Natura Impact Statement

Draft Seafood Development Programme 2021 - 2027

Doherty Environmental Consultants Ltd.

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1.0 INTRODUCTION

Doherty Environmental Consultants (DEC) Ltd have been appointed by the Department of Agriculture, Food, and Marine (DAFM) to undertake a Natura Impact Statement (NIS) of the Seafood Development Programme 2021 – 2027. This NIS has been completed with respect to the requirements outlined in Article 6(3) of the EU Habitats Directive and Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011.

The Appropriate Assessment Process was introduced under Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) transposed into Irish domestic law through the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), as amended in 2013. These Regulations also transpose Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds (the Birds Directive). The obligation to undertake an AA derives specifically from Article 6(3) and 6(4) of the Habitats Directive and both involve a sequence of steps and tests. Article 6(3) pertains to the strict protection of sites, stating,

> *Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances and states,

If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 200 is protected. It shall inform the Commission of the compensatory measures adopted.

Similarly, Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 sets out the requirements for undertaking an AA. Each phase of the four-stage assessment precedes and provides a basis for the next phase, and therefore requires careful documentation to ensure full traceability and transparency of decisions made.

The purpose of the AA is to protect sites designated as Special Areas of Conservation (SACs; under the Habitats Directive) and Special Protection Areas (SPAs; under the Birds Directive), collectively known as Natura 2000 Sites. An AA is not a prohibition on land use activities but involves an examination of the implications land use activities that may arise as a result of a plan or project for European Sites, their qualifying features and their conservation objectives. Once the screening stage has determined that an AA is required, the proponent of the plan or project prepares and submits information that is necessary for the competent authority to complete its Appropriate Assessment. This information is provided in the form of a Natura Impact Statement. For the purposes of the Seafood Development Programme DAFM represent both the proponent of the plan and the competent authority with responsibility for Appropriate Assessment. The need to apply the precautionary principle in making any key decisions in relation to Appropriate Assessment of the plan has been confirmed by European Court of Justice case law. With reference to the assessment steps required under Article 6(3) of the Habitats Directive, as described in Section 2 below, an initial screening for Appropriate Assessment of the Seafood Development Programme was completed the results of which were described in a Screening Report for Appropriate Assessment, which is provided as Appendix C to this Natura Impact Statement.

The Screening Report for Appropriate Assessment concluded, in view of best scientific knowledge and the conservation objectives of the European Sites that, in the absence of appropriate mitigation, it could not be ruled out at the screening stage that the Seafood Development Programme would not result in significant adverse effects to European Sites. The conclusion of the Screening Report was informed by a highly precautionary approach and adopted a worst-case scenario. Such an approach was adopted to ensure consistency with the extremely low threshold for triggering likely significant effects as determined in both European and Irish case law. On the basis of that conclusion, it has been determined that Appropriate Assessment is required in order to assess the implications of the plan for European Sites.

This Natura Impact Statement has been carried out for the DAFM to assist them in completely their Appropriate Assessment. This Natura Impact Statement presents the findings of an

evaluation that has examined the potential for the Seafood Development Programme to result in significant adverse effects to European Sites, their qualifying features of interest and their conservation objectives.

1.1 PURPOSE OF THIS NATURA IMPACT STATEMENT

The overall purpose of the Appropriate Assessment process is to ensure that the Seafood Development Programme does not result in any adverse effects on the integrity of any European Site in view of its conservation objectives. This NIS has been prepared to inform the AA process having regard to the legislative requirements of EU and national law as outlined previously. The responsibility of carrying out the AA lies with DAFM. The NIS will inform the AA determination made by DAFM at the time of the adoption of the Seafood Development Programme. The AA determination will be published alongside the adopted Seafood Development Programme.

2.0 METHOD

This NIS has been undertaken in accordance with National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010) and Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC. The following guidance documents were also of relevance during this the preparation of this NIS:

- A guide for competent authorities. Environment and Heritage Service, Sept 2002. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010). DEHLG.

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/42/EED. European Commission (2021).

- Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats directive 92/43/EEC. European Commission (2018).

- Communication from the Commission on the precautionary principle. European Commission (2000).

The EC (2001) guidelines outline the stages involved in undertaking an assessment of a plan under Article 6(3) and 6(4) of the Habitats Directive. The assessment process comprises the four stages outlined below. Stage 1 to 3 form part of the Article 6(3) process, while Stage 4 forms part of the Article 6(4) process. This NIS presents the findings of an assessment for Stage 2 of this assessment process.

- Stage 1 – Screening: This stage defines the proposed plan, establishes whether the proposed plan is necessary for the conservation management of the Natura 2000 site and assesses the likelihood of the plan to have a significant effect, alone or in combination with other plans or projects, upon a Natura 2000 site.

- Stage 2 – Appropriate Assessment: If a plan or project is likely to have a significant effect an Appropriate Assessment must be undertaken. In this stage, the impact of the plan or project on the Conservation Objectives of the Natura 2000 site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect on the integrity of the Natura 2000 site.

- Stage 3 – Assessment of Alternative Solutions: If it is concluded that, subsequent to the implementation of mitigation measures, a plan has an adverse impact upon the integrity of a Natura 2000 site it must be objectively concluded that no alternative solutions exist before the plan can proceed.

- Stage 4 – Where no alternative solutions exist and where adverse impacts remain but imperative reasons of overriding public interest (IROPI) exist for the implementation of a plan or project an assessment of compensatory measures that will effectively offset the damage to the European Site(s) will be necessary.

2.1 APPROACH TO ASSESSMENT

An initial high-level screening for Appropriate Assessment of the Seafood Development Programme was completed to identify the need for Appropriate Assessment. The screening was completed in advance of the provision of the finalised draft Seafood Development Programme but was based on the broad parameters and priorities for action outlined in the draft Programme and the likely land use interventions that are to be supported by it. A broad review of seafood related activities that will arise as a result of the programme and their interactions with Annex 1 habitat and Annex 2 species occurring in Ireland and Northern Ireland was completed. The potential for transboundary effects to European Sites (Natura 2000 Site) in Northern Ireland was identified during the screening assessment. The primary source material relied upon for this review was the NPWS reporting (NPWS, 2019a, 2019b) completed under Article 17 of the EU Habitats Directive. This documentation was published in 2019 and provides an overview of the threats and pressures affecting the favourable conservation condition of Annex 1 habitat and Annex 2 species in Ireland. The Joint Nature Conservation Committee (JNCC) provides similar reporting for Northern Ireland and these were also reviewed during the screening review. Where the reporting on marine and seafood related threats and pressures to Annex 1 habitat or Annex 2 species was limited in the Article 17 reporting, other sources were consulted during the review process. These include other NPWS publications such as Irish Wildlife

Manuals for specific species (e.g. white-clawed crayfish, marsh saxifrage etc.) and habitats (e.g. dunes, saltmarsh etc.) and national habitat survey reporting (e.g. National Survey of Upland Habitats; National Survey of Semi-national Woodland Habitats etc.).

Reporting prepared by Ireland under Article 12 of the EU Birds Directive was relied upon for identifying the interactions between marine and seafood related activity and the status of special conservation interest bird populations supported by the SPA network in Ireland. It was found during this review that there was less detailed information expanding on the nature of threats and pressures to these bird populations when compared with the Article 17 reporting for Annex 1 habitat and Annex 2 species. As such, additional information relating to the threats and pressures to SPA bird populations was gleaned from a review of the SPA site-specific Natura 2000 Data Return Forms. Any marine and seafood related threats and pressures documented in the SPA Data Return Forms were identified and collated. In addition to this Irish Wildlife Manuals 44 (Suddaby et al., 2010); 106; (Lewis et al., 2019); 114 (Cummins et al., 2019); 115 (Lewis et al. 2019), were also reviewed.

The above sources were reviewed to identify reported interactions, threats and/or pressures between marine and seafood related activity and the conservation status of Annex 1 habitats, Annex 2 species and SPA bird populations. The results of this review and the identification of such interactions formed the basis of the screening and also provide baseline information for this Natura Impact Statement with respect to identified threats and pressures to European Sites and their features of interest occurring within the zone of influence of the Seafood Development Programme.

Once the draft Seafood Development Programme was made available for evaluation, the Natura Impact Statement assessment was completed over a series of steps. The first step involved a review of the Programme and an identification of the Programme contents that do not relate to land use activities or will not result in land use interventions. Once identified these sections of the Programme were not considered further and were excluded from detailed impact assessment as they were not considered to have potential to result in land use effects and significant adverse effects to European Sites and their features of interest.

The next step involved a detailed consideration of the sections of the draft Programme that were identified as having the potential to result in land use effects. The individual interventions in these sections were reviewed and those that were not deemed to have the potential to result in

land use effects were identified and were not considered further. The assessment then focused on the Programme priorities and associated actions that were identified as having the potential to result in land use effects. The evaluation of these priorities and actions was completed by examining their potential to result in positive or adverse effects to Annex 1 habitats, Annex 2 species and SPA bird populations.

To facilitate this evaluation, the receptors of the plan interventions i.e. the Annex 1 habitats, Annex 2 species and SPA bird populations were grouped according to their ecological requirements and/or the documented agricultural threats and pressures that have been identified as having an impact of their conservation status. Various habitats and species share common ecological requirements that underpin their status and are also susceptible to similar agricultural threat and pressures. By adopting this approach habitats, species and bird populations were categorised according to broad groups and an assessment of the interventions was provided based on the broad group. The habitat grouping broadly follow the Annex 1 habitat groupings and Annex 2 species grouping that are set out in Annex 1 of the EU Habitats Directive but have been amended based on agricultural threats and pressures. For instance there are eight Annex 1 dune habitats occurring in Ireland and the impacts of the interventions were examined against this dune group. Other bespoke grouping were established, such as peatlands and heathlands group that comprises all peatland and heathland Annex 1 habitats, as broad overlap of the agricultural threats and pressures to these various Annex 1 peatland and heathland habitats in Ireland were identified. Similarly some features of interest were assessed in isolated due to the nature of the agricultural related threats and pressures affecting them.

Annex 1 bird populations for which SPAs are designed were assessed under the following broad groupings: coastal birds; raptors; breeding waterbirds; and wintering waterbirds.

The agricultural impacts that could be triggered by the Seafood Development Programme interventions for the Annex 1 habitat, Annex 2 species, SPA bird populations were assessed in specific impact assessment tables and targeted mitigation measures are recommended. The targeted mitigation measures are summarised in Section 7 of this Natura Impact Statement. In addition to the mitigation measures provided in each of the habitat/species grouping impact assessment tables, high level, overarching mitigation measures are also outlined in Section 7 of this Natura Impact Statement.

2.2 CONSULTATONS

Consultations for the Appropriate Assessment process were completed through the statutory SEA consultation process. An SEA Scoping report was prepared and issued for consultation. The SEA scoping report included a summary of the findings of the screening for Appropriate Assessment that identified the potential for likely significant effects to European Sites as a result of the implementation of the draft Seafood Development Programme. The draft Scoping Report was issued for Statutory and Public consultation between 30th March 2022 to 26th April 2022. Five key SEA Scoping Questions were provided at the end of the Scoping Report.

In addition to the consultation, the project team held a Scoping Workshop with the DAFM Steering Group as well as statutory consultees. Feedback and submissions on the scope of the SEA and Appropriate Assessment were varied, however a number of consistent themes were identified. **Table 2.1** below summarises the main issues raised by consultees and the SEA response to same.

Table 2.1 Summary of Submissions

Consultee	Summary of Points Raised
EPA	Scope of the SEA The Programme should clearly set out the scope, remit and implementation related elements of the Programme. These will have implications for the SEA, in terms of guiding the level of assessment applicable at the appropriate level for the Programme. Where it is envisaged that measures proposed in the Programme will be implemented via other plans, which themselves have been or will be subject to SEA, this should be explained in the Environmental Report and taken into account in the assessment. Where specific measures will be implemented directly, further detail should be provided in the Environmental Report and Programme on the relevant environmental assessments to be carried out at the project stage and relevant mitigation measures to be applied, as appropriate. There may be merit in exploring this issue further with the relevant SEA Environmental Authorities during the Programme preparation and SEA processes
	Integration of SEA and Programme All recommendations from the SEA and AA processes, including mitigation measures, should be integrated into the Programme. We recommend that the Programme includes summary tables outlining the key findings of the SEA and linking the significant environmental effects identified to the proposed mitigation measures, monitoring programme and Programme policies/measures.
	Question 1: Are there any other Plans or Programmes that should be identified and are viewed as part of the SEA/AA process? We acknowledge the comprehensive listing of the various plans, programmes, legislation etc provided in this section. There is merit in separating out those of most direct relevance to the Programme, along with a short summary of why they are of relevance. The other referenced plans/programmes/legislation, etc., could be provided in an appendix to the report. This would help focus the scope and breadth of the SEA and Programme documents.

Consultee	Summary of Points Raised
	Chapter 7 of the National Planning Framework- "Realising our Island and Marine Potential" provides useful contextual information for both the Programme and SEA ER. The related National Planning Objectives No.38 through to No.42 would also be useful to refer to, in the context of supporting alignment of marine and terrestrial sustainable planning and development, in addition to coordinated environmental protection. Table 4.1.2 - National Legislation, Plans and Programmes should reference the Shellfish Waters Pollution Reduction Programmes and the relevant legislation, as well as the Maritime Area Planning Act 2021. Reference should also be made to EU and national legislation regarding the authorisation of wastewater discharges. There is merit in clarifying whether the fishing ports are covered by the Programme, and if not, the relationship with the relevant port/harbour companies plans could be clarified. Transboundary consultation should be carried out, in order to determine whether any relevant transboundary-related plans or programmes need to be considered. The Loughs Agency, for example have dual jurisdiction in Carlingford Lough and Lough Foyle.
	Question 2: Is there an additional information that needed to be considered as part of the baseline data? The EPA Inventory of spatial datasets relevant to SEA might be useful to consider reviewing, and incorporate where relevant. We note that scoping report refers to the needs of food web assessment and research to inform monitoring programmes for marine protection. The Programme should where possible, support research in this area, in collaboration with the Marine Institute. The EPA will be releasing a research report on kelp ecosystems soon, that will include recommendations regarding their sustainable management.

Consultee	Summary of Points Raised
	Regarding some ongoing Irish research projects, UCD & NUIG are involved in the production of a policy brief in relation to the protection and sustainable management of aquatic ecosystems, Integration of the Ecosystem Services Approach into Policy and Practice is Key for the Sustainable Management of Aquatic Resources, that was facilitated by the EPA. This may be of use, in preparing the SEA.
	Question 3: Are there any changes that in your consideration should be made for; a) To the proposed environmental objectives b) To the guide questions including consideration of alternatives In Section 5.3: Scoping of Environmental Topics, regarding designations under the Water Framework Directive and the Marine Spatial Framework Directive (i.e. designated Shellfish waters and Marine Protected Areas), clarification should be included as to whether wastewater disposal aspects have been taken into account. The chemicals monitoring programme being carried by the Marine Institute (MI) under the WFD should be included. The MI cover Transitional and Coastal waterbodies (TraCs) in their chemicals monitoring programme. They are also developing a WFD Marine Monitoring Programme for 2022 – 2027. (STATUS?) Consideration of their findings from this programme on chemical monitoring, for example for any persistent organic pollutants, compounds of emerging concern and mercury would be an area for the programme to consider and link into. MI are also involved in various projects relating to PFAS including monitoring PFAS in finfish (freshwater), shellfish and marine mammals (Dolphins). Sources of chemicals in the aquatic environment and emerging chemical issues is an area for consideration. The Persistent Organic Pollutants Regulation, national implementation plan and Mercury Regulation are also all relevant in this respect.

Consultee	Summary of Points Raised
	In Chapter 7 Proposed Framework for Assessing Significant Environmental Effects, we welcome the comprehensive approach to providing draft SEA objectives in Table 7.1. There is merit in reviewing, reducing and possibly removing some SEA objectives to more easily facilitate the environmental assessment against the objectives of the Programme. In this context the overall assessment should focus on the likely significant effects of the Programme. Recommendations in relation to a number of SEOS around Population Human Health, Biodiversity etc.
	In relation to alternatives, in addition to the EPA SEA guidance on developing and assessing alternatives, (referred to in the scoping report), there is merit in considering the approach taken to development and assessment of alternatives in other national level SEAs, such as the National Marine Planning Framework and the National Planning Framework and Food Vision 2030. This may help develop appropriate and relevant alternatives, at the scale at which the Programme will be operating under
	Question 4: Is the ranges of issues covered appropriate? There is merit in clarifying whether the Programme cover non-seafood aspects such as fish meal, seaweed harvesting, etc.
	Appendix II – Additional Comments on the Scoping Report For any related on-land proposals considered within the Programme, the relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategies should be aligned with and considered, as appropriate. In Section 2 – Description of Ireland's Seafood Programme, there is merit in including a graphic showing the relationship of the Programme to the National Strategic Plan for Sustainable Aquaculture Development and other relevant key high-level plans and programmes or those being prepared. We note the priorities set out in Table 2.1 – Outline of the SDP. We recommend including a chapter on environmental considerations, which could be used to summarise the relevant findings and key recommendations (including mitigation measures) of the SEA and AA processes and provide information on the environmental-related commitments provided for in the Programme.

Consultee	Summary of Points Raised
	We also suggest that a chapter on monitoring and implementation should be considered, in the Programme which could be used to describe the Programme-related and SEA related monitoring and related reporting considerations. Section 3.4 - Links to WFD – clarification should be provided on the reference to Article 4(7) and whether it is the intention to undertake an assessment in this regard. In addition, clarification should be provided on the consideration of flood risk in the context of the Programme. Under Section 4.2 Existing Controls, there would be merit in including the relevant up to date BIM Fisheries Management Charts in the Programme along with a suitable commentary. Mitigation measures to recommend The Programme and SEA should consider where appropriate, excluding areas of particular environmental/ ecological (including fisheries) sensitivity or areas proposed for designation, from the scope of activities permitted by the Programme. This is in the context of promoting sustainable fisheries, the restoration and conservation of aquatic biological resources and enabling a sustainable blue economy. The SEA/Programme should promote the need for adequate and appropriate urban wastewater infrastructure capacity and any upgrades needed, in areas identified for processing or manufacturing, associated with implementation of the Programme. The requirements for monitoring shellfish and water quality varies depending on the focus of a different legislation and plans/programmes. The Programme should be cognisant of these variations and ensure the different monitoring requirements these are integrated into the proposed monitoring for the Programme, particularly in relation to microbiological and chemical monitoring.

Consultee	Summary of Points Raised
	The Programme should support the requirement for wastewater treatment plants discharging in the vicinity of shellfish waters to have more stringent treatment to protect the shellfish waters. The Programme should also promote the need for wastewater treatment issues to be addressed by relevant stakeholders. The proposed scope as set out in Table 5.1- Strategic Environmental Assessment Topics, scoping and potential significant environmental effects could be reduced/ refined to help focus on those aspects of the Programme with the greatest potential for likely significant effects. We note reference to the SWOT analysis carried out, the relevant aspects of this should be included in the SEA Environmental Report along with supporting discussion.
	Monitoring, Implementation & Reporting The Programme should include a commitment to implement the environmental monitoring programme and associated reporting. Where feasible there would be merits in aligning the periodic reviews of the Programme with existing cyclical reporting e.g. State of the Environment, National Planning Framework, Water Framework Directive, Marine Strategy Framework Directive, etc. We recommend aligning the Programme implementation monitoring/reporting with the environmental monitoring required under the SEA legislation. Doing so would enable the environmental performance of the Programme to be evaluated and would also provide for increased transparency during implementation of the Programme. The SEA-related monitoring should address positive, negative and cumulative effects where they are likely to occur and should include provision for on-going review to facilitate an early response to any environmental issues that may arise. The Environmental Report should specify the monitoring frequency and responsibilities and include provisions for reporting on the monitoring. To avoid duplication in data collection, the same indicators should be used for the Programme -related and SEA related monitoring where possible.
	Data & Knowledge Gaps The Programme should identify any significant data and knowledge gaps, including commitments to help address these on a priority basis during the implementation phase of the Programme. This is with a view to strengthening the evidence base for future reviews and iterations of the Programme

Consultee	Summary of Points Raised
	Available Guidance & Resources Our website contains various SEA resources and guidance. Other EPA mapping tools are also referenced.
Environmental Co-ordination Unit DAFM	Where SEA scoping indicates potential impacts on sea-fisheries and the marine environment, the following information should be taken into account in the SEA. Relevant Legislation, Plans and Policies -list of legislation and policies provided.
	Issues for consideration In the development of any Plans or Programmes due consideration should be given to: Potential impacts, both positive and negative, on marine environmental quality including potential impacts on designated Shellfish Growing Waters. Examples include but are not limited to the following: increased sedimentation; re-suspension of contaminants; discharge of contaminants; and introduction of non-native or invasive species. Potential impacts , both positive and negative, on the microbiological quality of shellfish in Classified Shellfish Production areas Potential impacts on human health resulting from the placing on the market of microbiologically contaminated shellfish Potential impacts on commercially important fish and shellfish stocks, licensed aquaculture sites and areas of importance for fish / shellfish and fisheries e.g. spawning grounds, nursery areas Potential impacts on freshwater aquaculture operations including the requirement for water abstraction and capacity of the receiving waters to assimilate discharges Future designations of areas of importance to the Aquaculture and Fisheries Sector Relevant EU Directives and National Legislation in the area of Marine Spatial Planning
	Potential Impacts on Sea-Fisheries and Aquaculture Major land-use changes can significantly impact the quality of the marine (particularly coastal) environment (e.g. sedimentation, hydrographic change, impacts on benthic eco-system, etc).

