

Sustainable Water Network (SWAN)

Ireland's Marine Strategy Framework Directive
draft Monitoring Programme

- Response to Public Consultation -



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1. Introduction to SWAN

The Sustainable Water Network (SWAN) is an umbrella network of 26 of Ireland's leading environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD), the Marine Strategy Framework Directive (MSFD) and other water-related policy and legislation. SWAN member groups are listed in Appendix I. SWAN has been actively engaged in Water Framework Directive (WFD) and other water policy implementation at both national and River Basin District (RBD) level since 2004, responding to water-related public consultations and representing the environmental sector on WFD River Basin District (RBD) Advisory Councils, the South Eastern RBD Management Group, The Irish Water Stakeholder Forum and other water policy-related fora.

In 2013 SWAN published the report (Brady et al., 2013) *'The Marine Strategy Framework Directive in Ireland: Requirements, Implications & Opportunities for Environmentally Sustainable Management of Our Marine Waters.'*

2. Introductory comment

SWAN welcomes the publishing for consultation of the *'Marine Strategy Framework Directive Article 11 Monitoring Programme'* and the opportunity to comment on it. This is an accessible document and it provides a very interesting and useful collation and overview of the range of monitoring programmes currently in place for Ireland's marine and coastal environment.

In our last submission on the *'Ireland's Marine Strategy Framework Directive Article 19 Report - Initial Assessment, GES and Targets & Indicators'* we acknowledged that the requirements of the MSFD, in terms of assessing the health of Ireland's marine waters; analysing the impacts on it; defining good environmental status (GES) and setting targets for a range of descriptors, is extremely challenging and beyond the knowledge and data currently available in government agencies in Ireland – and many other Member States. This reflected the data gaps acknowledged in the consultation document, in addition to SWAN understanding of the state of marine knowledge. 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.

Due to limited capacity, SWAN is not offering a full technical critique of the proposed monitoring for all descriptors. Rather we have focused on key elements of the report on which we are in a position to comment. We refer the reader to submissions from SWAN members e.g. Coastwatch and Birdwatch Ireland for more detailed comment on specific descriptors. Please note that no comment on a descriptor or indicator does not necessarily indicate agreement.

3. Public consultation & public participation process

3.1 Public consultation

A significant issue has arisen for SWAN members in relation to consultation on the implementation of the MSFD. In our response to the consultation on the Article 19 report (initial assessment, GES and environmental targets and indicators) we said that *'It is SWAN's position that the current consultation process is fundamentally flawed since the public are being invited to comment on a document which has already been finalised'* and that *'it is not sufficient to simply publish stakeholder comments with responses'* but that *'this must be accompanied by a willingness to amend the Initial Assessment based on input from stakeholders before the next stage of implementation (not in the next cycle in 6 years' time.) Without this commitment, the consultation is rendered almost meaningless.'*

The concern of SWAN members here is two-fold. In the first instance, this 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 DECLG 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.

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 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.

3.1.1. Public consultation: SWAN reservations and implications for SWAN input

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.

3.2 Public Participation

In relation to public participation, we believe that it is timely and appropriate to reiterate the argument made by us in response to the Article 19 consultation, since these issues have not yet been addressed.

"The participation of interested parties in the implementation of the Marine Strategy Framework Directive (MSFD) is one of its key requirements and the Directive places substantial emphasis on the need for the wider public to be informed and consulted as action is taken under it. Article 19(1) of the Directive provides,

‘... Member States shall ensure that all interested parties are given early and effective opportunities to participate in the implementation of this Directive, ...’.”

