the **predominant fishery is *Nephrops*** i.e. the Irish Sea is **a classic example of an overfished ecosystem where fishing down the food web has taken place** (Pauly et al. 1998). BWI re-iterate that the **programme of monitoring must not accept the current status quo as healthy**, where if a more rigorous baseline was used, implementation measures such as an ecologically coherent network of Marine Protected Areas would have precedence and be a top priority as one of the most effective mechanisms for preserving seabed habitats in the long-term (as well as protecting feeding and breeding areas for fish species and protecting the more vulnerable and rare species for example).
MSFD_Art.11_001 [C08]	It will be absolutely necessary, if the seafloor habitats are to be physically and structurally contributing towards productivity, natural functionality and a healthy ecosystem in the long term, that further areas are set aside as fully protected MPAs (marine reserves), as part of an ecologically coherent network of MPAs as required by international targets, as this will allow the recovery and ecological resilience of the marine ecosystem to be rebuilt. This would also allow the protection of breeding and feeding areas for marine species as well as the protection of more vulnerable species and habitats and larger species that are invaluable for the health of the spawning stock biomass. Please also see comments on seabed habitats.
MSFD_Art.11_011[C19]	Article 8 of the preamble to the Directive places strong emphasis on the designation of areas under the Habitats Directive and protected areas generally "as an important contribution" to the achievement of Good Environmental Status. Scientific evaluation is required on the most appropriate area to designate, with Ireland taking European leadership in the introduction of large-scale protected areas.
MSFD_Art.11_001 [C09(f)]	Under Section 3.2.7 – Ongoing additional relevant work – We would like to point out that while terrestrial and/or coastal SPAs have or will soon carry out full statutory protection, there have been no indications or attempts, as yet, to identify offshore marine SPAs. We strongly consider that this should be a priority – and that offshore marine SPAs should form part of a wider network of MPAs which would afford not only better protection for key foraging/roosting areas for seabirds and diving ducks at sea but also, for example, nursery and breeding areas for key prey species.