Consultee	Summary of Points Raised
	All aspects of the seafood sector rely on safe high quality water and assessment of potential impacts on water quality should include the seafood sector. To guarantee food safety the growing waters must attain certain standards. This is of relevance to the fishing and aquaculture sectors. In freshwater aquaculture (on land) a continuity of supply is important to ensure animal welfare and quality. Water supplies in this instance are sourced from rivers, wells and occasionally from mains supplies. The seafood processing sector also requires a safe and reliable water supply to support its operations.. The role of filter-feeding shellfish as a nutrient sink thus helping to reduce eutrophication potential and improve water quality is also important to consider in assessments.
	Relevant reports and on line GIS include: Shellfish Stocks and Fisheries Review 2011: An Assessment of Selected Stocks Atlas of Commercial Fisheries Around Ireland Atlas of Commercial Discarding Ireland's Marine Atlas Information on the Initial Assessment of Ireland's marine waters, required under the Marine Strategy Framework Directive, is available at http://www.environ.ie/en/Environment/Water/WaterQuality/Marine/
	Consultation with the following: DAFM – Policies, plans and legislation concerning sea-fisheries and aquaculture SFPA – Competent Authority for Seafood Safety (classifications, monitoring and sanitary surveys) and Sea-fisheries Control Marine Institute – Fisheries and Marine Environment BIM – Seafood Development Agency

Consultee	Summary of Points Raised
	Consideration should also be given to consulting directly with the seafood sector. This may include regional inshore fisheries forums, Fisheries Local Action Groups, fisheries representative bodies, including producer organisations, local advisory committees, associations, co-operatives; seafood processors; aquaculture representative bodies, etc.
DECC	'DECC suggests that consideration should be given to the following: Circularity- full lifecycle of the product Packaging – sustainability and suitability of the packaging Food Waste- prevention of food waste Our Waste Action Plan for a Circular Economy (September 2020) committed to a range of actions to support the transition to a circular economy. The Plan contains individual chapters on Packaging and Food Waste which outline various measures to achieve maximum results in these areas. The Plan also includes a commitment to the adoption of a high-level whole-of-government Circular Economy Strategy. The Strategy will be implemented during the course of 2022 & 2023 and will provide a national policy framework for Ireland's transition to a circular economy.'
DAERA	DAERA would like the SEA Environmental Report to contain a clear statement indicating the opinion about whether or not the implementation of the of the strategy is likely to have a significant effect on Northern Ireland, in combination with any identified measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment.
Natural Environment Division (NED)	NED are content with the overall approach and scope of the SEA and the issues that will be addressed, this should also include potential impacts on NI. We welcome that transboundary issues will be included in the Environmental Report particularly in NI which borders the area covered by the programme and shares two major water bodies with Ireland namely; Carlingford Lough and Lough Foyle which host fishing and aquaculture activity. We would highlight consideration of the following issues including the potential disturbance to/impact on NI/RoI migratory/mobile species, cross border designated sites, European sites in Northern Ireland adjacent to or with pathways to/from the Republic of Ireland, priority habitats and river basins. The SEA should consider all potential impacts including those which may impact Northern Ireland both directly and indirectly.

Consultee	Summary of Points Raised
	NED are in agreement and welcome the completion of a Habitats Regulations Assessment in parallel to the SEA. We welcome that a monitoring programme will be put in place in due course to ensure monitoring of the environmental effects during the SDP 2021-2027 implementation.
	A number of policy recommendations were provided in this submission.
	Decisions (authorisations and enforcement) that affect or might affect the whole or any part of the Northern Ireland marine area, must be made in accordance with marine policy documents, unless relevant considerations indicate otherwise. The marine area includes the sea (below mean high water spring tide); and estuaries, rivers or channels so far as the tide flows at mean high water spring tide (tidal waters)
	Please note following the decision of the United Kingdom to leave the European Union, the collective term of "Natura 2000" sites the network of European protected sites are now known as "National Site Network" sites within the United Kingdom, and is including Northern Ireland.
Climate Change Unit comments	Climate Change Mitigation Branch refers Department of Agriculture, Food and the Marine to the requirements laid out within The UK Climate Change Committee's Sixth Carbon Budget publication. A link for this can be found below. https://www.theccc.org.uk/publication/sixth-carbon-budget/ The UK Climate Change Committee (CCC) recently published its UK Climate Risk Independent Assessment 2021 which identifies the risk and opportunities posed by climate change over the next five years. A summary for Northern Ireland can be found below
Water Management Unit Comments	The SEA should consider all transboundary issues, including the potential disturbance to/impact on NI/RoI migratory/mobile species such as salmon, such species rely and can be impacted by water quality issues. Cross border river basins require special attention as ecological functionality cross jurisdictional boundaries. The SEA should consider all potential impacts including those which may impact Northern Ireland both directly and indirectly. DAERA has published the Draft River Basin Management Plan for the 3rd cycle period which runs from 2021-2027 which should also be considered as part of the assessment..
Historic Environment	Question 1 -In terms of plans and programmes which would be relevant HED advise of the Draft Marine Plan for Northern Ireland Marine Plan for NI (daera-ni.gov.uk) and the UK Marine Policy Statement 10164_Marine Statement_Cov.indd (publishing.service.gov.uk)

Consultee	Summary of Points Raised
Division, DAERA	Question 2 -HED welcome that cultural heritage has been scoped in for assessment.. In order to understand the transboundary qualities of heritage and to gauge the potential for impact HED highlight our evidence bases We attach a link to Northern Ireland's historic environment digital datasets.
	Question 3. HED suggest amending the wording of the SEA objectives around Cultural Heritage to begin "Protect, conserve and where appropriate enhance…
Geological Survey of Ireland	Marine and Coastal Unit Geological Survey Ireland's Marine and Coastal Unit in partnership with the Marine Institute, jointly manages INFOMAR, Ireland's national marine mapping programme; providing key baseline data for Ireland's marine sector. The programme delivers a wide range of benefits to multi-sectoral end-users across the national blue economy with an emphasis on enabling our stakeholders. Also references Cherish Project
	Other datasets: Coastal Vulnerability Index Geological Survey Ireland is undertaking a new coastal vulnerability mapping initiative. Geoheritage. Currently 27 local authority areas have completed geological heritage audits, and a further three are currently under way, (Limerick, Cork County and Cork City), creating an almost national level of audited sites. Geological Mapping Geological Survey Ireland maintains online datasets of bedrock and subsoils geological mapping that are reliable and accessible.. Groundwater Geological Survey Ireland's Groundwater and Geothermal Unit, provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems. Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. We recommend using the groundwater maps A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.
Environmental Co-ordination Unit |Climate Change &	Figure 2-1 refers to Ireland's "Economic Exclusion Zone" however the correct term is Exclusive Economic Zone (EEZ). The map in the figure is not showing the EEZ, it's displaying Ireland's designated continental shelf.

Consultee	Summary of Points Raised
Bioenergy Policy Division | environmentalco-ordination@agriculture.gov.ie **An Roinn Talmhaíochta, Bia agus Mara**	Section 4.2 refers to "A range of existing controls…provided and used in terms of fisheries management, processing, aquaculture, water quality and the planning and consenting process for landuse activities." However, the section only provides detail on technical measures and measures and controls in relation to aquaculture. Other fisheries management measures (such as setting TACs in line with MSY or controls on fleet capacity) aren't covered, nor are the controls in place for the other activities listed. Regarding Table 5-1, it is not clear if this table is a list of "general" risks to which fisheries/the seafood sector are exposed, or specific risks which could potentially arise from the implementation of the SDP. In addition, some of the points listed in the section on Biodiversity Flora and Fauna do not appear to take into account the developments that have taken place in recent years that support sustainable fishing. Please see comments in the attached which aim to clarify these points. In section 6.2, text was used from the EPA's integrated assessment in 2020. Paragraph 6 on climate change has been merged with a paragraph on fish stocks, which is not directly linked to climate change. We suggest separating the paragraphs for clarity. Comments re issues Biodiversity Flora and Fauna issue: Insufficient research to prove mitigation efficacy of fishing gear measures on sensitive habitats and bycatch; effective measures for reduction of incidental bycatch of sensitive species lacking for certain fisheries and gears. Response: DAFM works closely with BIM to bring forward proposals at EU level for technical measures for the fisheries in which we operate that result in increased selectivity and provide increased protection to overfished and sensitive stocks. In that regard, a range of technical measures for the Irish Sea, Celtic Sea and the North West area have been developed over recent years. BIM, working with the fishing industry, has developed and trialled many of

Consultee	Summary of Points Raised
	these measures which have been designed to protect vulnerable stocks such as cod and whiting. These measures have subsequently been adopted at EU level. CFP Maximum Sustainable Yield target for 2020 not fully achieved. GES not fully achieved for MSFD commercial fisheries descriptor by 2020 deadline. Response: The fishing opportunities for 2020 were set by the EU Fisheries Council of Ministers in line with the MSY objective. For 32 of the 47 stocks of particular interest to Ireland, the quotas for 2020 were set at or below the scientific advice where available, meeting MSY criteria. For other stocks, the Council agreed restrictive or precautionary quotas to allow for unavoidable by-catches or the collection of scientific data. High levels of unwanted catches in key mixed demersal fisheries. Response: As noted above, BIM is continuing to work closely with the fishing industry to develop modifications to fishing gears to increase selectivity and to further avoid juvenile fish or vulnerable species

3.0 DESCRIPTION OF THE SEAFOOD DEVELOPMENT PROGRAMME

3.1 SCALE & CONTENT OF IRELAND'S SEAFOOD DEVELOPMENT PROGRAMME

The plan area covers the whole of the Republic of Ireland and is national in scale and Ireland's Economic Exclusion Zone (as shown on Figure 3.1 below). Given the shared border with Northern Ireland, there are shared aquatic resources including sea loughs, rivers, lakes, and coastal waters and as such the potential for transboundary effects exists.

3.2 INTRODUCTION TO THE SEAFOOD DEVELOPMENT PROGRAMME

Ireland is to receive €142 million of EU funds from the new European Maritime Fisheries and Aquaculture Fund (EMFAF) which will be combined with co-funding from the Government of Ireland. These funds will be allocated for the sustainable development of fisheries, aquaculture, seafood processing, and coastal communities and also covers measures such as EU Data Collection (which informs fisheries and aquaculture policy at national and EU levels), Control and Enforcement of the Common Fisheries Policy (CFP), marine biodiversity and marine knowledge, seafood marketing and promotion and training and capacity building. The EMFAF supports the EU Green Deal, Biodiversity Strategy, Farm to Fork Strategy in addition to supporting the implementation of the Marine Strategy Framework Directive (MSFD), Birds and Habitats Directive, Marine Spatial Plan and Climate Action Plan by implementing actions in the field of the Common Fisheries Policy, Maritime Policy, and the EU international ocean governance agenda.

A series of Missions are established under the Seafood Development Programme 2021-2027. These are presented below:

- Mission 1 - A Climate Smart, Environmentally Sustainable Seafood Sector.
- Mission 2 - An Innovative, Competitive and Resilient Seafood Sector, driven by Technology and Talent.
- Mission 3 - Vibrant and sustainable coastal communities driven to implement creative community-based strategies to enhance economic opportunity and ensure a dynamic framework for quality growth and development in these communities.

The new Seafood Development Programme 2021-27 will be launched in 2022 with €142 million EU funds from the EMFAF and matching funds from Government. The Seafood Development Programme will be the programme to implement the above EMFAF.

Concurrently, the second National Strategic Plan for Sustainable Aquaculture Development (NSPSA 2021 – 2030) is being prepared by Bord Iascaigh Mhara (BIM) on behalf of DAFM and is also undergoing SEA and Appropriate Assessment. The NSPSA will cover aquaculture in freshwater (e.g. in lakes, rivers and using ground water), transitional waters (e.g. in estuaries, lagoons and other saline areas substantially influenced by freshwater flow) and sea water out to Ireland's jurisdictional limits. The NSPSA is predominantly focused on aquatic animals and plants for human consumption. Ireland's NSPSA will inform the sections of the SDP related to aquaculture. The assessment teams will liaise with each other to ensure consistency in approach and results across the environmental assessment processes.

3.3 THE CONTENT OF THE SEAFOOD DEVELOPMENT PROGRAMME

The structure of the SDP 2021-2027 is outlined below; key to the SEA Scoping of the plan is the Priorities, Specific Objectives and Actions as presented in Section two of the plan. Table 3.1 below presents an outline of the SDP Contents.

Figure 3.1 Ireland's Economic Exclusion Zone

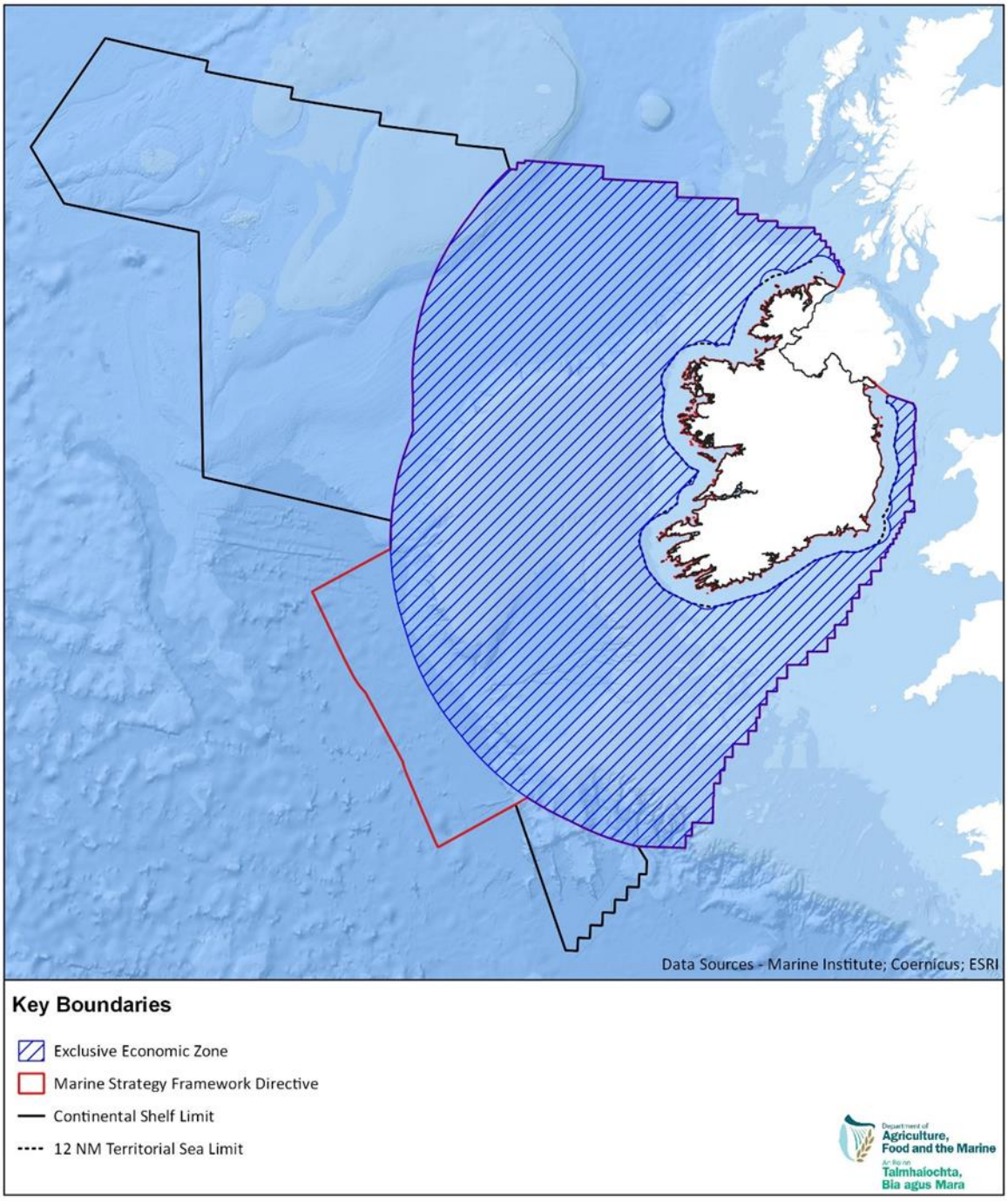


Table 3.1 Outline of SDP

Section	Outline
1	Programme strategy: main development challenges and policy responses. This includes Priority Justification and SWOT Analysis
2	Priorities, separated into Priorities other than technical assistance comprising the following 4 Priorities: • Fostering sustainable fisheries and the restoration and conservation of aquatic biological resources • Fostering sustainable aquaculture activities, and processing and marketing of fisheries and aquaculture products, thus contributing to food security in the Union • Enabling a sustainable blue economy in coastal, island and inland areas, and fostering the development of fishing and aquaculture communities • Strengthening international ocean governance and enabling seas and oceans to be safe, secure, clean and sustainably managed
	Technical assistance priorities (will be developed after SDP approval by EU Commission-CONFIRM
3	Financing Plan This comprises allocation
4	Enabling Conditions
5	Programme Authorities

6	Partnership
7	Communication and Visibility
8	Use of costs, lump sums, flat rates and financing not linked to costs

4.0 BASELINE CONTEXT

4.1 EUROPEAN SITES CONSIDERED

In Ireland, sites within the Natura 2000 Network are referred to as European Sites and comprise SAC and SPA. SACs are concerned with the protection of specific Qualifying interests (QIs) and SPAs are concerned with the protection of specific Special Conservation Interests (SCIs). Throughout this report Qualifying Interests and Special Conservation Interests are referred to jointly as 'features of interest'.

In identifying the Zone of Influence of the Seafood Development Programme, a number of considerations were taken into account, notably the national and strategic nature of the Plan; the list of European Sites and their features of interest; and baseline information describing the effects of marine and seafood related activity on European Sites and their features of interest. While much of the prioritises and actions outlined in the draft Seafood Development Programme are concerned with marine-based seafood and related activities it is noted that specific actions associated with aquaculture are included in the Programme. These aquaculture actions relate not only to marine, coastal and transitional waters but also to inland freshwater bodies. As such the identification of European Sites occurring within the zone of influence of the Programme includes those sites that are designated for features of interest that are reliant upon or influenced by marine, coastal, transitional and freshwater bodies.

The zone of influence of marine related activities was recently established as part of the Natura Impact Statement for the National Marine Spatial Plan (NMPF). This included a 50km marine buffer around the NMPF study area. The NMPF study area represents a similar area to the Seafood Development Programme study area, which is defined as Ireland's Economic Exclusion Zone shown on Figure 3.1 above. The 50km marine buffer takes into consideration transboundary Natura 2000 sites within other jurisdictions. AS part of the NMPF the 50km marine buffer was considered sufficient to also ensure that all relevant Natura 2000 sites where marine mammals are a QI are included within the Zone of Influence. An additional 31 European Sites/Natura 2000 Sites occur within the 50km buffer zone. In keeping with the approach adopted for the NMPF and other marine strategic plans the 50km buffer surrounding the Seafood Development Programme study area is also adopted for this Natura Impact Statement.

In Ireland, there are 439 SACs which are designated for one or more of 59 habitat types (Annex I of the Directive), 16 of which are designated as 'priority' habitats, owing to their ecological vulnerability, and 26 species (Annex II of the Directive), of which one or more are included as qualifying interests. These are mostly inshore but a small number of reef sites lie far offshore. There are 58 SAC designated in Northern Ireland.

A 5km inland buffer was also used during the NMPF assessment. This was based on a recognition of the potential for activities supported by the NMPF in the marine environment to result in environment changes which could directly or indirectly affect features of interest of inland terrestrial European Site. Given the aquaculture objectives of the Seafood Development Programme it is noted, as outlined above that all freshwater-dependent European Sites and associated features of interest are included within the zone of influence of the Seafood Development Programme. The 5km inland buffer was considered to provide a suitably precautionary basis for considering environment changes as a result of activities supported by the NMPF. In order to ensure consistency across marine-related plans and to ensure a precautionary approach is adopt for this Natura Impact Statement this 5km buffer has also been applied to determine the zone of influence of the Seafood Development Programme. A total of 60 European Sites are located within the 5km buffer zone.

Through the Birds Directive, SPAs are designated for the protection of endangered species of wild birds including listed rare and vulnerable species, regularly occurring migratory species, as well as wetland habitats that support such species. Currently there are 165 SPAs designated within Ireland and 16 SPAs designated in Northern Ireland.

4.1.1 All-Island European Site Network

Table 4.1 lists the number of SACs and SPAs occurring in the Republic of Ireland and Northern Ireland and the number of Annex 1 habitats and Annex 2 species listed as qualifying interests of these SACs and the number of bird species listed as special conservation interests for these SPAs. Figure 4.1 and 4.2 shows the distribution of SACs and SPAs occurring on the island of Ireland.