SWAN would strongly contend, as we did for the Initial Assessment phase, that the monitoring consultation does not offer an opportunity for ‘early and effective’ participation. It is not early, in that the final report must be submitted to the Commission a month after consultation responses are received, leaving very little time to carefully consider, discuss if necessary and incorporate if deemed appropriate, stakeholder input. Nor is the approach to public engagement, in the MSFD generally, or in this phase specifically, effective for a number of reasons. Firstly, only a small number of stakeholders are aware of this process, or indeed of the MSFD itself (there were 8 submissions on the last phase). In addition, one of the core principles of effective public participation is that the public must be allowed “*to influence the outcome of plans and working processes*” (EC, 2003) and for this process to be ‘effective’, there are a number of key required features which consistently emerge from the literature (Rowe & Frewer, 2000; Cuff, 2001; Mostert et al. 2007; Acland, 2012; Irvine & O’Brien, 2009). Whilst a comprehensive discussion of this is beyond the scope of this submission, in synthesis ‘effective’ public participation must involve:

- a firm commitment from relevant decision-makers to allow stakeholders involved to meaningfully influence outcomes;
- the identification and inclusion of all stakeholders;
- the use of appropriate means and techniques, of involving all interested parties, including specially trained professionals, which will consider and respond to the characteristics and circumstances of the stakeholders involved;
- the initiation of public involvement as early as possible, including planning ahead to ensure that stakeholders have the capacity to participate when the opportunity is provided.

It is clear that all of these elements are missing from the current consultation, as they were from the Article 19 consultation.

For the same reason, SWAN believes that this consultation, similar to the last, runs counter to both the letter and spirit of the Aarhus Convention which requires that *‘Each Party shall make appropriate practical and/or other provisions for the public to participate during the preparation of plans and programmes relating to the environment, within a transparent and fair framework, having provided the necessary information to the public’*.

3.2.1. Citizen monitoring

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. Such initiatives play a dual role by both augmenting state monitoring effort and also engaging the public in a very dynamic way, which lead to them taking an active interest in their coastal and marine environment and embracing further stages of MSFD implementation. It is important that this opportunity is grasped now before potentially contentious MSFD measures are introduced, so that a critical mass of motivated citizens are already engaged on the ground.

In light of the above, 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 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.

4. Monitoring Programme as a key step in MSFD implementation: Linkage to Article 19 assessment and new monitoring to fill knowledge gaps missing

It is clear from the Article 19 report that Ireland, as with other Member States, is starting from a low base with regard to the MSFD, especially in light of its requirement for an 'ecosystem-based approach'. As acknowledged in the Article 19 report, and highlighted at the stakeholder event in November 2013, there are substantial data gaps and a low level of baseline information on many aspects of the marine environment, especially in relation to ecosystem functioning and cumulative impacts. It was therefore expected by SWAN and other stakeholders that these gaps would be addressed with a new, much more comprehensive, science-based monitoring programme. What is being proposed falls far short of this.

The programme as presented represents an extremely useful collation of existing state-led marine monitoring initiatives and presents some additional programmes which are being considered for potential inclusion. To SWAN's knowledge this is the first time that this exercise has been conducted and it is to be welcomed.

However, 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.

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 fulfill 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 fulfill 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.);
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.

5. Resources

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 endeavors 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.

6. Integrated marine governance & MSFD implementation

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.

7. 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.

8. Specific comments by Section / Descriptor¹

2.3. MSFD Competent Authorities

This section 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.

2.6 How are monitoring programmes being developed.

This section is confusing and needs to be clarified. The difference between descriptors and indicators needs to be clarified. Furthermore, in the interests of transparency it is important that the rationale for selecting certain indicators for each descriptor is presented.

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 consultoant 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.

2.7 Aims and objectives of the monitoring programmes

It is regrettable that this section 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)

2.8. Next Steps

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.

3.2.6. D1 and D4 Birds Monitoring Programme

This section lists a range of monitoring activities that *'will be considered'*. It is vital that this is done before the monitoring programme is finalised and in consultation with SWAN member Birdwatch Ireland (BWI). Likewise, it is to be welcomed that the *'monitoring of pressures relating to fishing activities... are under consideration'*. However these considerations need to be done with the participation of relevant expert stakeholders including BWI.

Please see BWI's separate consultation submission for a detailed response in the context of elements of the proposed monitoring programme relevant to birds.

¹ These are enumerated by reference to the relevant section in the consultation document, for ease of reference Apologies that these are not set out using the template provided.

3.3. D1 and D4 Mammals and Reptiles.

Monitoring under MSFD for these descriptors 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 whether 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.