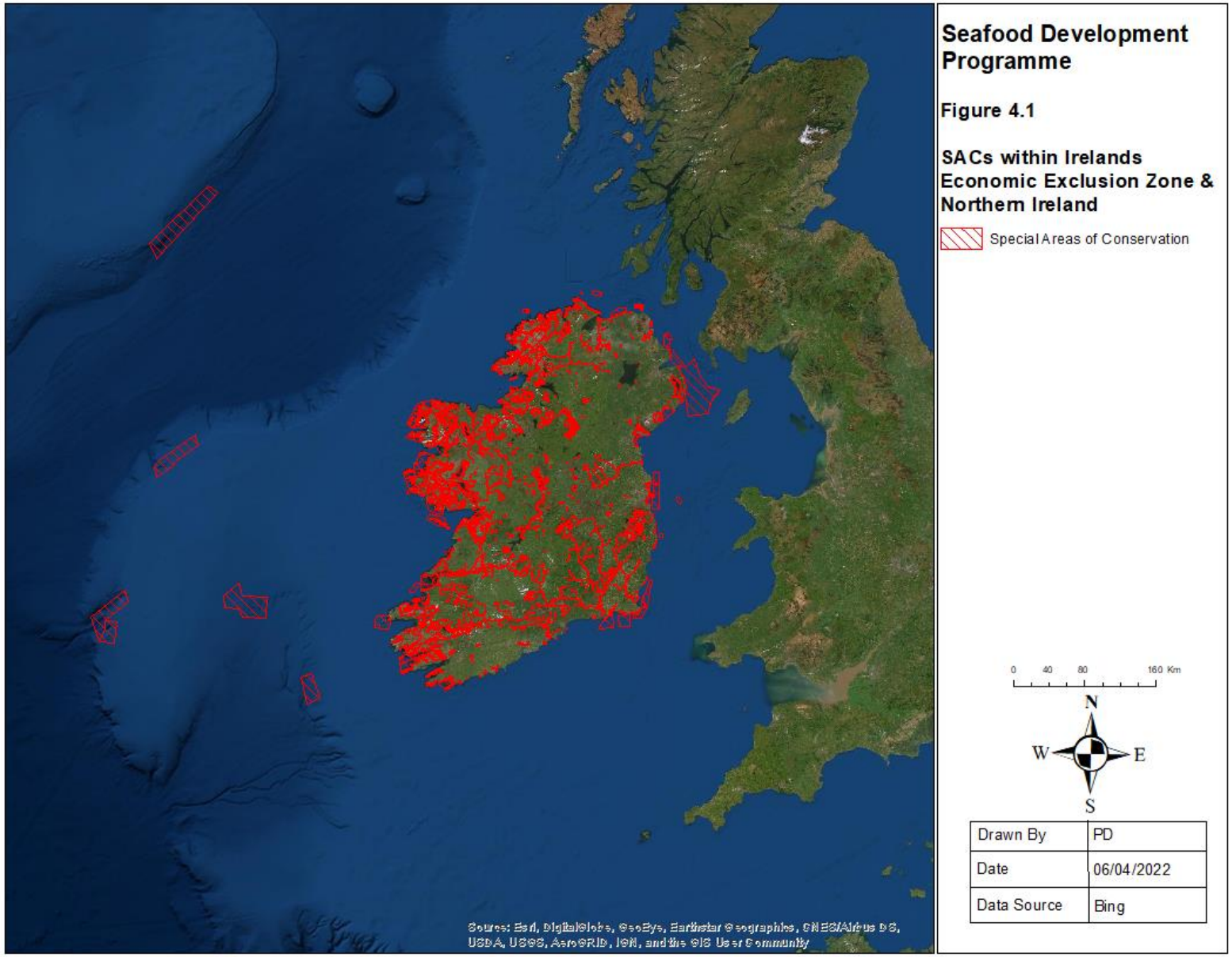
Table 4.1: European Sites, Annex 1 Habitats & Annex 2 Species

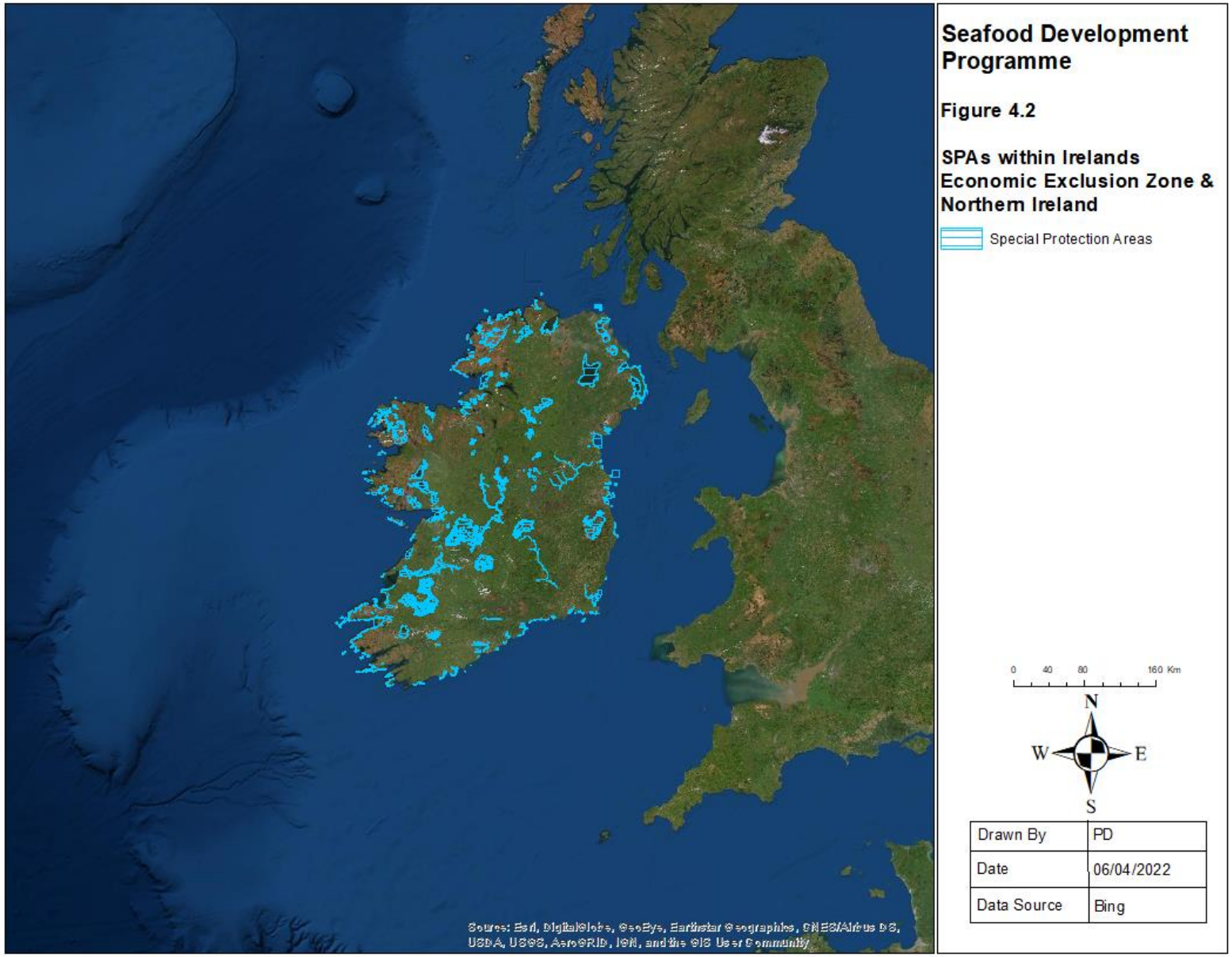
Republic of Ireland	Northern Ireland
433 SACs + 6 offshore SACs	58 SACs
165 SPAs	16 SPAs
59 Annex 1 Habitats, of which 16 are Priority Annex 1 Habitats	49 Annex 1 Habitats
25 Annex 2 Species	14 Annex 2 species

4.2 CONSERVATION OBJECTIVES FOR EUROPEAN SITE

Site-specific conservation objectives (SSCO) aim to define favourable conservation condition for a particular habitat or species at the European Site level. Maintaining habitats and species in a favourable conservation condition contributes to the wider objective to maintain those most vulnerable habitats and species at favourable status throughout their range within the Natura 2000 network.

At an individual site level, SSCO specify whether the objective is to maintain and/or to restore favourable conservation condition of the habitat or species, and they set out attributes and


Seafood Development Programme
Figure 4.1
SACs within Irelands Economic Exclusion Zone & Northern Ireland
Special Areas of Conservation
0 40 80 160 Km
N
W E
S
Drawn By PD
Date 06/04/2022
Data Source Bing
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Seafood Development Programme
Figure 4.2
SPAs within Irelands Economic Exclusion Zone & Northern Ireland
Special Protection Areas
0 40 80 160 Km
N
W E
S
Drawn By PD
Date 06/04/2022
Data Source Bing
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

targets that define the objectives. It is the aim of the NPWS to produce SSCO for all European sites in due course. Qualifying features of interest and special conservation interests are annexed habitats and annexed species of community interest for which an SAC or SPA has been designated. The SSCO for European Sites are set out to ensure that the features of interest of European Sites are maintained or restored to a favourable conservation condition/conservation status.

Site-specific conservation objectives are based on a detailed list of specific attributes and targets for each Annex 1 habitat, Annex 2 species and special conservation interests. A full listing of the site-specific conservation objectives for features of interest that each European Site is designated for, as well as the attributes and targets to maintain or restore them to a favourable conservation condition, are available from the NPWS website www.npws.ie/protected-sites.

The site-specific conservation objectives for Annex 1 habitats and wetland habitats of SPA can be categorised under the headings of "Range"; "Area"; and "Structure & Function". For instance common attributes of habitat distribution and habitat area that pertain to Annex 1 habitats and wetland habitats of SPAs fall into the categories of Range and Area. Attributes covered under the category "Structure and Function" vary between the habitats and the biotic/abiotic factors that they rely upon. Examples of site-specific conservation objective attributes that fall into the category structure and function include "salinity regime; hydrological regime; water quality; vegetation composition" etc. The broad categories of Range, Area and Structure and Function are used to establish the current overall conservation status of Annex 1 habitats as part of Ireland's Article 17 reporting under the EU Habitats Directive.

The categories of "Range" and "Area", in the form of habitat for species, and "Structure & Function" also apply to the site-specific conservation objectives of Annex 2 species and special conservation interests species of SPAs. A fourth broad category Population is also used. Examples of site-specific conservation objectives for Annex 2 species that fall under range and area are distribution and habitat extent respectively Examples of site-specific conservation objectives that fall under "Structure & Function" include water quality, hydrological condition, breeding behaviour, disturbance, prey availability etc.

It is noted that the existing conservation condition of some habitats and species is unfavourable at present for various reasons that include land use effects relating to marine-related activities. Further details on the existing threats and pressures to these features of interest, including those

arising from marine-related activity is provide in the subsequent section below. The potential impact of the elements of the Seafood Development Programme to the broad conservation objective categorises of European Site habitats and species is examined in Section 5 below.

4.3 CURRENT CONSERVATION STATUS OF FEATURES OF INTEREST

The current conservation status of features of interest of European Sites in Ireland is listed on Table 4.2 and 4.3 below.

Table 4.2: Current Conservation status of Annex 1 Habitat

Habitat	Conservation status[1]
Sandbanks	Stable
Estuaries	Deteriorating
Tidal mudflats and sandflats	Deteriorating
Coastal lagoons	Deteriorating
Large shallow inlets and bays	Deteriorating
Reefs	Stable
Submarine structures made by leaking gases	Stable
Annual vegetation of drift lines	Deteriorating
Perennial vegetation of stony banks	Stable
Vegetated sea cliffs of the Atlantic and Baltic coasts	Stable
Salicornia and other annuals colonising mud and sand	Stable
Atlantic salt meadows	Deteriorating
Mediterranean salt meadows	Deteriorating
Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)	Deteriorating
Embryonic shifting dunes	Stable
Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Stable
Fixed coastal dunes with herbaceous vegetation	Deteriorating
Decalcified fixed dunes with *Empetrum nigrum*	Stable

[1] Source: NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill

Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)	Stable
Dunes with *Salix repens* ssp. *Argentea* (*Salicion arenariae*)	Stable
Humid dune slacks	Deteriorating
Machairs	Stable
Oligotrophic waters containing very few minerals of sandy plains (*Littorellatalia uniflorae*)	Stable
Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*	Deteriorating
Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	Deteriorating
Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation	Stable
Natural dystrophic lakes and ponds	Stable
Turloughs	Stable
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Deteriorating
Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation	Stable
Northern Atlantic wet heaths with *Erica tetralix*	Deteriorating
European dry heaths	Stable
Alpine and Boreal heaths	Improving
Juniperus communis formations on heaths or calcerous grasslands	Stable
Calaminarian grasslands of the *Violetalia calaminariae*	Deteriorating
Semi-natural dry grasslands and scrubland facies on calcerous substrates (*Festuco-Brometalia*) (*important orchid sites)	Deteriorating
Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*	Stable
Molinia meadows on calcerous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	Deteriorating
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	Deteriorating
Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)	Deteriorating
Active raised bogs	Deteriorating
Degraded raised bogs still capable of natural regeneration	Deteriorating
Blanket bogs (*if active bog)	Deteriorating
Transition mires	Stable

Depressions on peat substrates of the *Rhynchosporion*	Deteriorating
Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae**	Stable
Petrifying springs with tufa formation (*Cratoneurion*)*	Deteriorating
Alkaline fens	Deteriorating
Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	Stable
Calcereous and clacshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)	Stable
Calcareous rocky slopes with chasmophytic vegetation	Stable
Siliceous rocky slopes with chasmophytic vegetation	Stable
Limestone pavement	Stable
Caves	Stable
Submerged or partially submerged sea caves	Stable
Taxus baccata woods of the British Isles*	Stable
Bog woodland	Stable
Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Deteriorating
Alluvial forest with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*	Deteriorating

Table 4.3: Current Conservation status of Annex 2 Species

Habitat/Species	Conservation status[2]
Killarney fern (*Vandenboschia speciosa*)	Stable
Marsh saxifrage (*Saxifraga hirculus*)	Stable
Slender naiad (*Najas flexilis*)	Deteriorating
Slender Green Feather-moss (*Hamatocaulis vernicosus*)	Stable
Petalwort (*Petalophyllum ralfsii*)	Stable
Geyer's whorl snail (*Vertigo geyeri*)	Deteriorating
Narrow-mouthed whorl snail (*Vertigo angustior*)	Deteriorating
Desmoulin's whorl snail (*Vertigo moulinsiana*)	Deteriorating
Kerry slug (Geomalacus maculosus)	Deteriorating

[2] Source: NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill

Freshwater pearl mussel (*Margaritifera margaritifera*) & (Margaritifera durrovensis)	Deteriorating
White-clawed Crayfish (*Austropotamobius pallipes*)	Improving
Marsh Fritillary (*Euphydryas aurinia*)	Stable
Sea Lamprey (*Petromyzon marinus*)	Stable
Brook Lamprey (*Lampetra planeri*)	N/A
River Lamprey (*Lampetra fluviatilis*)	Stable
Killarney Shad (*Alosa killarnensis*)	Stable
Twaite Shad (*Alosa fallax*)	Deteriorating
Atlantic Salmon (*Salmo salar*)	Improving
Lesser horseshoe bat (*Rhinolophus hipposideros*)	Improving
Otter (*Lutra lutra*)	Stable
Grey Seal (*Halichoerus grypus*)	Stable
Harbour seal (*Phoca vitulina*)	Stable
Bottlenose Dolphin (*Tursiops truncatus*)	Stable
Harbour Porpoise (*Phocoena phocoena*)	Stable

Table 4.4: Conservation Status of Special Conservation Interest Annex 1 Bird Species

Species Name	Conservation Status[3]
Waterbirds	
Barnacle Goose (Branta leucopsis)	Amber
Bewick's Swan (Cygnus columbianus bewickii)	Red
Black-throated Diver (Gavia arctica)	Amber
Corncrake (Crex crex)	Red
Dunlin (Calidris alpina schinzii)	Red
Golden Plover (Pluvialis apricaria)	Red
Greenland White-fronted Goose (Anser albifrons flavirostris)	Amber
Great Northern Diver (Gavia immer)	Amber
Kingfisher (Alcedo atthis)	Amber
Leach's Petrel (Oceanodroma leucorhoa)	Red
Red-throated Diver (Gavia stellata)	Amber
Slavonian Grebe (Podiceps auritus)	Red
Storm Petrel (Hydrobates pelagicus)	Amber

[3] Source: Gilbert G, Stanbury A and Lewis L (2021), "Birds of Conservation Concern in Ireland 2020 – 2026". Irish Birds 9: 523—544

Whooper Swan (Cygnus Cygnus)	Amber
Raptors	
Hen Harrier (Circus cyaneus)	Amber
Merlin (Falco columbarius)	Amber
Peregrine (Falco peregrinus)	Green
Coastal Birds	
Arctic Tern (Sterna paradisaea)	Amber
Chough (Pyrrhocorax pyrrhocorax)	Amber
Common Tern (Sterna hirundo)	Amber
Little Tern (Sterna albifrons)	Amber
Roseate Tern (Sterna dougallii)	Amber
Sandwich Tern (Sterna sandvicensis)	Amber

4.4 THREATS AND PRESSURES TO EUROPEAN SITES

4.4.1 Overview

The European Commission has identified approximately 400 existing threats, pressures and activities that have adverse effects on the status of European Sites and their features of interest. These threats and pressures are grouped under land use activities and processes such as agriculture; forestry; biological resource use; human intrusions and disturbances; natural biotic and abiotic processes; and climate change. A specific threat and pressure sub-category relating to seafood and aquaculture activities is identified under the sub-category heading Fishing and Harvesting of Aquatic Resources, under the threats and pressures category of Biological Resource Use other than Agricultural and Forestry. These threats and pressures are listed on Table 4.5 below. However a range of other threats and pressures are described under other threats and pressures categories that are relevant to marine, coastal, seafood or aquaculture activities. These threats and pressures are listed in Table 4.5 below. The threats and pressures listed in Table 4.5 that have been identified by the NPWS as already have adverse effects on the favourable conservation condition of European Sites features of interest, as documented in Article 17 reports or other relevant reports outlined in Section 2 above, are also highlighted in Table 4.5.

Table 4.5: List of Threats and Pressures relevant to marine, coastal, seafood or aquaculture land use activities

Threat/Pressure	Threat/Pressure Code
Biological resource use other than agriculture & forestry	**F**
Marine and Freshwater Aquaculture	F01
intensive fish farming, intensification	F01.01
suspension culture	F01.02
bottom culture	F01.03
Fishing and harvesting aquatic resources	F02
Professional passive fishing	F02.01
potting	F02.01.01
netting	F02.01.02
demersal longlining	F02.01.03
pelagic longlining	F02.01.04
Professional active fishing	F02.02
benthic or demersal trawling	F02.02.01
pelagic trawling	F02.02.02
demersal seining	F02.02.03
purse seining	F02.02.04
benthic dredging	F02.02.05
Leisure fishing	F02.03
bait digging / collection	F02.03.01
pole fishing	F02.03.02
spear-fishing	F02.03.03
Illegal taking/ removal of marine fauna	F05
dynamite	F05.01
date mussel-fishing	F05.02
poisons	F05.03
poaching	F05.04
shooting	F05.05
removal for collection purposes	F05.06
other (i.e. drift nets)	F05.07
Transportation and service corridors	**D**
slipways	D03.01.01
piers / tourist harbours or recreational piers	D03.01.02
fishing harbours	D03.01.03
industrial ports	D03.01.04
Urbanisation, residential and commercial development	**E**
Discharges	E03
disposal of industrial waste	E03.02

costal sand suppletion/ beach nourishment	E03.04.01
Human intrusions and disturbances	G
Outdoor sports and leisure activities, recreational activities	G01
nautical sports	G01.01
gliding, delta plane, paragliding, ballooning	G01.05
other outdoor sports and leisure activities	G01.08
Sport and leisure structures	G02
other sport / leisure complexes	G02.10
Other human intrusions and disturbances	G05
shallow surface abrasion/ mechanical damage to seabed surface	G05.02
penetration/ disturbance below surface of the seabed	G05.03
Pollution	H
Pollution to surface waters (limnic, terrestrial, marine & brackish)	H01
pollution to surface waters by industrial plants	H01.01
pollution to surface waters by storm overflows	H01.02
other point source pollution to surface water	H01.03
diffuse pollution to surface waters via storm overflows or urban run-off	H01.04
diffuse pollution to surface waters due to other sources not listed	H01.09
Pollution to groundwater (point sources and diffuse sources)	H02
Marine water pollution	H03
oil spills in the sea	H03.01
toxic chemical discharge from material dumped at sea	H03.02
non-synthetic compound contamination	H03.02.01
synthetic compound contamination	H03.02.02
radionucleide contamination	H03.02.03
introduction of other substances (e.g. liquid, gas)	H03.02.04
marine macro-pollution (i.e. plastic bags, styrofoam)	H03.03
Invasive, other problematic species and genes	I
invasive non-native species	I01
problematic native species	I02
introduced genetic material, GMO	I03
genetic pollution (animals)	I03.01
genetic pollution (plants)	I03.02
sea defence or coast protection works, tidal barrages	J02.12.01

5.0 IMPACT ASSESSMENT

5.1 ELEMENTS OF THE SEAFOOD DEVELOPMENT PROGRAMME SUBJECT TO NATURA IMPACT STATEMENT EXAMINATION

Elements of the Seafood Development Programme that have the potential to result in land use activities have been examined as part of this Natura Impact Statement. The Seafood Development Programme contains elements that are explanatory/informational and will not result in land use activities. A review of the Programme was completed in order to identify the elements that will and will not result in land use activities. Table 5.1 below lists the Contents of the Seafood Development Programme and identifies those sections that are subject to examination as part of this Natura Impact Statement and those that are not.

Table 5.1: Elements of the Seafood Development Programme and Assessment Requirements

Section	Content	Content subject to Natura Impact Statement examination
1	Programme strategy: main development challenges and policy responses. This includes Priority Justification and SWOT Analysis	No, this is context for the SDP 2021-2027 No, this has provided background information.
2	Priorities, separated into Priorities other than technical assistance comprising the following 4 Priorities: Fostering sustainable fisheries and the restoration and conservation of aquatic biological resources	Yes, this section provides for support and interventions including those that could give rise to environmental effects. Therefore this section has been subject to examination in the Natura Impact Statement.

	Fostering sustainable aquaculture activities, and processing and marketing of fisheries and aquaculture products, thus contributing to food security in the Union Enabling a sustainable blue economy in coastal, island and inland areas, and fostering the development of fishing and aquaculture communities Strengthening international ocean governance and enabling seas and oceans to be safe, secure, clean, and sustainably managed	
	Technical assistance priorities. Note: technical assistance priorities covers the costs of DAFM and implementing agencies in administering the programme and does not support investments or schemes.	No, where relevant this information has been used to inform the Natura Impact Statement Monitoring requirements/recommendations.
3	Financing Plan This comprises allocation	No, where relevant this information has been used to inform the Natura Impact Statement Monitoring requirements/recommendations.
4	Enabling Conditions	No, where relevant this information has been used to inform the requirements/recommendations.

5	Programme Authorities	No, where relevant this information has been used to inform the requirements/recommendations.
6	Partnership	No, where relevant this information has been used to inform the requirements/recommendations.
7	Communication and Visibility	No
8	Use of costs, lump sums, flat rates, and financing not linked to costs	No

In summary the elements of the Seafood Development Programme that have been identified as having potential to result in land use effects and that require examination relates to Section 2 Priorities and the associated 4 Priorities areas outlined in the Seafood Development Programme.

5.2 ASSESSMENT OF SEAFOOD DEVELOPMENT PROGRAMME PRIORITIES & ACTIONS

Table 5.1 to 5.4 below list all actions associated with each of the 4 Priorities of the Seafood Development Programme and provide an evaluation of the potential adverse effects that could arise from these actions to European Sites and their features of interest. It is noted that the evaluation presented in these tables has been completed without regard to mitigation measures. It is also noted that the objectives of some actions listed in the following tables are to ensure the protection and management of European Sites specifically and biodiversity in general. These are representative of positive actions that will provide safeguards embedded within the Seafood Development Programme for the future favourable conservation condition. These

objectives are identified in the following tables. Their potential to mitigate other potentially adverse actions are considered further under Section 6 Mitigation Measures.

At an individual site level, SSCO specify whether the objective is to maintain and/or to restore favourable conservation condition of the habitat or species, and they set out attributes and

Table 5.2: Evaluation of Priority 1

Specific Objectives	Actions	Evaluation
1.1.1: Strengthening economically, socially and environmentally sustainable fishing activities. All operations except those supported under Articles 17 and 19 The coastline of Ireland and its territorial waters	***1.1.1.1 Actions to reduce unwanted catches will be addressed through:***	The action to prevent unwanted catches has the potential to result in positive impacts for European Sites and particularly European Sites that are designated for their role in supporting marine and freshwater species (Guillen et al., 2018). Potential barriers to fishing operator willingness to embrace new advances in gear selectivity have been identified (see O'Neill et al. 2019). This unwillingness has been associated with operator uncertainty surrounding the costs and benefits of gear modifications, with associated losses in both time and revenue during trial periods and when gear is being used commercially. It is noted that Fishing is an economic activity and uncertainty surrounding the costs and benefits of gear modifications may make vessel owners reluctant to make gear changes due to potential losses in time and revenue both during trial periods and when the gear is being used commercially. Investments in on-board production equipment will have the potential to improve fishing efficiency resulting in an increase in the catching power of vessels. There is potential for such improvements in on-board equipment to result in overfishing, which is a serious and pervasive issue and combined with climate change presents a serious threat to the medium to long term viability of the seafood sector. The TAC for the North-east Atlantic continues to exceed the limits set by scientific advice and is currently under referral to the ECJU. With this in mind it is also noted that the current Habitats Directive Article 17 Reporting (NPWS, 2019) concluded that fisheries represents a pressure to the offshore environment
	1. Investment in on-board production equipment	
	2.Studies and research	
	3. Pilot projects	
	4.Gear selectivity to reduce unwanted catches.	

	1.1.1.2 Actions to improve the onboard quality and added value of the catch and enhance traceability and certification of seafood will be addressed through:	The investments in on-board production equipment as noted above will have the potential to improve fishing efficiency resulting in on-board production equipment will have the potential to improve fishing efficiency resulting in an increase in the catching power of vessels. There is potential for such improvements in on-board equipment to result in overfishing, which is a serious and pervasive issue and combined with climate change presents a serious threat to the medium to long term viability of the seafood sector. The TAC for the North-east Atlantic continues to exceed the limits set by scientific advice and is currently under referral to the ECJU. With this in mind it is also noted that the current Habitats Directive Article 17 Reporting (NPWS, 2019) concluded that fisheries represent the most significant pressure on the offshore environment.
	1. Investments in on-board production equipment.	
	2. Investment to improve traceability	Marketing has the potential to influence fishing and aquaculture practices and improving traceability can be used as a means to promote more sustainable fish stocks through accreditation. Marketing can also influence decisions on fishing activities (and ecosystems and stocks) through promoting demand for some species. Likewise for accreditation, this can have a significant behavioural effect on consumption and demand for seafood. Consumer demand for fish products with a small carbon footprint will facilitate a shift to less fuel-intensive and low-impact fishing methods and gears and should be promoted and marketed based on an accredited scheme that is credible and can influence consumer demand. For example the Marine Stewardship Council certification for Irish mussel growers. The purchasing decisions by processing companies can indirectly influence fishing activity (and so effect on biodiversity) through demand for certain species, practices or accreditations. These influences can be positive, but not significant as the extent via these schemes is unknown at this stage
	3. Investment in marketing activities to support business development	

	1.1.1.3 Actions to support young fishermen, particularly existing crew of SSCF vessels, to enter the sector and facilitate generational renewal will be addressed through:	Promoting the entry of young fishermen to the industry with the support of vessel acquisition will have the potential to result in an increase in vessel numbers and particularly in the number of SSCF vessels. It is noted that the number of SSCF vessels have been falling since 2006 (source Marine Institute) and that there is a ceiling on the SSCT fleet capacity. Notwithstanding these factors it is noted that SSCT vessels are associated with coastal fisheries, where the interaction with European Sites is greatest. The fishing gear associated with SSCF vessels include both active gear (such as trawls, nets and dredges) and static gear such as pots, creels, gillnets and longlines. These types of fishing gear used by SSCF vessels can result in damage to benthic habitats, including Annex 1 listed benthic habitats such as reefs, sandbanks, large shallow bays and inlets as a result of trawling and dredging. The loss of fishing gear to these and other marine habitats can result in "ghost-fishing gear" with ongoing impacts to the structure and function of Annex 1 habitats as well as presenting an ongoing risk to Annex 2 marine species and anadromous fish species.
	1. First acquisition of a fishing vessel	
	2. Training to improve skills and develop human capital	
	1.1.1.4 Actions to improve health, safety and working conditions on board fishing vessels will be addressed through:	These actions in and of themselves do not give rise to direct effects on the marine or terrestrial environment.
	1. Investments in safety equipment	
	2.Investments in working conditions.	
	3. Training to improve skills and develop human capital	
	1.1.1.5 Actions to assess the economic and biological impacts of changes to fisheries will be addressed through:	The cites fisheries as the most significant pressure on the offshore environment. Targeted scientific research to broaden understanding of the effects of different fishing activities and their interaction with other marine

	1. Evaluations	activities is essential to underpin an evidenced based approach to interventions and actions. In addition, the 2020 target of the CFP has not been achieved so greater targeted action is needed to address this. Sustainable fishing and marine and coastal ecosystems all provide numerous ecosystem services from provisioning to cultural services and a robust marine and coastal environment can provide significant positive impacts for European Sites. Research and delivery of actions to support sustainable fish stocks also has co benefits by reducing the need for deeper and more energy intensive fishing operations as fishing vessels have to travel further and fish deeper to access depleted stocks. This further has effects in relation to GHG emissions; whilst in commercial fisheries, fuel is used for activities such as onboard processing, refrigeration, and freezing, in general the most fuel consuming activity is vessel propulsion. Research results indicate that building up fish stocks not only increases output but also increases profitability and reduces emissions per unit of output, as long as the fisheries management system preserves incentives for efficient fishing .
	2. Studies and research	
	1.1.1.6 Actions to develop skills (e.g.; digital literacy) and capacity within the sector to engage with critical issues will be addressed through:	This action in and of itself does not give rise to direct effects on the marine or terrestrial environment. However, positive effects are identified. Events can provide opportunities to raise awareness around marine and seafood challenges and actions being undertaken. The design of the above is not yet known but should be tailored to raise awareness and education relating to sustainable seafood practices, wildlife, biodiversity and the effects of climate change to reflect Priorities in the EMMAF.
	1. Investment in advisory services	
	2. Training to improve skills and develop human capital	
	3. Events	
	4. Capacity building	
	5. Knowledge sharing	

1.2. Increasing energy efficiency and reducing CO2 emissions through the replacement or modernisation of engines of fishing vessels	1.2.1 Actions to improve energy efficiency, reduce carbon emissions and increased usage of fuel efficient fishing gears on board fishing vessels will be addressed through: 1. Investment in reduction of energy use and energy efficiency. 2. Investment in renewable energy systems	this action will have the potential to result in positive environmental effects relating to climatic factors, air quality, pollution reduction, with potential indirect effects of particulate matter and its effect on marine chemistry (noted at small scale for Ireland). At shore facilitating fishing vessels to access shore power rather than diesel as in the case of Killybegs is an example of actions that could reduce the need to burn diesel whilst at shore. The converters will future-proof the harbour by complying with tightening legislation that is being introduced by the International Maritime Organisation (IMO) as it works toward its target of reducing emissions from shipping by at least 50 percent by 2050 compared with 2008.
1.3. Promoting the adjustment of fishing capacity to fishing opportunities in cases of permanent cessation of fishing activities and contributing to a fair standard of living in cases of temporary cessation of fishing activities		The temporary or permanent cessation of older and less fuel efficient vessels with greater energy use will have the potential to contribute positively towards emission reduction and climate change impacts to marine and freshwater habitats, including the European Sites occurring in these ecosystems.

1.4. Fostering efficient fisheries control and enforcement, including fighting against IUU fishing, as well as reliable data for knowledge-based decision-making	***1.4.1 Actions to ensure effective control, enforcement and inspection of all activities will be addressed through.***	For the seafood sector and given Irelands EEZ extent, control and enforcements is very significant part of the overall budget. Control and enforcement for public authorities relates to marine and coastal seafood activities, whilst private business relates to processing, landing, etc. The successful delivery of these mechanisms also provides for stronger compliance generally and allows for data to be captured to monitor effectiveness of controls; thereby providing reliable data to help inform knowledge based decision making. Data collection, enforcement and regulation were all identified as strengths in the SWOT analysis. Ongoing support for these actions as outlined in this Specific Objective all underpin this.
	1. Investments for control and enforcement for public authorities	
	2. Investments for control and enforcement for private business	
	1.4.2 Actions to develop, implement and integrate improved technologies and development of specialist expertise capacity will be addressed through:	As above, this action has the potential to result in positive effects through the use of smarter technology which can also allow for remote monitoring and upskilling. Again this can assist in data collection, monitoring of effectiveness of controls and input to evidence based decision making.
	1. Investment in IT – hardware	
	2. Investment in IT – software	
	3. IT development and maintenance	
	4. Training to improve skills and develop human capital	

	1.4.3 Actions to renew and upgrade ships and aircraft, substantially deployed in fishery protection throughout the Irish EEZ will be addressed through investments for control and enforcement for public authorities	The EU Biodiversity Strategy 2030 outlined actions required to restore the good environmental status of marine ecosystems by focusing on harvesting sustainably and zero tolerance for illegal practices, implementing maritime spatial plans, conserve fisheries resources and reduce by-catch of species threatened by extinction. In this regard the actions within this Specific Objective all interact to contribute to the achievement of these objectives. Control and enforcement for public authorities relates to marine and coastal seafood activities, whilst private business relates to processing, landing, etc. The successful delivery of these mechanisms also provides for stronger compliance generally and allows for data to be captured to monitor effectiveness of controls; thereby providing reliable data to help inform knowledge based decision making. Data collection, enforcement and regulation were all identified as strengths in the SWOT analysis. Ongoing support for these actions as outlined in this Specific Objective all underpin this. The implementation of this action will have the potential to result in indirect positive effects for European Sites.
	1.4.4 Actions to enhance the awareness of control and enforcement activities among fishermen and all other stakeholders and develop a cooperative system will be addressed through:	These actions in and of themselves do not give rise to direct effects on the marine or terrestrial environment. However, the potential for positive indirect effects are identified as these interventions support a safer working environment and training to improve skills more broadly. Events can be a useful means to raise awareness around marine and seafood challenges, impacts to European Sites and actions being undertaken.
	1. Training to improve skills and develop human capital	
	2. Events	
	3. Awareness raising, communication to the wider public	
	4. Capacity building	
	1.4.5 Actions to develop a fit for purpose data collection programme will be addressed through:	The successful delivery of these mechanisms of data gathering provides for stronger compliance generally and allows for data to be captured to monitor effectiveness of controls; thereby providing reliable data to help inform knowledge based decision making. Data collection was identified as strengths in the SWOT analysis. Ongoing support for these actions as outlined in this Specific Objective all underpin this.
	1. Data collection	
	2. Investment in IT – hardware	

	3. Investment in IT – software	
	4. Knowledge Sharing	
	1.4.6 Actions to collect transversal data and spatial distribution of fishing effort for vessels under 12m will be addressed through:	This action seeks to build on data and knowledge sharing from inshore fishing vessels, where previously the data provision for the majority of the inshore fleet was very poor. This project is building on a system already operating in the Irish Sea, where the location of fishing operations is monitored using a fleet tracking system, and adds functionality to enable capture of fishing effort and catch or landings data. The evaluation of these methods includes how the data could be seamlessly streamed to existing or modified databases, hardware costs, depreciation and reliability and also how fishermen interact with the system. Improved data provision is important for a range of reasons such as fisheries monitoring and assessment, marine spatial planning, assessing fishing pressure on the environment and seafood traceability. Inshore fisheries are associated more closely to coastal communities, with over 2,000 vessels registered as commercial fishing vessels and over 80% of these are under 12m in length and depend largely or completely on the territorial waters of the state. The successful delivery of these mechanisms of data gathering provides for stronger compliance generally and allows for data to be captured to monitor effectiveness of controls; thereby providing reliable data to help inform knowledge based decision making. Data collection was identified as a strength in the SWOT analysis. Ongoing support for these actions as outlined in this Specific Objective all underpin this. In summary, these actions interact positively for receptors such as marine ecosystems and species and will have the potential to result in positive impacts for less.
	1. Investments for control and enforcement for public authorities,	
	2. Investments for control and enforcement for private business,	
	3. Data collection,	
	4. Investment in IT – hardware,	
	5. Investment in IT – software,	
	6. Knowledge sharing.	

	1.4.7 Actions to address specific data and knowledge gaps for data poor stocks to respond to advisory demands will be addressed through:	As with the above actions, data gathering, knowledge sharing and IT investment all provide reliable data to help inform knowledge based decision making. Data collection was identified as strengths in the SWOT analysis. Ongoing support for these actions as outlined in this Specific Objective all underpin this. The delivery of data to expand scientific understanding of poorly understood fish stocks, if translated into delivery of actions to inform fishing activities would generate positive interactions for the marine and aquatic environment in general with the potential for consequential indirect benefits for European Sites and their features of interest.
	1. Studies and research,	
	2. Knowledge sharing,	
	3.Investment in IT – hardware,	
	4. Investment in IT – software,	
	5. Data collection.	
	1.4.8 Actions to address emerging advisory needs for stock assessment, MSE, mixed fisheries and ecosystem modelling will be addressed through:	Previous research activity under the EMMF 2014-2020 was completed by the Marine Institute the emphasis of which was to inform rebuilding plans for depleted stocks, moving from a single species to a multispecies and EBFM management paradigm. In addition the research aimed to develop a climate and ecosystem modelling capability to underpin decisions at national level in climate adaptation, initially for the seafood sector with potential applicability in other sectors e.g. biodiversity, flooding, built heritage. The models provide information on changes in many essential climate variables including temperature, salinity, ocean currents, sea state, plankton groups, ocean carbon and nutrients. Again, providing data to inform decision making particularly in terms of the complexities of the ocean environment provides positive indirect effects for the marine and aquatic environment in general with the potential for consequential indirect benefits for European Sites and their features of interest
	1. Studies and research,	
	2. Knowledge sharing,	
	3. Investment in IT – hardware,	
	4. Investment in IT – software,	
	5. Data collection	

	1.4.9 Actions to improve sampling efficiencies will be addressed through:	Data to inform decision making particularly in terms of the complexities of the ocean environment provides positive indirect effects across all SEOs though no direct landuse/maritime effects in terms of physical interventions or actions at this stage.
	1. Knowledge sharing,	
	2. Investment in IT – hardware,	
	3. Investment in IT – software,	
	4. Data collection	
	1.4.10 Actions to address specific scientific questions in relation to stock ID, mixing, assessment methods, migration patterns will be addressed through:	Data to inform decision making particularly in terms of the complexities of the ocean environment provides positive indirect effects across all SEOs though no direct landuse/maritime effects in terms of physical interventions or actions at this stage.
	1. Studies and research,	
	2. Knowledge sharing,	
	3. Investment in IT – hardware,	
	4. Investment in IT – software,	
	5. Data collection	
	1.4.11 Actions to optimize and maximise research survey outputs will be addressed through:	Data gathering, collaboration and knowledge transfer to address this issue, again provides positive indirect effects across all SEOs though no direct landuse/maritime effects in terms of physical interventions or actions at this stage.
	1. Studies and research,	
	2. Knowledge sharing,	
	3. Investment in IT – hardware,	
	4. Investment in IT – software,	
	5. Data collection	

1.6. Contributing to the protection and restoration of aquatic biodiversity and ecosystems	***1.6.1 Actions to enhance dissemination of fisheries data and information to stakeholder including increased awareness of the Natura/MPA network and associated conservation measures will be addressed through:***	No direct landuse/marine effects in relation to this action. However, by promotion and sharing knowledge and knowledge transfer across stakeholders increased awareness and understanding of marine conservation and co benefits of same, positive in direct short to long term effects are identified across all SEOS due to the interactions across all environmental parameters. Application of studies and research to provide evidence based decision making including restoration and conservation efforts should be a key priority under this action. By making through research the explicit links between sustainable fisheries resources, reducing energy efficiency and healthy marine and coastal ecosystem, positive indirect effects in terms of guiding behaviours across all sectors.
	1. Studies and research,	
	2. Knowledge sharing	
	3. Data assembly and dissemination.	
	4. Events	
	1.6.2 Actions to address the issue of marine litter and continue and expand the Clean Oceans Initiative and plastics directive will be addressed through:	It is broadly assumed that approximately 80% of marine litter is land-based, with regional fluctuations (for example, in the Northeast Atlantic, shipping and fishing are very important litter sources); at the same time sea-based sources receive increasing attention, both because of the quantities of e.g. lost or abandoned fishing gear, but also of the damage to marine life and negative impacts on fishing and economy. In the marine environment up to 80% of debris is made up of plastics which are not biodegradable, but instead are breaking down under UV light from recognisable larger plastic pieces into tiny particulates or microplastics. Concerted and positive actions are required to reduce the inputs of plastic entering our marine environment and ecosystems. BIM is a lead organisation under the Clean Oceans Initiative to ensure waste impacts are minimised and mitigation efforts are developed and recognised. Key actions of the Clean Oceans Initiative are: • Expand the current baseline data collection programme from Fishing for

	1. Retrieval and proper disposal of marine litter	Litter to include key inputs and output of the seafood sector in order to define the waste streams coming directly from the Irish industry. This informs the direct mitigation initiatives. • Retrieve: Important and substantial actions are already underway in retrieval of marine litter across the Irish marine and seafood sectors. These include Fishing for Litter, shore and pier cleans and the Co-ordinated Local Aquaculture Management Systems (CLAMS). These programmes focus on retrieval of discarded material in the marine environment. • Reduce: Preventing waste from the sector becoming marine litter in the first place will be potentially the most environmentally impactful for the Clean Oceans Initiative. Targeting reduction in single use plastics and identifying alternatives is a clear priority. On-board initiatives along with the aquaculture ECOPACT and Origin Green will help ensure that all potential sources of marine litter are accounted for. • Record: A verifiable system to record and characterise the litter retrieved will be key to the success of this initiative. • Reach: BIM endeavours to work with our stakeholders and support their efforts under the Clean Oceans Initiative. • Reward: Championing and supporting individual and community efforts in the reduction of marine litter and plastics. Demonstrating performance and recognising the effort and co-operation that it takes to be successful and make a difference in protecting our marine environment is integral to the Clean Oceans Initiative. Marine litter is also one of the clearest symbols of a resource inefficient economy. Valuable materials are sources of pollutants rather than being recirculated. A circular economy approach which puts the emphasis on preventing waste and on recycling and reuse of materials and products in the first place, is a main response to this issue. Main sources of marine litter from the seafood sector are: • fishing and aquaculture • illegal or accidental dumping at sea from shipping (e.g. transport, tourism)
	2. Investment in physical infrastructure at existing fishing ports	

	3. Events	• offshore mining and extraction • Land-based: • land-fills and littering of beaches and coastal areas (tourism) • rivers and floodwaters • industrial emissions • discharge from storm water drains • untreated municipal sewerage • Sea-based: The Marine Strategy Framework Directive (MSFD) requires EU Member States to ensure that, by 2020, "properties and quantities of marine litter do not cause harm to the coastal and marine environment". Pollution of the seas from plastics and microplastics is one of the three major areas of the Strategy for Plastics, adopted by the Commission in 2018; most of the proposed Actions are directly or indirectly related to marine litter, including its international dimension. Flagship initiatives against plastic pollution of the oceans, flowing from the Strategy are: The Directive on Single Use Plastics and fishing gear introduces a set of ambitious measures: • a ban on selected single-use products made of plastic for which alternatives exist on the market: cotton bud sticks, cutlery, plates, straws, stirrers, sticks for balloons, as well as cups, food and beverage containers made of expanded polystyrene and on all products made of oxo-degradable plastic; • measures to reduce consumption of food containers and beverage cups made of plastic and specific marking and labelling of certain products; • extended Producer Responsibility schemes covering the cost to clean-up litter, applied to products such as tobacco filters and fishing gear; • a 90% separate collection target for plastic bottles by 2029 (77% by 2025) and the introduction of design requirements to connect caps to bottles, as well as target to incorporate 25% of recycled plastic in PET bottles as from 2025 and 30% in all plastic bottles as from 2030.
	4. Awareness raising, communication to the wider public	

	5. Studies and research,	The OSPAR Marine Litter Regional Action Plan for the North Atlantic is relevant in this regard also. Whilst the type, scale and location of actions under this objective such as investment in physical infrastructure at exiting fishing ports is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA). Monitoring of this action will be useful to determine uptake and reductions in marine litter on terrestrial and marine environments. The multi sources of plastic litter is acknowledged but research to identify waste streams, map and monitor same should inform activities under this Specific Objective. MAY BE RESEARCH/ MORE ACTIVITIES GOING ON UNDER THIS..MORE DETAIL WOULD BE HELFPUL. Measures under this action are directly positive for the structure and function of marine Annex 1 habitats and the populations of marine Annex 2 species and anadramous fish species. . Reduction in plastics production further reduces a by-product of fossil fuel and indirectly contributes to GHG reductions at large scale, with associated indirect positive effects for European Sites.
	6. Knowledge sharing.	
	1.6.3 Actions to tackle climate action and equally to prepare for climate change impact on fishing patterns and implement climate action measures around business operations will be addressed through:	This action provides for both non landuse/marine effects through awareness raising which can influence behavioral change. However it also provides for measures such as pollution prevention/contamination. Depending on the type of intervention proposed, this could be subject to the planning and consenting or license monitoring regime.
	1. Events	

	2. Awareness raising, communication to the wider public	
	3. Reduction and prevention of pollution/contamination	
	4. Data collection	
	5. Evaluation	
	6. Knowledge sharing	
	7. Other (environmental)	
	8. Studies & Research	
	9. Advisory Services	
	1.6.4 Action to increase awareness on marine biodiversity, habitat loss, climate change and environmental impacts will be addressed through:	This action provides for non landuse/marine effects through awareness raising which can influence behavioral change. More broadly understanding the effects of climate change and how to respond to these effects is of urgent importance
	1. Awareness raising, communication to the wider public,	
	2. Studies and research,	
	3. Knowledge sharing.	
	<u>1.6.5 Action to provide continued support for the designation and management process of Natura sites and MPAs will be addressed through:</u>	This action will contribute to the national and EU target of 30% MPAs by 2020. The Government aims to expand Ireland's MPA network from 2.13% to 30% of Ireland's maritime area by 2030. Expanding Ireland's Marine Protected Area Network (www.gov.ie) lists the habitats and species for which European Site coverage is currently insufficient. These habitats and species include critically endangered elasmobranch fish, pelagic species, ecosystem engineering species, Vulnerable Marine Ecosystem indicator species, continental shelf soft substrate habitats and habitats associated with oceanographic features. Gaps in the designation criteria of the Habitats Directive have been identified as a reason for the insufficient coverage of
	1. Natura 2000 areas management and monitoring (soft operations),	
	2. MPA management and monitoring (soft operations).	