In addition, 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 and we recommend that this is included in the revised programme which SWAN proposes

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.

SWAN and in particular, SWAN member 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. SWAN strongly recommends that his review is conducted with the participation of the IWDG who have international expertise in cetacean science and assessment.

3.4 D1 and D4 Fish and Cephalopods

SWAN disagrees with the statement under 3.4.1. that *‘In general, populations of shallow and shelf water bony fish are stable....’* This is not consistent with the Stock Book and a recent ICES report. Please see separate Coastwatch submission for further detail on this.

SWAN is also concerned that cephalopods are the only invertebrates being proposed for monitoring. Cephalopods are only one class (*Cephalopoda*), of one phylum (*Mollusca*) of marine invertebrates found in Irish waters. Please see separate Coastwatch submission for proposals of other relevant invertebrate species for monitoring

3.5 D1 and D4 ~Water Column Habitats

The monitoring programme elements under consideration for water column habitats comprise mostly of monitoring in coastal, transitional and shellfish waters. For others the spatial and temporal frequency is unclear. SWAN seeks clarification on the monitoring for this descriptor proposed for open sea.

3.5.7.

This section states that *‘Measurements of chlorophyll and phycocyanin fluorescence, oxygen, turbidity, indirect measurement of pH and pCO₂ (partial pressure of Carbon Dioxide) are key parameters for monitoring in water column habitats.’* and yet a monitoring programme to assess these is not proposed. It is stated that *‘High frequency monitoring (e.g. minimum sampling of once per month) stations/platforms for integrated*

monitoring of key physical, chemical and biological oceanographic parameters may be desirable at a small number of locations.

Surely, such stations for integrated monitoring should a basic minimum for any monitoring programme whose objective is to assess environmental status. Such decisions and recommendations must be science-based in the first instance rather than curtailed by financial considerations.

3.6 D1 D4 and D6 Seabed Habitats

SWAN acknowledges that, if assessed by % surface area, Ireland's seabed habitats are in a healthy condition. However, what is not reflected in this section, and what needs to be assessed by the monitoring programme, is the localised but potentially extremely ecological damaging effects on sea beds of certain activities such as bottom fishing. These can have a disproportionately damaging impact on vulnerable areas such as nursery and spawning areas and while we welcome reference to this in this section, we propose that the earlier statement regarding overall status be refined to reflect localised damage.

This section lists a wide range of monitoring elements under consideration. The merits of most seem sound. However, it not clear

- What / whether they are actually being proposed (since they are only consideration). An example of this the Irish Petroleum Infrastructure Programme. It is not clear what is being proposed here in terms of monitoring or how this could contribute to MSFD assessment.
- Who/how are these diverse range of monitoring initiatives being carried out by a diverse range of agencies going to be incorporated and integrated for the particular purpose of MSFD assessment.

4.1 D2 Non-indigenous species

4.1.2. and 4.1.4

One of SWAN's key concerns regarding NIS is omitted from 4.1.2., which sets out consultation comments, and is furthermore not reflected in the definition of GES for NIS which remains unchanged in 4.1.3. This is worth reiterating here:

'This Directive's Annex I definition of GES for non-indigenous species (NIS) is as follows: 'Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems'. However, the definition of GES for this descriptor in the Irish summary report is as follows:

'Good status is achieved when the risks and pathways from vectors which facilitate the introduction and spread of NIS as a result of human activities is significantly reduced by way of appropriate measures ; and should they arrive, by applying, where feasible, practical and cost-effective means to control or reduce their further spread.' (SWAN's underlining)

This is not in keeping with the Directive's definition and includes too many 'qualifiers' and subjective language. It is not clear what degree of reduction is significant, nor what 'appropriate' measures means. In addition the inclusion of 'where feasible' introduces an element of uncertainty as to the circumstances in which it would be deemed feasible to control the spread of NIS.

These comments are still as relevant in the context of the monitoring programme and we request that this concern be added to the final monitoring report and that it be addressed in the review of the Article 19 report.