	3. Data collection	European Sites affording protection to these habitats and species. Another key finding of the Expanding Ireland's Marine Protected Area Network report was the need for additional European Sites for offshore reef and seabirds at sea in line with Habitats Directive requirements. A process is already underway through the aegis of the EMFAF and its data collection framework (DCF) the to achieve this. Proper management and monitoring of European Sites will provide for site integrity and favourable conservation condition. European Sites in favourable conservation condition can provide resources upon which key indicator species rely such as marine mammals and seabirds. The interaction between the proper management and monitoring of European Sites and MPAs should seek to complement and support refuge areas and provide for corridors in the marine environmental. The application of the MSFD and supporting mitigation measures are of particular relevance in this regard.
	4. Data assembly and dissemination	
	1.6.6 Actions to reduce the use of fishing gear most harmful to biodiversity	Actions relating to less damaging fishing gear and reduction of unwanted catches is essential to recovery of marine ecosystems. Research into the most sustainable and least damaging fishing gear to reduce unwanted catches and address EU landing obligation requirements is continued from the previous SDP (e.g.: https://doi.org/10.1016/j.fishres.2018.09.019, Research in crayfish and fishing gear (MI). These actions in particular gear modification, selectivity etc all can contribute in a significant manner to reducing unwanted catches and discards to support the CFP scientific assessments and support recovery of some fish stocks. The uptake and monitoring of success of these measures should be a key element. Subject to actions working together around data gathering, scientific advice of the CFP, application of findings of research, communication and enforcement, this action will have the potential to result in positive effects for Annex 1 habitats and Annex 2 species for which European Sites are designated.
	1. Gear modification to minimise habitat impacts,	
	2. Gear selectivity to reduce unwanted catches,	
	3. Gear selectivity in relation to endangered, threatened and protected species,	
	4. Natura 2000 areas management and monitoring (soft operations),	

	5. MPA management and monitoring (soft operations),	
	6. Advisory services,	
	1.6.7 Actions to support restoration to improve the status of Habitats Directive habitats and species will be addressed through:	These actions represent land use actions that aim to support the conservation objectives of European Sites and are representative of positive impacts for European Sites. Specific investments for restoration and the improvement of aquatic habitats and biodiversity will have potential to contribute to the achievement of favourable conservation conditions for habitats and species supported by European Sites.
	1. Investments in Natura 2000 areas restoration,	
	2. Specific investments for improving aquatic habitats and biodiversity.	

	1.6.8 Actions to support appropriate Control and Enforcement of fisheries management measures related to Natura/MPA site management (SFPA) will be addressed through investments for control and enforcement for public authorities.	Delivery of this action is essential to support the multi-functional benefits of MPAs and Natura site management. In this regard this action also interacts with other data gathering and governance actions under this priority .
	1.6.9 Actions to manage and control the introduction and spread of invasive marine species by the fishing and aquaculture sectors	The collection of data, data assembly and sharing of knowledge relating to the management and control of non-native invasive species is representative of a measure with potential to result in positive environmental impacts. The assembly of such knowledge and its dissemination will have the potential to contribute to future management and control of non-native invasive species.
	1. Data collection	
	2. Data assembly and dissemination	
	3. Knowledge sharing	
	1.6.9 Actions to increase co-ordination and pace at which new measures for biodiversity protection are implemented within and across sectors and in response to scientific advice through knowledge sharing	Co-ordination and shared knowledge including data sharing are underpinned by the MSFD and specific measures to encourage same are listed in Section 6.4 of this Natura Impact Statement.

	1.6.10 Actions to improve information-sharing across decision- making bodies to facilitate cumulative impact assessments as required by the EIA Directive and Appropriate Assessment under the Habitats Directives will be addressed through:	The implementation of actions to improve information sharing across decision making bodies to facilitate cumulative impact assessment as required under planning and consent processes, will have the potential to improve upon and ensure a robust approach to cumulative assessment in the context of EIA and Habitats Directive assessments. Such data sharing will have the potential to result in positive effects for the status of European Sites by ensuring all relevant and best scientific knowledge pertinent of cumulative assessment are available during the consent process.
	1. Data collection	
	2. Data assembly and dissemination	
	3. Knowledge sharing	

Table 5.3: Evaluation of Priority 2

Specific Objectives	Actions	Evaluation

2.1. Promoting sustainable aquaculture activities, especially strengthening the competitiveness of aquaculture production, while ensuring that the activities are environmentally sustainable in the long term	***2.1.1 Actions to utilise technology and enhanced knowledge to facilitate growth will be addressed through investment in***	At strategic level, actions listed under Points 1 to 6 and Points 8 to 15 will not give rise to direct landuse/marine effects. Whilst the type, scale and location of actions under Action No. 7 and 15 is unknown, there will, in theory, be potential for investment in renewable energy systems or other pilot projects to result in land use effects that could present a risk of likely significant effects to European Sites. The potential for impacts associated with the investment in on-board production equipment, which forms part of this action, has been examined under Action 1.1.1.1, Point No. 1 above. With regard to many of the other actions outlined here, such as Action No. 4, 5, 6 which include for the promotion of knowledge transfer across stakeholders and establishing through research the explicit links between sustainable seafood production, reducing energy efficiency and healthy marine and coastal ecosystem, the potential exists for positive indirect effects in terms of guiding behaviours across all sectors.
	1. Advisory services	
	2.Studies and Research	
	3. Investment in animal welfare	
	4. Knowledge sharing	
	5. Training to develop skills and develop human capital.	
	6. Investment in reduction of energy use and energy systems	
	7. Investment in renewable energy systems	
	8. Investment in on board production equipment	
	9. Training to develop skills and develop human capital.	
	10. Additional investments to support business development.	
	11. Events	
	12. Data collection	
	13. Development of marketing innovation	

	14. Food quality and hygiene safety	
	15. Pilot Projects	
	2.1.2 Actions to promote the sustainable development of new and existing enterprises will be addressed through investment in	Aquaculture in the marine environment has been identified as having a negative impact on the favourable conservation condition of a number of Annex 1 habitat types including estuaries, tidal sand and mudflats and large shallow inlets and bays. Negative impacts have also been identified for the following Annex 2 species Atlantic salmon, grey seal, harbour seal, bottle-nosed dolphin and harbour porpoise (NPWS, 2019a & 2019b).
	1. Advisory services	Addressing water usage and water quality in aquaculture has the potential to contribute towards mitigating the potential negative impact aquaculture has to European Sites and their features of interest, and the requirement for clean water throughout the aquaculture production contributes to maintaining high quality water standards at bay area, supported by Bay Area Assessments under the Habitats Directive. The requirements for monitoring shellfish and water quality varies depending on the focus of a different legislation and plans/programmes. The Programme should be authorized of these variations and ensure the different monitoring requirements these are integrated into the proposed monitoring for the Programme, particularly in relation to microbiological and chemical monitoring. The opportunity to work with Irish Water and DHHLG in relation to wastewater treatment plants discharging in the vicinity of shellfish waters should be considered as a means to provide more stringent treatment to protect the shellfish waters. The Programme should also promote the need for wastewater treatment issues to be addressed by relevant stakeholders Actions relating to additional investments to support business and productive investments in aquaculture are identified as giving rise to direct effects on marine/coastal/terrestrial environment and would be subject to the statutory planning, environmental assessment and
	2. Environmental Services	
	3. Productive investments for sustainable aquaculture	
	4. Training to improve skills and develop human capital.	
	5. Investments in safety equipment.	
	6. Water usage and quality in aquaculture	
	7. Additional investments to support business development.	
	8. Events	
	9. Investment in reduction of energy use and efficiency	
	10. Investment in renewable energy systems	
	11. Development of product innovation	
	12. Development of marketing innovation	

	13. Investment in marketing activities to support business development.	consenting system as appropriate. This aligns with submissions at SEA Scoping Stage (EPA) in relation to wastewater treatment infrastructure. Promotion and knowledge transfer across stakeholders and making through research the explicit links between sustainable seafood production, reducing energy efficiency and healthy marine and coastal ecosystem, positive indirect effects in terms of guiding behaviours across all sectors. Marketing to create higher value aquaculture products above high quantity as well as animal welfare measures, food quality and safety can drive demand for lower tropic aquaculture products and influence consumer behaviour.
	2.1.3 Actions to reduce, recover, and dispose of marine litter will be addressed through investment in	The retrieval and proper disposal of marine litter has the potential to represent a positive impact for the structure and function of marine habitats include Annex 1 habitats such as reefs, sandflats, bays and estuaries. However it is noted that marine litter and particularly abandoned, lost or otherwise discarded fishing gear is often snagged on reefs and on other underwater obstacles. The process of removal of such gear could in itself could result in damage and disturbance to such habitats
	1. The retrieval and proper disposal of Marine litter	

	2. Awareness raising and communication to the wider public.	
	2.1.4 Actions to protect biodiversity in marine habitats will be addressed through	The provision of European Site management and monitoring under this Action will have the potential to result in positive impacts for the integrity of marine European Sites by contributing to the achievement of the conservation objectives for such European Sites. The collection of data relevant to the conservation status of European Sites will also contribute to the overall management of these sites and the establishment of existing conservation condition and the management measures required to achieve conservation objectives. It is noted that this Action is specific to the marine environment and does not include reference to the freshwater environment. As Seafood Development Programme aim to support aquaculture in both the marine and freshwater environment it is noted that in the absence of such protections, the potential will exist for aquaculture projects in the freshwater environment to result in adverse effects to freshwater-dependent Annex 1 habitats and Annex 2 species and associated European Sites.
	1. Natura 2000 areas management and monitoring.	
	2. Data collection	
	2.1.5. Actions to build public and stakeholder awareness of the importance of the Irish aquaculture sector will be addressed through	This action in and of itself does not give rise to direct effects on the marine or terrestrial environment. However, positive effects are identified. Events can provide opportunities to raise awareness around environmental challenges, including those relating to European Sites, associated with the aquaculture section. The design of the above is not yet known but should be tailored to raise awareness and education relating to sustainable seafood practices, wildlife, biodiversity and the effects of climate change to reflect Priorities in the EMMAF.
	1. Awareness raising, communication to the wider public.	

	2.Events	
	2.1.6 Actions to review and address fragmentation across Irish aquaculture sector will be addressed by investment in	These actions relate to institutional organisation and will not result in land use effects and will have a neutral impact on European Sites
	1. Advisory Services	
	2. Marketing activities to support business development	
	2.1.7 Actions to coordinate aquaculture's participation in the National marine spatial planning process will be addressed through assistance	Actions to support participation by aquaculture sector in the NMPF are not identified as giving rise to adverse effects to European Sites. The participation and meaningful engagement by stakeholders will be important to contribute to achieving the NMPF overall aims as well as those specific to the aquaculture sector.
	2.1.8. Actions to reinforce a streamlined and efficient licensing system will be addressed through investments for control and enforcement for public authorities.	The provision of a streamlined and efficient licensing system will have the potential to contribute to a full and thorough review of aquaculture licence applications for proposed aquaculture projects. Included in such a full and thorough review process will be a review of Screening Report and/or Natura Impact Statements that will be required to accompany licence applications. As part of this process all applications will be required to be screened for Appropriate Assessment or subject to Appropriate Assessment by the competent authority, which in this case is the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine. In light of the above the provision of a streamlined and efficient licencing system will contribute to providing a system that is in accordance with the EU Habitats Directive and Article of this Directive.

	2.1.9 Actions to assist aquaculture producers affected by major biotoxin episodes and other biological challenges will be addressed through Insurance Schemes	Support is intended to provide hardship funds to shellfish farms and being focused on shellfish, short-term and localised is not expected to result in significant effect on the environment. Factors that contribute to biotoxin episodes include eutrophication (this can be from landuse practices), ocean warming and other anthropogenic pressures. Harmful algae blooms (HABs) have the potential to result in adverse effects to the structure and function of Annex 1 coastal and freshwater habitats and the species, many of which are Annex 2 species supported by these habitats. Over the last decades the occurrence and intensity of HAB appear to be increasing on a global scale due to rising ocean temperatures and growing coastal eutrophication (McCarthy et al., 2015). The geographical expansion of HAB can also be associated with ballast waters transporting encysted algae to new environments or massive algae spreading caused by aquaculture practices (Anderson et al., 2002; Maso and Garcés, 2006; Smayda, 2007). Among the thousands of microalgal species known in nature, about 300 are involved in harmful events and more than 100 (of these species) produce persistent natural toxins that can cause intoxication or even death in humans and animals.

Among marine toxins, the okadaic acid (OA) and the related dinophysistoxins (DTX) are the most frequently reported in EU waters, mainly in shellfish species. These toxins are responsible for human syndrome diarrhetic shellfish poisoning (DSP). Fish, like other marine species, are also exposed to HABs and their toxins. However, reduced attention has been given to exposure, accumulation, and effects on fish of DSP toxins, such as OA. Published data has shown that exposure of fish to DSP toxins causes a range of negative effects, from behavioral and morphological alterations to death.

The NMPF (2021) states: The main activities potentially contributing to eutrophication in Ireland's marine waters are land-based sources such as agriculture, discharges from unsewered areas and industry. Shellfish perform several important roles that serve to increase water and habitat quality in coastal waters – nutrients are removed when shellfish are harvested, shellfish enhance sedimentation rates and speed the sequestration of nutrients and feeding reduces turbidity and this increases light penetration which in turn enhances availability of oxygen in the water column.(NMPF 2021:107).

The Marine Institute in Ireland releases weekly Harmful Algae Bloom (HAB) bulletins to prevent toxin related aquaculture farm closures. The Marine Institute in Ireland is the National Reference Laboratory (NRL) for marine biotoxins. Ireland has a monitoring system in place which can provide predictions of toxin increases and limited forecasting but due to the complexities associated with marine biotoxin formation, regulators face many challenges.

2.2. Promoting marketing, quality and added value of fisheries and aquaculture products, as well as processing of those products	***2.2.1 Actions to utilise technology and enhanced knowledge to facilitate growth in the processing sector will be delivered through***	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. No direct land or marine effects identified for this action. The potential for additional investment to support business development to result in negative impacts has been examined under Action 2.1.2, No. 7 above and mitigation measures have been outlined.
	1. Advisory services	
	2. Investment in animal welfare	
	3. Training to develop skills and develop human capital.	
	4. Additional investments to support business development.	
	5. Events	
	6. Data collection	
	7. Development of marketing innovation	
	8. Food quality and hygiene safety	
	2.2.2 Actions to support the development of the processing sector by adding value to raw material will be addressed through	Adding value to raw material through the types of actions outlined under Points 1 to 3 and 8 will not in themselves give rise to adverse effects to European Sites. Given the absence of information surrounding examples of pilot projects, development of product innovations and the development of process innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Advisory Services	
	2. Capacity Building	
	3. Knowledge sharing	
	4. Pilot Project	
	5. Development of product innovation	
	7. Development of process innovation	

	8. Development of marketing innovation	
	2.2.3 Actions to support the development of operational optimisation in the processing sector will be addressed through	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects, development of product innovations and the development of process innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Advisory Services	
	2. Capacity Building	
	3. Knowledge sharing	
	4. Pilot Project	
	5. Development of process innovation	
	6. Studies and research	
	7. Additional investments to support business development	

	2.2.4 Actions to build competitiveness, promote economies of scale and employment in the processing sector will be addressed through investment in	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects, development of product innovations and the development of process innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	Advisory Services	
	Pilot Projects	
	Knowledge Sharing	
	Capacity building	
	Investment in reduction of energy use and energy systems	
	Investment in renewable energy systems	
	Studies and Research	
	2.2.5 Actions to encourage open access to raw material will be delivered through	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Capacity Building	
	2. Knowledge sharing	

	3. Pilot Project	
	2.2.6 Actions to differentiate Irish products in order to expand access to high-value, niche markets globally will be addressed through investment in:	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects and development of product innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Advisory services	
	2. Food safety and hygiene safety and	
	3. Marketing activities to support business development.	
	4. Events	
	5. Development of product innovation	
	6. Pilot Projects	

	7. Studies and Research	
	2.2.7 Actions to support investment in measures relating to logistics and market access of fisheries and aquaculture products will be addressed through investment in:	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Advisory services	
	2. Pilot projects	
	3. Studies and research	
	2.2.8. Actions to assist processors in developing existing and creating new markets for Irish seafood will be delivered through	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects and the implication of additional investments for business development it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	5. Advisory Services	
	6. Pilot Project	
	7. Development of marketing innovation	
	8. Studies and research	
	9. Additional investments to support business development.	

	10. Events	
	11. Awareness raising, communication to the wider public.	
	2.2.9 Actions to support blue bioeconomy and marine biorefinery development in the processing sector will be delivered through	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Given the absence of information surrounding examples of pilot projects, development of product innovations and the development of process innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Advisory Services	
	2. Pilot Project	
	3.Development of product innovation	
	4. Development of process innovation	
	2.2.10 Actions to develop industry skills will be delivered through 1. Advisory Services	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses.

	2. Training to develop skills and develop human capital. 3. Development of process innovation	Given the absence of information surrounding examples of the development of process innovations it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise
	2.2.11 Actions to support the preparation and implementation of Producer Organisations' production and marketing plans, encourage development of PO's, and facilitate formation of new POs	No land use/marine effects identified for this action.

Table 5.4: Evaluation of Priority 3

Specific Objectives	Actions	Evaluation
3.1. Enabling a sustainable blue economy in coastal, island and inland areas, and fostering the sustainable development of fishing and aquaculture communities	***3.1.1Actions to diversify the income of fishers and coastal community economy. will be addressed through:***	Figure 4.1 and 4.2 of this NIS shows that much of Irelands coastline is designated for its role in supporting European Sites. Past coastal land use and development has been identified as having adverse effects on a range of European Site features of interest such as the Annex 1 habitats drift lines, perennial vegetation of stony banks, sea cliffs, salt meadows, dune habitats, estuaries, tidal sand and mudflats, sandbanks, and large shallow bays and inlets. The Annex 2 species that have been previously affected by coastal development and land use included petalwort, otters, harbour seals, grey seals and bottle-nosed dolphin Diversification of the coastal economy can contribute to more even, balanced economic activity. Nevertheless land use activities associated with such diversification can have potential to result in adverse effects to European Sites and their features of interest as a result of direct impacts, such as habitat loss, fragmentation or degradation as a result of physical interactions and species mortality or indirect impacts such as species/habitat disturbance and changes to abiotic processes that underpin the structure and function of habitats supported by European Sites. Avoiding the creation of tourism honeypots and managing visitor impacts on sensitive habitats, species (i.e. marine tourism) and coastal and island landscapes is also necessary.
	1. Investment in advisory services	
	2. Additional investments to support business development (strategy development, administration, equipment)	
	3. Other business-diversification operations not involving fisheries, aquaculture, or innovation	
	4. Training to improve skills and develop human capital	

	3.1.2 Actions that identify innovations that can lead to a transition towards smarter growth in coastal areas will be addressed through:	Smarter growth as reflected in Our Rural Future, Rural Development Policy 2021-2025 is the national policy in relation to rural Ireland, including rural coastal and island communities. The measures set out in the policy align with commitments in the Programme for Government and other national and regional strategic policies to focus on the economic, social and environmental wellbeing of rural Ireland. The policy outlines opportunities in emerging and innovative sectors, including off-shore renewable wind energy, the bio economy and outdoor activity tourism, which have considerable potential to drive investment and job creation in coastal communities, providing benefits for local economies and are important to provide for sustainable communities. Covid 19 has further highlighted both opportunities for working remotely and desire for coastal living; this needs to be matched with appropriate capacity across infrastructure including broadband, water supply and wastewater infrastructure. The need for addressing and ensuring the provision and capacity of such services to facilitate quality of life and viable livelihoods is important in terms of supporting rural communities but this need should be satisfied with similar consideration given toward protecting biodiversity and sensitive receptors such as European Sites and their features of interest. Whilst the type, scale and location of actions under this objective such as development in product innovation is unknown, it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Investment in advisory services	
	2. Training to improve skills and develop human capital	
	3. Events	
	4. Awareness raising, communication to the wider public	
	5. Capacity building	
	6. Development of marketing innovation	
	7. Development of process innovation	
	8. Development of product innovation	
	9. Cooperation	
	10. Pilot projects	
	3.1.3 Actions to develop and promote niche tourism will be addressed through:	In the context of tourism, niche is referring to products, services or interests that are shared by a small group of people. Niche tourism is the umbrella term covering a range of types of tourism. Niche tourism products and services serve a specialised segment of the tourism industry. Niche tourism is the antithesis of mass tourism. It is the opposite of large group tours, all-inclusive holiday resorts and over tourism. Other terms that identify similar, small market segments include alternative tourism and special interest tourism.
	1. Advisory services	

	2. Additional investments to support business development (strategy development, administration, equipment)	Coastal and inland waterbody areas that are the subject of this Priority support a range of European Sites and features of interest that are sensitive to human recreational activities, such as walking, water-based sports and pursuits, climbing etc. Increasing in tourism activities in such areas can also pose significant indirect impacts such as the introduction of non-native invasive species. This impact is particularly problematic at inland waterbodies providing water-based recreational activities. Coastal SACs and SPA support many types of Annex 1 habitats that are particularly sensitive to physical disturbance such as dune habitats, coastal peatland habitats and maritime vegetation associated with sea cliff habitats. The Annex 2 species and special conservation bird species that are supported by these European Sites, such as petalwort, Vertigo snails, otters, marsh fritillary etc are also sensitive to physical disturbance and changes to abiotic factors that underpin the structure and function of the habitats that support them. Coastal bird species that are sensitive to human disturbance include choughs as well as cliff nesting seabirds. Research has shown that the breeding success of choughs are sensitive to human disturbance (Kerbiriou, 2006 & 2009), while other research has identified a potential link between high tourism activity and reduced cliff nesting seabird breeding success (Beale & Monaghan, 2005; Gill 2007). Inland waterbodies support a range of species that are sensitive to human disturbance including breeding and overwintering bird species, otters and fish species. The potential for in combination effects from other sectors should inform any environmental assessments.
	3. Other business-diversification operations not involving fisheries, aquaculture, or innovation	
	4. Training to improve skills and develop human capital.	

	3.1.4 Actions to build capacity develop greater co-operation between all relevant stakeholders in coastal communities will be addressed through:	Professional training and networking can result in improved environmental performance; the training and capacity building should seek to educate on key environmental challenges of biodiversity and climate change, adaptation and where possible co benefits responses. Examples of good practice are found in examples such as the rainwater harvesting on Inis Oirr, community energy planning on Inis Mor. Given the absence of information surrounding examples of pilot projects it is difficult at this stage to identify the potential mechanism by which actions could give rise to adverse effects to European Sites and their features of interest. Notwithstanding this it is noted that should these actions result in land use effects that will interact with European Sites and their features of interest, then the potential for adverse effects may arise.
	1. Awareness raising, communication to the wider public.	
	2. Training to improve skills and develop human capital.	
	3. Animation and capacity building for CLLD	
	4. CLLD preparatory actions	
	5. Cooperation in CLLD.	
	6. Advisory services	
	7. Pilot projects	
	8. Studies and research	
	3.1.5 Actions to ensure that Ireland's coastal resource is managed to sustain its physical character and environmental quality will be addressed through.	Actions, specific interventions, monitoring and restoration are all positive as they contribute to addressing the pressures on the marine and coastal environments and, based on best scientific data and advice can be a significant positive measure that can contribute towards the achievement of conservation objectives of European Sites. In particular the action for the management and monitoring of European Sites will contribute towards achieving these objectives. Furthermore it is noted that, If marine protected areas (MPAs) are carefully designed; rather than focusing on just one outcome, the achievement of the main goals of such areas, namely management of fishing stocks, biodiversity, and carbon reduction can be optimised. Critically research has shown that increasing MPAs can boost fish supplies instead of diminishing them (Davies et al., 2021). If countries were to value biodiversity and fish stocks equally, the ideal optimization
	1. Advisory services	
	2. Environmental Services	
	3. Awareness raising, communication to the wider public	
	4. Specific investments for improving aquatic habitats and biodiversity	

	5. Natura 2000 areas management and monitoring (soft operations)	would be to protect 45%of the ocean, which would lead to 71% of the maximum biodiversity benefits, 92% of the possible food benefits, and 29% of the carbon benefits (Sala et al. 2021). Protecting our natural and economic assets and infrastructure means adapting to the inevitable consequences of climate change. As an alternative to building yet more 'grey' infrastructure (dams, dikes or concrete barriers), climate adaptation should be based on natural and nature-based solutions – wetlands such as salt marshes, seagrass fields, mangroves and dunes, for instance. In coastal regions, developing green infrastructure will help preserve biodiversity, coastal ecosystems and landscapes, strengthening the sustainable development of tourism and of the coastal regions' economy. These adaptation activities will have the potential to become a new sector of the blue economy in its own right and the implementation of these actions will have the potential to contributing to achieving these positive outcomes.
	6. MPA management and monitoring (soft operations)	
	7. Investments in MPA restoration	
	3.1.6 Actions to protect and promote the sense of place and culture and the quality, character and distinctiveness of the Irish coastal communities will be addressed through:	These actions, which aim to provide positive effects for communities and cultural heritage will not result in land use effects and will not have the potential to result in adverse effects to European Sites.
	1. Investment in marketing activities to support business development.	
	2. Investment in advisory services.	
	3. Pilot projects in CLLD.	

	4. Socio-cultural development in CLLD.	
	5. Animation and capacity building for CLLD	

Table 5.5: Evaluation of Priority 4

Specific Objectives	Actions	Evaluation
4.1. Strengthening sustainable sea and ocean management through the promotion of marine knowledge, maritime surveillance or coast guard cooperation	***Actions relating to data collection, access and analysis that will deliver on national obligations and measure changes in the marine environment will be addressed through:***	All actions associated with this Priority relate to studies, research, knowledge sharing, investment in software etc. In and of themselves they do not give rise to direct effects on parameters being research based. It is emphasised that the focus of the research and the scientific evidence base is essential to urgently address the existing and predicted effects of climate change on marine, coastal and freshwater ecosystems with associated significant effects for European Sites designated for features of interest reliant on these ecosystems. The challenges posed by climate change to the European Site network has been well documented in published literature for example by the EU Guidelines on climate change and Natura 2000; Araujo et al., 2011; Barredo et al. 2016; Nila et al. 2019; Marchowski et al. 2020; At this juncture, in direct positive effects may be identified for SEOS arising from the research and data gathering and sharing activities. Ensuring the research provides for evidence based decision making and action is essential to maximise the environmental benefits of these actions. Effects of climate change on the marine environment is identifying a range of significant, adverse and in combination /cumulative effects. Changes to plankton life and structure in the Celtic Sea from 1958-2014 is shown below (Climate Ireland: accessed 08.05.2022) Annual mean abundance expressed as anomalies above and below the long term mean for a number of plankton life-forms (functional group) from 1958-2014 for the Celtic Sea. Ref: Global Marine Ecological Status Report, results from the global CPR Survey
	Studies and research,	
	Knowledge sharing,	
	Investment in IT – hardware,	
	Data collection,	
	Investment in IT –software.	
	Actions to ensure data compatibility will be addressed through:	
	Studies and research	
	Knowledge sharing	
	Data collection	
	Investment in IT –software	

	Actions to improve the understanding of the impacts of human activities and climate change on the marine environment will be addressed through:	2014/2015. SAHFOS Technical Report, 11: 1-32. A decreasing temporal trend in the abundance of taxa is observed for many plankton life forms in the Celtic Sea. This suggests that a major ecosystem alteration has taken place over the period examined . As an example of the impact of such changes on maritime activities, it is estimated that increased intensity of storms and the frequency of storm surge events will result in damage to vessels and infrastructure including gear loss in inshore and coastal sector of fisheries and aquaculture, such as crab / lobster pots, oyster trestles, etc. T
	Studies and research	
	Knowledge sharing	
	Data collection	
	Socio-cultural development	
	Actions that streamline Marine data coordination and processing needs will be addressed through:	
	Knowledge sharing	
	Investment in IT – hardware	
	Investment in IT –software	
	Actions to enhance data quality to support evidence-based decision making will be addressed through:	
	Studies and research	
	Knowledge sharing	
	Investment in IT – hardware	
	Investment in IT –software	
	Actions to ensure that Irish marine data and knowledge are made available to all relevant stakeholders will be addressed through:	
	Studies and research	
	Knowledge sharing	
	Investment in IT – hardware	

	Investment in IT –software	
	Actions to understand different stakeholder needs and to ensure EMFAF programme outputs are available to developers, stakeholders and end-users in appropriate formats will be addressed through:	
	Events,	
	Studies and research	
	Knowledge sharing	
	Investment in IT – hardware	
	Investment in IT –software	
	Actions to increase cooperation, research collaboration and information sharing at national, EU and international level will be addressed through	
	Events	
	Awareness raising, communication to the wider public	
	Knowledge sharing	
	Investment in IT – hardware	
	Investment in IT –software	
	Actions to quantify the potential of coastal habitats as carbon sinks will be addressed through:	
	Studies and research	

	Data collection	
	Actions to improve understanding of marine activities that could increase resilience to climate change will be addressed through:	
	Studies and research	
	Knowledge sharing	

5.2.1 Conservation Objectives

The potential for each of the elements of the Seafood Development Programme to undermine the conservation objectives of European Sites is examined in this Section. Table 5.4 below lists the broad conservation objectives categories for European Site habitats and species as outlined in Section 5.5 above. Each of the elements of the Seafood Development Programme are identified and an indication of the Plans potential to result in positive, neutral or adverse effects to the achievement of these conservation objectives is provided.

The following evaluation matrix is used to identify the elements of the Seafood Development Programme that have the potential to result in positive, adverse, both positive and/or adverse and neutral effects to the conservation objectives of Annex 1 habitats, Annex 2 species, wetland habitats and special conservation interest bird species of SPAs.

+	Indicates a potential positive environmental impact
-	Indicates a potential negative environmental impact
+/-	Indicates that both positive and negative environmental impacts are likely or that in the absence of further detail the impact is unclear
Zero 0	Indicates neutral or no significant impact

Table 5.5: Potential Impact of the Seafood Development Programme Priority Objectives on the conservation objectives of Annex 1 habitats & wetland habitat & Annex 2 species & special conservation interests bird species

Condition/Intervention	Habitats			Species			
	Range	Area	Structure & Function	Range	Area	Structure & Function	Population
Priority 1 Objectives	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Priority 2 Objectives	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Priority 3 Objectives	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Priority 4 Objectives	+/0	+/0	+/0	+/0	+/0	+/0	+/0

5.3 IN-COMBINATION EFFECTS

Assessing the possible effects the Seafood Development Programme may have on European Sites, their features of interest and their conservation objectives in combination with other plans or projects is a requirement of the Appropriate Assessment process as outlined in Article 6(3) of the Habitats Directive. The plans and programmes that have been considered are listed in in the following sub-sections. There are many other plans or project that could conceivably interact with the Seafood Development Programme, however the approach to this in-combination assessment aimed to identify those plans and projects that are most likely to have the potential to interaction with the land use activities that will arise during the implementation of the Seafood Development Programme.

5.3.1 An overview of relevant plans, programmes and processes

The July 2020 **Programme for Government** (PFG) the broadest and most overarching statement of government policy - marks a significant increase in the prioritisation of sustainability across all key aspects of government policy including fishery and aquaculture[4] and commits also to supporting the principles and ambition of the EU Biodiversity Strategy and to Marine Planning according to the principles of the Aarhus convention. More specifically it commits, among other goals, to

Reduce the use of inorganic nitrogen fertiliser (p. 33, 67);

Work with farmers and industry to protect and deliver improvements in water quality (p. 41)Seek reforms to the CAP to reward farmers for improving water quality (p. 63).e Seafood Development Programme 2023-2027

Below, more specific relevant policy programmes and plans are summarised in brief with a short tabular synopsis of their alignment or otherwise with the SDP

[4] **Pages 70-71 in section *"Mission: Balanced Regional Development"***

The **Harnessing Our Ocean Wealth – An Integrated Marine Plan (IMP) for Ireland** report, published in 2012, sets out the Government's vision high-level goals and integrated actions to release our marine potential.

Strategy / Plan SEA related objectives	Alignment with / Impact on SDP
HOOW-IMP has been reviewed and monitored in the light of the subsequent increase in sustainability priorities, in particular in relation to its commitment to implement the EU Marine Strategy Framework Directive, EU Water Framework Directive (via River Basin Management Plans) and EU Natura 2000 legislation, Ireland's National Biodiversity Plan and the general commitment to high standards of environmental compliance to promote Ireland's "Clean Green" brand. Exceed €6.4 billion a year in turnover from maritime sectors	IMP commitments are broadly in line with the SDP's "Mission 1" commitment to a Climate Smart and Environmentally Sustainable Seafood Sector and to the commitment to sustainability in fisheries, restoration and conservation of biological resources and good ocean governance, safety, cleanliness and sustainable management contained in SDP Priorities 1,2, 3 and 4.

Building on the emphasis on promoting more balanced regional growth as laid out in the PFG **Our Rural Future** provides a detailed policy statement in this area.

Strategy / Plan SEA related objectives	Alignment with / Impact on SDP
Our Rural Future provides a framework for the development of rural Ireland over the next five years by revitalising rural and coastal communities and promoting employment growth, remote working, better amenities and the promotion of rural Ireland as an alternative to urban living.	- The document stresses the crucial importance of aquaculture and fishery to coastal communities and the coastal economy and employment. - It notes the importance of sustainability and conservation in fishery policy - It notes the contribution of the EMFF 2017-2021 to coastal communities through funding of seven Fishery Local Area Groups (FLAGs) and commits to

A key section is devoted to Agriculture the Marine and Forestry	continued investment in coastal economies through the FLAG system.

A key sectoral policy area is food policy as set out in **Food Wise 2025** which, building on its predecessor programme **Food Harvest 2020**, maintains a strong commitment to environmental sustainability, conservation and biodiversity.

Strategy / Plan SEA related objectives	**Alignment with / Impact on SDP**
This strategy, established in 2015 (and to be replaced by the Agri Food strategy 2030 but currently active) targets significant increase in economic output and exports in food including fishery and aquaculture. It outlines recommendations for the sector including: - A commissioned review of the existing aquaculture licensing system. - A strategy to expand shellfish and aquaculture production taking into account the carrying capacity of bays - Measures to attract increased landings into Irish ports and to accordingly invest in necessary infrastructure. - Improve scale and increase the quantity of seafood in the economy - Raise industry engagement with the "Origin Green" food brand and improve sector environmental sustainability. - Given renewed priority to R&D	Established in 2015, Foodwise 2025 preceded the significantly strengthened emphasis of environmental sustainability, climate action and biodiversity committed to in the PFG (see above). As relevant to Foodwise 2025 objectives the SDP: - Aims to reinforce a streamlined and efficient licensing system (Priority 2) - Notes the both the (positive) potential of underutilised shellfish aquaculture sites to raise productivity as well as the (negative) limited understanding of freshwater surges as a risk to shellfish aquaculture and also excessive norovirus levels in Irish waters. - Notes the importance to market access and diversification of Origin Green

The **National Strategic Plan for Sustainable Aquaculture (NSPSA)** 2021-2030 **(NSPSA)** , the SEA and AA of which are currently being finalised, seeks to promote sustainable aquaculture output and promote scale improved funding and R&D and greater transnational cooperation.

Strategy / Plan SEA related objectives	Alignment with / Impact on SDP
Relevant issues in the NSPSA include: - Consideration of controls in the areas of licence application. - Licensing appeals, terms and conditions. - Enhanced regulatory monitoring - Bay Scale appropriate assessment - Benthic monitoring - Pest control and fish health - Implementation of the Dangerous Substances Directive.	As relevant to the NSPSA the SDP: - Aims to reinforce a streamlined and efficient licensing system (Priority 2) - Foster sustainable aquaculture through investment, data and informational support. Improved water usage and address fragmentation and lack of scale. - Aims to coordinate aquaculture's participation in the National Marine Spatial Planning process - Notes the both the (positive) potential of underutilised shellfish aquaculture sites to raise productivity as well as the (negative) limited understanding of freshwater surges as a risk to shellfish aquaculture and also excessive norovirus levels in Irish waters. -

The **Offshore Renewable Energy Development Plan II (OREDP II)** aims to develop an understanding of the overall resource potential within Ireland's waters and to provide an evidence base for identifying suitable locations for marine based renewable energy in Ireland's Exclusive Economic Zone (EEZ).

Strategy / Plan SEA related objectives	Alignment with / Impact on SDP
Relevant issues in the OREDEPII include:	The SDP:

- Climate and Air Quality (Emissions, Climate Change, GHG, Ocean acidification) - Marine Heritage/ Landscape / seascape (Protected sites, Underwater sites, character areas, Designations) - Marine pollution (Underwater sound, Marine litter, electromagnetic fields, chemical waste) - Material assets (Mineral exploitation and mining, Defence, Aquaculture, Fishing, Marine exploration, Tourism) - Physical environment (Geology and Sediments, Turbidity, Bathymetry, Hydrographic Features) - Water (Microbial pathogens, nutrient content, water chemistry, turbidity0	- Contains commitment to climate change action in its Mission statement and in Policy Objectives 1, 2 and 3 . It notes the "significant consequences" of climate change for seafood production and marine biodiversity and fish migration and distribution. It calls for technical assistance and collaboration, data collection technology and scenario modelling to prepare for and mitigate, respectively, the impact of climate change. - - Recognises the marine environmental as a "national asset that yields multiple commercial and non-commercial benefits in terms of …cultural heritage and biodiversity..". makes specific references to the cultural importance of marine heritage and coastal assets, amenities and communities. - - Recognises and aims to contribution to the reduction of marine pollution. - - Recognises the opportunity of offshore exploration to contribute to the development of community energy development. - - Recognises the importance of nutrient rich waters to bivalve cultivation.

While not specifically addressed as a Plan, Programme or Policy in regard to being assessed in terms of alignment, we note that the Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan (2019) has been developed to make agriculture and seafood sectors more resilient to the effects of climate change and weather-related events.

5.3.2 Northern Ireland and UK considerations

In the context of transboundary consultation requirements responses to the Scoping Report on the SDP were received from the Northern Ireland (NI) Department of Agriculture, Environment

and Rural Affairs (DAERA) Natural Environment Division and the Department for Communities Historic Environment Division (HED) which are summarised in brief below along with several other relevant NI policy initiatives.

Note 1: While both the Marine Plan for NI and the UK Marine Policy Statement are cited by the HED (see below) as relevant plans and programmes for consideration, attention is focused for efficiency on the former, given that NI is the part of the UK with shared water resources (Lough Foyle and Carlingford Lough) as recognised in the DAERA response)

Note 2: This is the first SEA AA process to be undertaken in relation to Fishery and Aquaculture since the implementation of Brexit. Consequently a caveat in the analysis below needs to be borne in mind: Analysis of the extent to which EU legislation remains in force may need to be undertaken.