4.1.6 D2 NIS monitoring Programme Elements under Consideration

We propose the inclusion of a list of the key marine NIS and a monitoring action plan set out for each. Whilst we acknowledge that work is ongoing we do not accept that work on NIS in Ireland is at such an early stage that no

monitoring can be proposed. As a minimum the draft programme should include a list and timeline for developing an action plan.

4.2 D3 Commercial exploitation of fish and shellfish

It is unclear from this section exactly which species of fish and shellfish are being targeted with the proposed monitoring programme and SWAN proposes that this is clarified. It would appear that the programmes proposed target primarily fish, rather than shellfish, which is an issue of concern.

More specifically, SWAN wishes to raise as a significant issue of concern the fact that there is no monitoring proposed for the native mussel (*Mytilus edulis*), despite the fact that this is a commercially highly significant shellfish species for Ireland.

SWAN believes that this is a significant weakness which must be addressed, especially in light of the fact that SWAN has reason to believe that a significant body of monitoring data on *mytilus edulis* is held by BIM. If this data set is not included, SWAN wishes to be informed as to the detailed reasons why, in the interests of transparency.

4.4 D7 Hydrographic conditions

SWAN disagrees fundamentally with the approach whereby the ‘assessment method for this descriptor will be via existing regulatory regimes’. It is wholly inadequate to rely on the current regulatory regime as the sole source of assessment and monitoring without a full assessment of the adequacy of this as a data source, in the context of the very specific requirements of the MSFD, and without dedicated scientific staff to coordinate and integrate the data from these sources. Reliance on the EIA and SEA processes presumes that these regimes are operating effectively, when recent ECJ cases, especially in relation to EIA, indicate that this is not the case.

It is also worth re-iterating our related comment from the Article 19 consultation here, that the operational target for this descriptor is also inadequate, especially given that it is not accompanied by any state-based or quantitative target:

‘All developments that may give rise to significant permanent changes in the hydrological regime of currents, waves, or sediments must comply with existing regulatory regimes and guidance should be followed to ensure that regulatory assessments are undertaken in a way that ensures the full consideration of any potential impacts, including cumulative effects at the most appropriate spatial scales to ensure that GES is not compromised.’

4.5 D8 Contaminants

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.

4.7 D10 Marine Litter

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.

Please see submissions from Coastwatch and An Taisce for further detailed comment on this descriptor.

4.8 D11 Energy and Noise

In summary it is quite hard to comment constructively on implementation of these descriptors without more detail being provided.

1. 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?
2. 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?
3. 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 should be devised to take this into consideration.
4. At the Initial Assessment stage, it was not possible to assess the overall extent of sound
5. 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?

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.

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.

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.

It is also unclear what Ireland's representation is at the TSG. What groups are represented?

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APPENDICES

Appendix I

SWAN Member Organisations

SWAN National Groups		SWAN Regional & Local Groups	
1.	An Taisce	16.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	17.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	18.	Celebrate Water
6.	Eco-UNESCO	19.	Cork Environmental Forum
7.	Friends of the Earth	20.	Longford Environmental Alliance
8.	Friends of the Irish Environment		
9.	Irish Doctor's Environmental Association	21.	Macroom District Environmental Group
10.	Irish Peatland Conservation Council	22.	Save Our Lough Derg
11.	Irish Seal Sanctuary	23.	Save Our Lough Ree
12.	Irish Water and Fish Preservation Society	24.	Save The Swilly
13.	Irish Whale and Dolphin Group		
14.	Irish Wildlife Trust	25.	Shannon Whale & Dolphin Foundation
15.	Voice Of Irish Concern for the Environment (VOICE)	26.	Slaney River Trust

Appendix II

SWAN Board of Directors

Board of Directors:	
Mark Boyden, Chair	Coomhola Salmon Trust
Mindy O'Brien, Co. Secretary	Voice of Irish Concern for the Environment
David Healy, Director	Friends of the Irish Environment
David Lee, Director	Cork Environmental Forum
Elaine Nevin, Director	ECO-UNESCO
Joachim Schaefer, Director	Cavan Leitrim Environmental Awareness Network
Karin Dubsy, Director	Coastwatch Europe
Geoff Cooper	Irish Fish