Plan / Programme / Policy	**Relevance**
DAERA response to SDP Scoping report	DAERA expresses its contentment with the "overall approach and scope" of the SEA of the SDP but calls for the SEA Environmental Report (ER) to "contain a clear statement indicating the opinion about whether or not the implementation of the strategy is likely to have a significant effect on Northern Ireland". The response calls for all potential impacts – directly and indirectly – on NI to be assessed. Carlingford Lough and Lough Foyle – which host fishing and aquaculture activity – are shared water bodies between the Republic and NI. The response notes the impact on coastal zones of EU policies (Structural Funds, CAP, CFP, ESDP and Ten-P) and legislation, particularly the Water Framework Directive
HED response to SDP Scoping report	The HED operates a SLA with DAERA by which it provides authoritative comment and advice in relation to matters of Cultural Heritage. Its comments on the scoping report may be summarised as follows:

	It says that the Draft Marine Plan for NI and the UK Marine Policy Statement are the relevant policy documents for consideration (but see Note 1 above). It welcomes that cultural heritage has been scoped in the assessment. It suggests use of HED's Historic Environment Digital Datasets in order to help "understand the transboundary qualities of heritage" [Amendment suggestion from HED They suggest amending the wording of the SEA objectives around cultural heritage to begin with the words "Protect, conserve and where appropriate enhance…]
Strategic Planning Policy Statement for NI	The objective of this 2015 statement is to further sustainable development in relation to the planning system. Areas of relevance to the SDP include its commitments regarding Mitigating and adapting to climate change Preserving the natural environment Specifically relevant commitments include the requirement for Local Development Plans to take account of the need for marine and terrestrial planning systems to interact and work together as acknowledged by the UK Marine Policy Statement.
Marine Plan for NI	The 2018 Marine Plan for NI aims to promote sustainable development of productive activities, realise marine energy development potential, promote sustainable coastal communities and promote the preservation of marine heritage assets, a healthy adaptable marine economy system and a contribution to climate change mitigation and adaption. It also commits to an evidence based coordinated monitoring and review of marine plans

Towards an Integrated Coastal Zone Management (ICZM) Strategy for NI	The ICZM Strategy for NI aims to support a vibrant viable and informed coastal population and economy through and ecosystem approach, taking decisions about development and conservation using timely and accurate knowledge of impacts and based on the "Precautionary Principle". It is not, however, a statutory document, a conservation or economic/social development or regeneration plan but rather aims to improve integrated management approaches and implementation. The ICZM advocates adaptive management responding to new information and conditions recognising the physical limitations (carrying capacity) of local coastal ecosystems. Participatory planning The role of the North South Ministerial Council (NSMC), Special EU Programmes (in managing North/South environmental initiatives co funded by the EU) and the Cross-Border Aquaculture Initiative (CBAIT) are noted as mechanisms for implementing integrated coastal policies. Key dimensions of policy cooperation in this regard include: Drainage and flood defence Fisheries and Aquaculture management Marine Spatial Planning Commercial fisheries Aquaculture Renewable energy Climate change and coastal protection Commercial port management Water quality management Industrial Pollution and Radiochemical Inspection Drafted in 2006, the document envisaged policy goals over short, medium and long-term horizons. The latter – over an 8-20 year horizon – are most relevant to the current period and include Fully effective integration of coastal zone planning and management systems. Systems to respond to new challenges and opportunities Significant improvements in water quality, marine species diversity and marine economic performance.

NI Regional Development Strategy	This strategy refers to the importance for Local Development Plans to take account of marine planning, legislation (in relation to coastal access) and Marine Plans (see the Marine Plan for NI above). It commits to the establishment of "marine planning for all NI waters – i.e. inshore (out to 12 nautical miles) and offshore (beyond 12 nautical miles) It commits to protecting and enhancing coastal water management and raising the quality of coastal water. It comments to integrating water and land use planning It identifies waterways and coastal areas as heritage assets

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6.0 MITIGATION MEASURES

6.1 INTRODUCTION

This chapter sets out mitigation measures and recommendations appropriate to minimising the adverse effects identified in Chapter 5 of this Natura Impact Statement. Recommended measures to maximise the beneficial effects offered by the Seafood Development Programme for European Sites and their features of interest are also detailed in this Chapter.

Over-arching mitigation measures for the Seafood Development Programme are provided in Section 6.2 below, while mitigation measures and recommendations specific to the Priorities and Actions of the Seafood Development Programme are outlined in Section 6.3.

Mitigation measures and recommendations are structured to align with SEA and AA Mitigation Measures provided for at national level from other relevant plans and programmes. These should also facilitate greater co-ordination and sharing of information intra agency and departmental.

6.2 OVER-ARCHING MITIGATION MEASURES

6.2.1 Overarching Mitigation Measure 1: Oversight and Monitoring

Oversight and monitoring of the SDP 2021-2027 through the Environmental Monitoring Committee and existing controls and checks protocols. In addition, to address and respond to trends relating to environmental issues, the monitoring regime needs to be enforced, targeted in a practical manner to allow for results that enhance the positive measures in the plan, and respond accordingly where adverse effects are identified early in the plan stage. This would also support where positive effects are occurring and learn from these actions. This will facilitate achievement of targets set out in the SDP 2021-2027 including those relevant to other national and EU legislations such as WFD, MSD, Habitats Directive, Birds Directive. Allow for annual review and remedial actions/revisions if adverse effects are identified through this monitoring. This would seek to monitor effects (positive and negative) across key environmental receptors identified through the SEA and AA process namely Biodiversity, Flora

and Fauna, European Sites, water resources and GHG emissions. Enhanced cross reporting between local authorities, EPA, DAFM, DHHLG, DACE and Irish Water as appropriate.

6.3 MITIGATION MEASURES ALIGNMENT WITH MEASURES FROM OTHER PLANS & PROGRAMMES

Mitigation measures from other relevant plans and programmes that will apply for the Seafood Development Programme are listed in Table 6.1 below.

Table 6.1: Mitigation Measures from other Plans and Programme that will apply for the Seafood Development Programme

NMPF Policy	Text
Environmental – Ocean Health Policy 1	Compliance with NMPF policies relating to: • Biodiversity • Non-Indigenous Species • Water Quality • Sea-floor and Water Column Integrity • Marine litter • Underwater Noise

NMPF Policy	Text
	should include demonstration of contribution to the relevant MSFD targets identified
Biodiversity Policy 1	Proposals incorporating features that enhance or facilitate species adaptation or migration, or natural native habitat connectivity will be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF. Proposals that may have significant adverse impacts on species adaptation or migration, or on natural native habitat connectivity must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant adverse impacts on species adaptation or migration, or on natural native habitat connectivity
Biodiversity Policy 2	Proposals that protect, maintain, restore and enhance the distribution and net extent of important habitats and distribution of important species will be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF. Proposals must avoid significant reduction in the distribution and net extent of important habitats and other habitats that important species depend on, including avoidance of activity that may result in

NMPF Policy	Text
Biodiversity Policy 3	Where marine or coastal natural capital assets are recognised by Government: • Proposals must seek to enhance marine or coastal natural capital assets where possible. • Proposals must demonstrate that they will in order of preference, and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant adverse impacts on marine or coastal natural capital assets, or d) if it is not possible to mitigate significant adverse impacts on marine or coastal natural capital assets proposals must set out the reasons for proceeding.
Biodiversity Policy 4	Proposals must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant disturbance to, or displacement of, highly mobile species
Protected Marine Sites Policy 1	Proposals must demonstrate that they can be implemented without adverse effects on the integrity of Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). Where adverse effects from proposals remain following mitigation, in line with Habitats Directive Article 6(3), consent for the proposals cannot be granted unless the prerequisites set by Article 6(4) are met.

NMPF Policy	Text
Protected marine sites Policy 2	Proposals supporting the objectives of protected marine sites should be supported and: • be informed by appropriate guidance • must demonstrate that they are in accordance with legal requirements, including statutory advice provided by authorities relevant to protected marine sites
Protected marine sites Policy 3	Proposals that enhance a protected marine site's ability to adapt to climate change, enhancing the resilience of the protected site, should be supported and: • be informed by appropriate guidance • must demonstrate that they are in accordance with legal requirements, including statutory advice provided by authorities relevant to protected marine sites
Protected marine sites Policy 4	Until the ecological coherence of the network of protected marine sites is examined and understood, proposals should identify, by review of best available evidence (including consultation with the competent authority with responsibility for designating such areas as required), the features, under consideration at the time the application is made, that may be required to develop and further establish the network. Based upon identified features that may be required to develop and further establish the network, proposals should demonstrate that they will, in order of preference, and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant impacts on features that may be required to develop and

NMPF Policy	Text
	further establish the network, or d) if it is not possible to mitigate significant impacts, proposals should set out the reasons for proceeding
Non-indigenous Species Policy 1	Reducing the risk of the introduction and / or spread of non-indigenous species is a requirement of all proposals. Proposals must demonstrate a risk management approach to prevent the introduction of and / or spread of non-indigenous species, particularly when: a) moving equipment, boats or livestock (for example fish or shellfish) from one water body to another, b) introducing structures suitable for settlement of non-indigenous species, or the spread of non-indigenous species known to exist in the area of the proposal
Water Quality Policy 1	Proposals that may have significant adverse impacts upon water quality, including upon habitats and species beneficial to water quality, must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant adverse impacts

NMPF Policy	Text
Water Quality Policy 2	Proposals delivering improvements to water quality, or enhancing habitats and species, which can be of benefit to water quality, should be supported.
Sea-floor and Water Column Integrity Policy 1	Proposals that incorporate measures to support the resilience of marine habitats will be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority and where they contribute to the policies and objectives of this NMPF. Proposals which may have significant adverse impacts on marine, particularly deep sea, habitats must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate significant adverse impacts on marine habitats, or d) if it is not possible to mitigate significant adverse impacts on marine habitats must set out the reasons for proceeding
Sea-floor and Water Column Integrity Policy 2	Proposals, including those that increase access to the maritime area, must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate adverse impacts on important habitats and species

NMPF Policy	Text
Sea-floor and Water Column Integrity Policy 3	Proposals that protect, maintain, restore and enhance coastal habitats for ecosystem functioning and provision of ecosystem services will be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF. Proposals must take account of the space required for coastal habitats, for ecosystem functioning and provision of ecosystem services, and demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise , or c) mitigate for net loss of coastal habitat.
Marine Litter Policy 1	Proposals that facilitate waste re-use or recycling, or that reduce marine and coastal litter will be supported, where they contribute to the policies and objectives of this NMPF. Proposals that could potentially increase the amount of litter that is discharged into the maritime area, either intentionally or accidentally, must include measures (such as development of a waste management plan) to, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate the litter. Demonstration of these measures must provide satisfactory evidence that the proposal is able to manage all waste without creation of litter

NMPF Policy	Text
Underwater Noise Policy 1	Proposals must take account of spatial distribution, temporal extent, and levels of impulsive and / or continuous sound (underwater noise) that may be generated and the potential for significant adverse impacts on marine fauna. Where the potential for significant impact on marine fauna from underwater noise is identified, a Noise Assessment Statement must be prepared by the proposer of development. The findings of the Noise Assessment Statement should demonstrably inform determination(s) related to the activity proposed and the carrying out of the activity itself. The content of the Noise Assessment Statement should be relevant to the particular circumstances and must include: • Demonstration of compliance with applicable legal requirements, such as necessary assessment of proposals likely to have underwater noise implications, including but not limited to: » Appropriate Assessment (AA); » Environmental Impact Assessment (EIA); » Strategic Environmental Assessment (SEA); » Specific response to 'strict protection' requirements of Article 12 of the Habitats Directive in relation to certain species listed in Annex IV of the Directive; and » Species protected under the Wildlife Acts. • An assessment of the potential impact of the development or use on the affected species in terms of environmental sustainability; • Demonstration that significant adverse impacts on marine fauna resulting from underwater noise will, in order of preference and in accordance with legal requirements be: a) avoided, b) minimised, or c) mitigated, or d) if it is not possible to mitigate significant adverse impacts on marine fauna, the reasons for proceeding must be set out. This policy

NMPF Policy	Text
	should be included as part of statutory environmental assessments where such assessments require consideration of underwater noise.
Air Quality Policy 1	Proposals that support a reduction in air pollution should be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF. Proposals must demonstrate consideration of their contribution to air pollution, both direct and cumulative.
Air Quality Policy 2	Where proposals are likely to result in or facilitate an increase in air pollution, proposals should demonstrate that they will, in order of preference in accordance with legal requirements and standards: a) avoid, b) minimise, or c) mitigate air pollution
Climate Change Policy 1	Proposals should demonstrate how they: • avoid contribution to adverse changes to physical features of the coast; • enhance, restore or recreate habitats that provide a flood defence or carbon sequestration ecosystem services where possible. Where potential significant adverse impacts upon habitats that provide a flood defence or carbon sequestration ecosystem services are identified, these must be in order of preference and in accordance with legal requirements: a) avoided, b) minimised, c)

NMPF Policy	Text
	mitigated, d) if it is not possible to mitigate significant adverse impacts, the reasons for proceeding must be set out. This policy should be included as part of statutory environmental assessments where such assessments are required
Climate Change Policy 2	For the lifetime of the proposal, the following climate change matters must be demonstrated: • estimation of likely generation of greenhouse gas emissions, both direct and indirect; • measures to support reductions in greenhouse gas emissions where possible; • likely impact of climate change effects upon the proposal from factors including but not limited to: sea level rise, ocean acidification, changing weather patterns; • measures incorporated to enable adaptation climate change effects; • likely impact upon climate change adaptation measures adopted in the coastal area relevant to the proposal and/or adaptation measures adopted by adjacent activities; • where likely impact upon climate change adaptation measures in the coastal area relevant to the proposal and/or adaptation measures adopted by adjacent activities is identified, these impacts must be in order of preference and in accordance with legal requirements: a) avoided, b) minimised, c) mitigated, d) if it is not possible to mitigate significant adverse impacts, the reasons for proceeding must be set out.
Co-existence Policy 1	Proposals should demonstrate that they have considered how to optimise the use of space, including through consideration of opportunities for co-existence and co-operation with other activities, enhancing other activities where appropriate. If proposals cannot avoid significant adverse impacts (including displacement) on other activities they must, in order of

NMPF Policy	Text
	preference: a) minimise significant adverse impacts, b) mitigate significant adverse impacts, or c) if it is not possible to mitigate significant adverse impacts, proposals should set out the reasons for proceeding.
Infrastructure Policy 1	Infrastructure Policy 1 Appropriate land-based infrastructure which facilitates marine activity (and vice versa) should be supported. Proposals for appropriate infrastructure that facilitates the diversification or regeneration of marine industries should be supported.
Access Policy 1	Proposals, including in relation to tourism and recreation, should demonstrate that they will, in order of preference: a) avoid, b) minimise, or c) mitigate significant adverse impacts on public access
Access Policy 2	Proposals demonstrating appropriate enhanced and inclusive public access to and within the maritime area, and that consider the future provision of services for tourism and recreation activities, should be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF.

NMPF Policy	Text
Employment Policy 1	Proposals should demonstrate contribution to a net increase in marine related employment in Ireland, particularly where the proposals are • in line with the skills available in Irish coastal communities adjacent to the maritime area, • improve the sustainable use of natural resources, • diversify skills to enable employment in emerging industries.
Heritage Assets Policy 1	Proposals that demonstrate they will contribute to enhancing the significance of heritage assets will be supported, subject to the outcome of statutory environmental assessment processes and subsequent decision by the competent authority, and where they contribute to the policies and objectives of this NMPF. Proposals unable to contribute to enhancing the significance of heritage assets will only be supported if they demonstrate that they will, in order of preference: a) avoid, b) minimise, or c) mitigate harm to the significance of heritage assets, and d) if it is not possible, to mitigate harm, then the public benefits for proceeding with the proposal must outweigh the harm to the significance of the heritage assets. (see definition of 'Public Benefits' in the Glossary
Rural Coastal and Island Communities Policy 1	Proposals contributing to access, communications, energy self-sufficiency or sustainability of rural coastal and / or island communities should be supported. Proposals should ideally be inclusive of continual education, skills development and

NMPF Policy	Text
	training in marine sectors, thus improving the sustainability, social benefits and economic resilience of rural and island communities.
Seascape and Landscape Policy 1	Proposals should demonstrate how the likely significant impacts of a development on the seascape and landscape of an area have been considered. Proposals will only be supported if they demonstrate that they, in order of preference: a) avoid, b) minimise, or c) mitigate significant adverse impacts on the seascape and landscape of the area. d) If it is not possible to mitigate significant adverse impacts, proposals must set out the reasons for proceeding. This policy should be included as part of statutory environmental assessments
Social Benefits Policy 1	Proposals that enhance or promote social benefits should be supported. Proposals unable to enhance or promote social benefits should demonstrate that they will, in order of preference: a) minimise, or b) mitigate significant adverse impacts which result in the displacement of other existing or authorised (but yet to be implemented) activities that generate social benefits.

NMPF Policy	Text
Social Benefits Policy 2	Proposals that increase the understanding and enjoyment of the marine environment (including its natural, historic and social value), or that promote conservation management and increased education and skills, should be supported
Transboundary policy 1	Proposals that have transboundary impacts beyond the maritime area, on either the terrestrial environment or neighbouring international jurisdictions, must show evidence of consultation with the relevant public authorities, including terrestrial planning authorities and other country authorities. Proposals should consider transboundary impacts throughout the lifetime of the proposed activity
Aquaculture Policy 1	Proposals for sustainable development of aquaculture that: • demonstrate use of innovative approaches, and / or • contribute to diversification of species being grown in a given locality, particularly proposals applying a multi-trophic approach, and / or • enhances resilience to the effects of climate change should be supported
Aquaculture Policy 2	Non-aquaculture proposals in aquaculture production areas must demonstrate consideration of, and compatibility with, aquaculture production. Where compatibility is not possible, proposals must demonstrate that they will, in order of

NMPF Policy	Text
	preference: a) avoid; b) minimise; c) mitigate significant adverse impacts on aquaculture. d) If it is not possible to mitigate significant adverse impacts upon aquaculture, proposals should set out the reasons for proceeding.
Aquaculture Policy 3	Land-based coastal infrastructure that is critical to and supports development of aquaculture should be supported, in accordance with any legal requirements and provided environmental safeguards contained within authorisation processes are fully met
Defence and Security Policy 1	Any proposal that has the potential to interfere with the performance by the Defence Forces of their security and non-security related tasks must be subject to consultation with the Defence Organisation. This includes potential interference with: • Safety of navigation and access to naval facilities; • Firing, test or exercise areas; • Communication, and surveillance systems; • Fishery protection functions. Proposals should only be supported where, having consulted with the Defence Organisation, they are satisfied that it will not result in unacceptable interference with the performance by the Defence Forces of their security and non-security related tasks. Any proposal will be subject to the relevant Environmental Assessments, as set out in the introduction to this NMPF.

NMPF Policy	Text
ORE Policy 1	Proposals that assist the State in meeting the Government's offshore renewable energy targets, including the target of achieving 5GW of capacity in offshore wind by 2030 and proposals that maximise the long-term shift from use of fossil fuels to renewable electricity energy, in line with decarbonisation targets, should be supported. All proposals will be rigorously assessed to ensure compliance with environmental standards and seek to minimise impacts on the marine environment, marine ecology and other maritime users
RE Policy 4	Decisions on ORE developments should be informed by consideration of space required for other activities of national importance described in the NMPF
Fisheries Policy 1	Proposals that may have significant adverse impacts on access for existing fishing activities, must demonstrate that they will, in order of preference: a) avoid, b) minimise, or c) mitigate such impacts. d) If it is not possible to mitigate significant adverse impacts on fishing activity, the public benefits for proceeding with the proposal that outweigh the significant adverse impacts on existing fishing activity must be demonstrated.

NMPF Policy	Text
Fisheries Policy 2	Where significant impact upon fishing activity arising from any proposal is identified, a Fisheries Management and Mitigation Strategy (FMMS) should be prepared by the proposer of development or other maritime area use, in consultation with local fishing interests and other interests as appropriate. All efforts should be made to agree the FMMS with those interests. Those interests should also undertake to engage with the proposer and provide best available, transparent and accurate information and data in a timely manner to help complete the FMMS. The FMMS should be drawn up as part of readying a proposal prior to submission, with measures identified to be considered in finalising conditions of any authorisations granted. Development of the strategy should be coordinated with other relevant assessments such as EIA where possible. The content of the Fisheries Management and Mitigation Strategy (FMMS) should be relevant to the particular circumstances and could include: • An assessment of the potential impact of all stages of the development or other suggested use on the affected fishery or fisheries, both in socio-economic terms and in relation to environmental sustainability. This assessment should include consideration of any impact upon cultural identity within fishing communities, as well as identifying indirect / in-combination matters. • A recognition that the disruption to existing fishing opportunities / activity should be minimised as far as possible. • Demonstration of the public benefit(s) that outweigh the significant impacts identified. • Reasonable measures to mitigate any constraints which the proposed development or use

NMPF Policy	Text
	may place on existing or proposed fishing activity. • Reasonable measures to mitigate any potential impacts on sustainability of fish stocks (e.g. impacts on spawning grounds or areas of fish or shellfish abundance) and any socio-economic impacts. Where it does not prove possible to agree the FMMS with all interests: • Divergent views and the reasons for any divergence of views between the parties should be fully explained in the FMMS, and dissenting views should be given a platform within the said FMMS to make their case. • Where divergent views are identified, relevant public authorities should be engaged to identify informal and formal steps designed to enable proposal(s) to progress
Fisheries Policy 3	Proposals that enhance the sustainability of fisheries or support a sustainable fishing industry, including the industry's diversification and or enhanced resilience to the effects of climate change, should be supported provided they fully meet the environmental safeguards contained within authorisation processes
Fisheries Policy 4	Infrastructural proposals that enable access to fishing activities should be supported provided they fully meet the environmental safeguards contained within authorisation processes.

NMPF Policy	Text
Fisheries Policy 5	Proposals, regardless of the type of activity they relate to, enhancing essential fish habitat, including spawning, nursery and feeding grounds, and migratory routes should be supported. If proposals cannot enhance essential fish habitat, they must demonstrate that they will, in order of preference: a) avoid, b) minimise, c) mitigate significant adverse impact on essential fish habitat, including spawning, nursery and feeding grounds, and migration routes. d) If it is not possible to mitigate significant adverse impact on essential fish habitat, proposals must set out the reasons for proceeding
Fisheries Policy 6	Ports and harbours should seek to engage with fishing and other relevant stakeholders at an early stage to discuss any changes in infrastructure that may affect them. Any port or harbour developments should take account of the needs of the dependent fishing fleets with a view to avoiding commercial harm where possible. Where a port or harbour has reached a minimum level of infrastructure required to support a viable fishing fleet, there should be a presumption in favour of maintaining this infrastructure, provided there is an ongoing requirement for it to remain in place and that it continues to be fit for purpose.

NMPF Policy	Text
Ports, Harbours and Shipping Policy 2	Proposals that may have a significant impact upon current activity and future opportunity for expansion of port and harbour activities should demonstrate that they will, in order of preference: a) avoid, b) minimise, or c) mitigate significant adverse impacts, and d) if it is not possible to mitigate significant adverse impacts on current activity and future opportunity for expansion of port and harbour activities, proposals should set out the reasons for proceeding
Ports, Harbours and Shipping Policy 5	Proposals for capital dredging will be supported where it is necessary to safeguard national port capacity and Ireland's international connectivity, and where required compliance assessments associated with authorisations have been carried out and incorporated into subsequent competent authority decision(s).
Ports, Harbours and Shipping Policy 6	In areas of authorised dredging activity, including those subject to navigational dredging, proposals for other activities will not be supported unless they are compatible with the dredging activity.

NMPF Policy	Text
Ports, Harbours and Shipping Policy 7	Proposals for maintenance dredging activity will be supported where: • relevant decisions by competent authorities incorporate the outcome of statutory environmental assessment processes, as well as necessary compliance assessments associated with authorisations, including in relation to the planning process; • there will be no significant adverse impact on marine activities or uses or the maritime area. Any potential adverse impact will be, in order of preference, avoided, minimised or mitigated; • dredged waste is managed in accordance with internationally agreed hierarchy of waste management options for sea disposal; • if disposing of dredged material at sea, existing registered disposal sites are used, in preference to new disposal sites; and • where they contribute to the policies and objectives of this NMPF.
Ports, Harbours and Shipping Policy 8	Proposals that cause significant adverse impacts on licensed disposal areas should not be supported. Proposals that cannot avoid such impact must, in order of preference" a) minimise, b) mitigate, or c) if it is not possible to mitigate the significant adverse impacts, proposals must set out the reasons for proceeding.
Ports, Harbours and Shipping Policy	9 Proposals for the management of dredged material must demonstrate that they have been assessed against the waste hierarchy (see Glossary).

NMPF Policy	Text
Ports, Harbours and Shipping Policy 10	Proposals identifying new dredge disposal sites which are subject to best practice and guidance from previous studies should be supported where: • competent authority decisions incorporate necessary compliance assessments associated with authorisations; and • they contribute to the policies and objectives of this NMPF. Proposals must include an adequate characterisation study, be assessed against the waste hierarchy and must be informed by consultation with all relevant stakeholders.
Sport and Recreation Policy 1	Proposals that promote sustainable development of water-based sports and marine recreation, while enhancing community health, wellbeing and quality of life, should be supported, provided that due consideration is given to environmental carrying capacities and tourism pressures.
Sport and Recreation Policy 2	Proposals should demonstrate the following in relation to potential impact on recreation and tourism: • The extent to which the proposal is likely to adversely impact sports clubs and other recreational users, including the extent to which proposals may interfere with facilities or other physical infrastructure. • The extent to which any proposal interferes with access to

NMPF Policy	Text
	and along the shore, to the water, use of the resource for recreation or tourism purposes and existing navigational routes or navigational safety. • The extent to which the proposal is likely to adversely impact on the natural environment.
Sport and Recreation Policy 3	Opportunities to promote inclusive development of water-based sports and marine recreation should be supported, where appropriate and at the applicable scale, with a focus on facilities for people with disabilities.
Sport and Recreation Policy 4	Proposals that improve access to marine and coastal resources for tourism activities, and sport and recreation should be supported, where appropriate, at the applicable scale and aligned with existing development plans
Sport and Recreation Policy 5	Proposals should seek to enhance water safety through provision of appropriate International Organization for Standardization (ISO) and European Committee for Standardization (CEN) compliant safety signage. In general the safety of persons should be a key consideration for planners and due consideration should be given to best practice guidance for marine and coastal recreation areas endorsed by the Visitor Safety in the Countryside Group

NMPF Policy	Text
Tourism Policy 1	Where appropriate, proposals enabling, promoting or facilitating sustainable tourism and recreation activities, particularly where this creates diversification or additional utilisation of related facilities beyond typical usage patterns, should be supported.
Tourism Policy 2	Proposals must identify possible impacts on tourism. Where a potential significant impact upon tourism is identified it should be demonstrated how the potential negative consequences to tourism in communities will be minimised. This must include assessment of how the benefits of proposals are not outweighed by potential negative impacts
Tourism Policy 3	Proposals for tourism development should seek to optimise facilities and use of space by taking a cross-sectoral development approach that provides for multiple activities, whilst minimising the extent to which the proposal is likely to adversely impact on the natural environment

NMPF Policy	Text
Wastewater Treatment and Disposal Policy 1	Proposals by Irish Water related to the treatment and disposal of wastewater that: i) service the social and economic development of the country under the National Planning Framework; ii) resolve environmental issues at priority areas identified by the EPA; iii) contribute to the realisation of the objectives of: • Ireland's River Basin Management Plan 2018 – 2021 • The Water Services Policy Statement 2018 – 2025 • Marine Strategy Framework Directive 2012 - 2020 should be supported, provided they fully meet the environmental safeguards contained within relevant authorisation processes
Wastewater Treatment and Disposal Policy 2	Proposals that have the potential to significantly adversely affect existing and planned wastewater management and treatment infrastructure where a consent or authorisation or lease has been granted or formally applied for by Irish Water should not be authorised unless: • compatibility with the existing, authorised, proposed or otherwise identified in consultations with Irish Water activity, can be satisfactorily demonstrated; • the proposal is clearly of strategic or national importance. Where possible, proposals that may affect Irish Water activities or plans should engage with Irish Water at the earliest available opportunity. Compatibility should be achieved, in order of preference, through: a) avoiding adverse impacts on those activities; and / or b) minimising impacts where they cannot be avoided; and / or c) mitigating impacts where they cannot be minimised.

NMPF Policy	Text
NMPF Appendix F supporting actions	Continued development of maps setting out best available knowledge in relation to the distribution of highly mobile and migratory species. Develop statutory marine planning guidelines on Development Management. This will be a step-by step guide for those interacting with the new planned development management system. This will be informed by existing statutory guidelines developed under S.28 of the Planning and Development Act 2000 (as amended). A matter to be addressed in these guidelines is improvement of transparency and identification of how development management processes can be used to identify and contribute to addressing evidence gaps, furthering our understanding of the maritime area and reducing duplication of effort in evidence gathering. Development of guidelines will include identifying where in marine decisions environmental considerations (including assessments and of cumulative impacts) need to be identified and addressed as well as identifying relevant codes of practice, guidance etc. such as in relation to management of non-native species. Departments and Public Bodies will be involved with development including through the MLSG and the MCG, as a minimum including Departments identified in Appendix A as follows: Agriculture, Food and the Marine; Tourism, Culture, Arts, Gaeltacht, Sport and Media; Environment, Climate and Communications; Defence; Housing, Local Government and Heritage; Enterprise, Trade and Employment; Public Expenditure and Reform; Transport; Foreign Affair.

NMPF Policy	Text
Draft River Basin Management Plan	
100 Aquaculture	DAFM to seek to improve access to information through the launch of an online mapping viewer of licensed aquaculture sites in Ireland which will link to licence information already available online.
101 Aquaculture	DAFM and DHLGH to review opportunities to strengthen the links between the Aquaculture licensing process and the objectives of the WFD
102 Aquaculture	DHLGH will seek to implement a new legislative and management framework for shellfish waters in Ireland.
103 Aquaculture	Roll out of training on the new water and planning guidelines to practitioners

NMPF Policy	Text
104 Aquaculture	Progress amendments to the planning and development legislation to give effect to the new guidance

6.4 MIITIGATION FOR PRIORITY ACTIONS

Table 6.2 to 6.4 provide mitigation measures for specific actions identified under Priority 1, 2 and 3 of the Seafood Development Programme as having potential to result in adverse effects to European Sites.

Table 6.2: Mitigation Measures identified for Priority 1 Actions

1.1.1.1 Actions to reduce unwanted catches will be addressed through:	Adherence to the requirements under the Land Obligations will contribute to minimising unwanted catches. Notwithstanding this it is noted that recent analysis has found that control and enforcement of the landing obligation remain challenging, that Member States have not adopted the necessary control measures and that significant undocumented discarding of catches occur. Measures should be put in place to enable fishers to evaluate the financial implications of developing and using more selective gears. The promotion of best practice guidelines and financial assessment toolkits for operators should form part of any future evolution of production equipment and gear selectivity. Examples of such best practice and financial toolkits has been developed by Seafish (a UK Non-Departmental Public Body). The fishing industry and fishers should be involved in innovations to selective gears at every stage of the dev process. Industry-science collaboration has been identified as a key requirement for the successful introduction and continued use of new selectivity gear.
1. Investment in on-board production equipment	
2.Studies and research	
3. Pilot projects	
4.Gear selectivity to reduce unwanted catches.	
1.1.1.3 Actions to support young fishermen, particularly existing crew of SSCF vessels, to enter the sector and facilitate generational renewal will be addressed through:	The implementation of measures under the Natura Fisheries Plans, as required under the "Fisheries Act" will have the potential to mitigate the potential for the negative effects of SSCF vessels on European Sites. The National Inshore Fisheries Forum will be tasked to continue the works towards identifying solutions for the sustainable management of inshore fisheries. Continued implementation of the Inshore Fisheries Conservation Scheme or similar under the current EMFAF will provide supports to young fishermen that aim to ensure sustainable inshore fisheries and the protection of the environment in general and European Sites in particular.
1. First acquisition of a fishing vessel	
2. Training to improve skills and develop human capital	
1.2.1 Actions to improve energy efficiency, reduce carbon emissions and increased usage of fuel efficient fishing gears on board fishing vessels will be addressed through:	Whilst the type, scale and location of actions under this objective such as investment in renewable energy systems is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA). Monitoring of this action will be useful to determine take of uptake and energy savings/increase in renewable energy sources.
1. Investment in reduction of energy use and energy efficiency.	

2. Investment in renewable energy systems	
1.6.6 Actions to reduce the use of fishing gear most harmful to biodiversity	Adherence to the requirements under the Land Obligations will contribute to minimising unwanted catches. Notwithstanding this it is noted that recent analysis has found that control and enforcement of the landing obligation remain challenging, that Member States have not adopted the necessary control measures and that significant undocumented discarding of catches occur. Measures should be put in place to enable fishers to evaluate the financial implications of developing and using more selective gears. The promotion of best practice guidelines and financial assessment toolkits for operators should form part of any future evolution of production equipment and gear selectivity. It has been noted by the Marine Institute (pers. comm.) that uptake of similar measures listed under this Action at the fleet level or generally has heretofore been low. The implementation of the above measures will aim to contribute to improved uptake in the future. Examples of such best practice and financial toolkits has been developed by Seafish (a UK Non-Departmental Public Body). The fishing industry and fishers should be involved in innovations to selective gears at every stage of the dev process. Industry-science collaboration has been identified as a key requirement for the successful introduction and continued use of new selectivity gear. The designation of MPAs will have the potential to further protect Annex 1 Habitats and Annex 2 Species. The implementation of measures under the Natura Fisheries Plans, as required under the "Fisheries Act" will have the potential to combine with these actions to afford protection to European Site.
1. Gear modification to minimise habitat impacts,	
2. Gear selectivity to reduce unwanted catches,	
3. Gear selectivity in relation to endangered, threatened and protected species,	
4. Natura 2000 areas management and monitoring (soft operations),	
5. MPA management and monitoring (soft operations),	
6. Advisory services,	
1.6.7 Actions to support restoration to improve the status of Habitats Directive habitats and species will be addressed through:	Restoration and improvement projects supported by this action will be subject to Appropriate Assessment to ensure that the proposed methods used for achieving restoration and improvements are consistent with the conservation objectives of European Sites. In order the strengthen consistency between this Action and the overall aims of the Habitats Directive the Action has been revised as follows (revisions highlighted in blue text): ***1.6.7 Actions to support maintenance and restoration to maintain and/or improve the status of Habitats Directive habitats and species will be addressed through:*** 2. . Specific investments for maintaining and/or improving aquatic habitats and biodiversity
1. Investments in Natura 2000 areas restoration,	
2. Specific investments for improving aquatic habitats and biodiversity.	

Table 6.3: Mitigation measures for Priority 2 Actions

2.1.1 Actions to utilise technology and enhanced knowledge to facilitate growth will be addressed through investment in	There exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA). In line with existing consent and licencing requirements any future renewable energy land use activities facilitated by investments in this area or pilot projects initiated under this Action will require to be subject to screening for Appropriate Assessment and where necessary Appropriate Assessment. These procedures will ensure that the potential for significant effects are identified and such land use activities will only be permitted to proceed in accordance with Article 6(3) & 6(4) of the Habitats Directive.
1. Advisory services	
2.Studies and Research	
3. Investment in animal welfare	
4. Knowledge sharing	
5. Training to develop skills and develop human capital.	
6. Investment in reduction of energy use and energy systems	
7. Investment in renewable energy systems	
8. Investment in on board production equipment	
9. Training to develop skills and develop human capital.	
10. Additional investments to support business development.	
11. Events	
12. Data collection	
13. Development of marketing innovation	
14. Food quality and hygiene safety	

15. Pilot Projects	
2.1.2 Actions to promote the sustainable development of new and existing enterprises will be addressed through investment in	An additional action that will further promote sustainable development and assist in avoiding the potential for negative impacts to European Sites and biodiversity in general will be the provision of advice and guidance relating to the appropriate siting of aquaculture developments. It is noted that the Article 17 reporting has highlighted the fact that "greater controls (*such as Bay Area Assessments* have also been placed on aquaculture, including site location and requirement for environmental management" The European Commission have published guidance on aquaculture and European Sites under the publication Guidance on Aquaculture and Natura 2000 (2018). It is recommended that the presence of this guidance is identified and referred to in the SDP. With regard to actions relating to additional investments to support business and productive investments in aquaculture, it is noted that, whilst the type, scale and location of actions under this actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA). In particular referencing requirements under the Maritime Area Planning Act 2021 and polices in the MSFD, such as Protected Marine Sites Policies 1-3, Aquaculture Policies 1-3 in the NMPF are also pertinent and note that Aquaculture Policy 3 states: Land-based coastal infrastructure that is critical to and supports development of aquaculture should be supported, in accordance with any legal requirements and provided environmental safeguards contained within authorization processes are fully met
1. Advisory services	
2. Environmental Services	
3. Productive investments for sustainable aquaculture	
4. Training to improve skills and develop human capital.	
5. Investments in safety equipment.	
6. Water usage and quality in aquaculture	
7. Additional investments to support business development.	
8. Events	
9. Investment in reduction of energy use and efficiency	
10. Investment in renewable energy systems	
11. Development of product innovation	
12. Development of marketing innovation	
13. Investment in marketing activities to support business development.	

2.1.3 Actions to reduce, recover, and dispose of marine litter will be addressed through investment in	Actions to reduce, recover and dispose of marine litter should be based on empirical marine litter monitoring data. Monitoring should be based on best practice and up to date approaches to marine litter monitoring such as the use of optical mapping and acoustic mapping. Where appropriate best practice scientific models used to predict the fate of litter in the sea should be used to inform actions for the recovering of marine litter. Approaches to marine litter recovery shall be appropriate for the habitats affected. Heretofore removal activities have been divided into two main categories: retrieval performed by trawling or removal performed through diving surveys (Madricardo et al., 2020). The most appropriate and sensitive approach to litter marine should be adopted, taking into account the sensitivity of the receiving habitat. For instance removal of marine litter from reef habitats by trawling will have the potential to result in further damage to this habitat. Removal projects within or adjacent to European Sites shall be subject to screening for appropriate assessment and where necessary Natura Impact Statement and Appropriate Assessment.
1. The retrieval and proper disposal of Marine litter	
2. Awareness raising and communication to the wider public.	
2.1.4 Actions to protect biodiversity in marine habitats will be addressed through	Amend the wording of this Action so that includes freshwater habitats as follows: "Actions to protect biodiversity in marine **and freshwater** habitats will be addressed through…."
1. Natura 2000 areas management and monitoring.	
2. Data collection	
2.1.5. Actions to build public and stakeholder awareness of the importance of the Irish aquaculture sector will be addressed through	The environmental challenges posed by aquaculture to the environment and European Sites shall form part of future public and stakeholder awareness initiatives. Solutions to these challenges will continually evolve as a result of ongoing research and the awareness initiatives shall disseminate information regarding the latest best scientific knowledge and practice relating to aquaculture and the avoidance and minimisation of environmental challenges.
1. Awareness raising, communication to the wider public.	
2.Events	

2.1.8. Actions to reinforce a streamlined and efficient licensing system will be addressed through investments for control and enforcement for public authorities.	Ensure that as part of the streamlined and efficient licencing system all aquaculture projects requiring a licence are subject to screening for Appropriate Assessment and where necessary Natura Impact Statements and that the competent authority in this case is the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine undertakes Screening for Appropriate Assessment and Appropriate Assessment.
2.2.2 Actions to support the development of the processing sector by adding value to raw material will be addressed through	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects. Where pilot projects, , development of product innovations and/or the development of process innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
1. Advisory Services	
2. Capacity Building	
3. Knowledge sharing	
4. Pilot Project	
5. Development of product innovation	
7. Development of process innovation	
8. Development of marketing innovation	
2.2.3 Actions to support the development of operational optimisation in the processing sector will be addressed through	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Similarly capacity building, studies and research can increase awareness and understanding of key environmental challenges and should continue to inform such actions. Where pilot projects, , development of product innovations and/or the development of process innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including
1. Advisory Services	
2. Capacity Building	
3. Knowledge sharing	
4. Pilot Project	
5. Development of process innovation	

6. Studies and research	County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
7. Additional investments to support business development	
2.2.4 Actions to build competitiveness, promote economies of scale and employment in the processing sector will be addressed through investment in	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Similarly capacity building, studies and research can increase awareness and understanding of key environmental challenges and should continue to inform such actions. Where pilot projects, , development of product innovations and/or the development of process innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
Advisory Services	
Pilot Projects	
Knowledge Sharing	
Capacity building	
Investment in reduction of energy use and energy systems	
Investment in renewable energy systems	
Studies and Research	
2.2.5 Actions to encourage open access to raw material will be delivered through	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Where pilot projects give rise to land use effects such projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities associated with pilot projects is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
1. Capacity Building	
2. Knowledge sharing	
3. Pilot Project	

2.2.6 Actions to differentiate Irish products in order to expand access to high-value, niche markets globally will be addressed through investment in:	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projectsSimilarly capacity building, studies and research can increase awareness and understanding of key environmental challenges and should continue to inform such actions.Where pilot projects and development of product innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
1. Advisory services	
2. Food safety and hygiene safety and	
3. Marketing activities to support business development.	
4. Events	
5. Development of product innovation	
6. Pilot Projects	
7. Studies and Research	
2.2.7 Actions to support investment in measures relating to logistics and market access of fisheries and aquaculture products will be addressed through investment in:	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Where pilot projects give rise to land use effects such projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities associated with pilot projects is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
1. Advisory services	
2. Pilot projects	
3. Studies and research	
2.2.8. Actions to assist processors in developing existing and creating new markets for Irish seafood will be delivered through	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Where pilot projects and additional business investment give rise to land use effects such projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities associated with pilot projects and generated by
5. Advisory Services	
6. Pilot Project	

7. Development of marketing innovation 8. Studies and research 9. Additional investments to support business development. 10. Events 11. Awareness raising, communication to the wider public.	additional business investment is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
2.2.9 Actions to support blue bioeconomy and marine biorefinery development in the processing sector will be delivered through 1. Advisory Services 2. Pilot Project 3.Development of product innovation 4. Development of process innovation	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Similarly capacity building, studies and research can increase awareness and understanding of key environmental challenges and should continue to inform such actions. Where pilot projects and development of product innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA). Process and product innovation should be guided towards a core environmental principles for the blue economy as suggested in the EU Commission Communication on same (2021); this establishes the following agenda for the blue economy: 1. Achieve the objectives of climate neutrality and zero pollution notably by developing offshore renewable energy, by decarbonising maritime transport and by greening ports. A sustainable ocean energy mix including floating wind, thermal, wave and tidal energy could generate a quarter of the EU's electricity in 2050. Ports are crucial to the connectivity and the economy of Europe's regions and countries and could be used as energy hubs. 2. Switch to a circular economy and reduce pollution – including through renewed standards for fishing gear design, for ship recycling, and for decommissioning of offshore platforms and action to reduce plastics and microplastics pollution. 3. Preserve biodiversity and invest in nature - protecting 30% of the EU's sea area will reverse biodiversity loss, increase fish stocks, contribute to climate mitigation and resilience, and generate significant financial and social benefits. Environmental impacts of fishing on marine habitats will be further minimised.

	4. Support climate adaptation and coastal resilience – adaptation activities, such as developing green infrastructure in coastal areas and protecting coastlines from the risk of erosion and flooding will help preserve biodiversity and landscapes, while benefitting tourism and the coastal economy. 5. Ensure sustainable food production - sustainable production of and new marketing standards for seafood, use of algae and seagrass, stronger fisheries control as well as research and innovation in cell-based seafood will help to preserve Europe's seas. With the EU sustainable aquaculture strategic guidelines now also adopted, the Commission has also committed to growing sustainable aquaculture in the EU. 6. Improve management of space at sea – the new Blue Forum for users of the sea to coordinate a dialogue between offshore operators, stakeholders and scientists engaged in fisheries, aquaculture, shipping, tourism, renewable energy and other activities will stimulate cooperative exchange for the sustainable use of marine environment. A report on the implementation of the EU Directive on Maritime Spatial Planning will be issued in 2022, following the adoption of national maritime spatial plans in March 2021. The integration and application of these objectives could strengthen alignment with the EU Blue Economy as part of the Green New Deal and be broadly consistent with the objectives of The NMPF.
2.2.10 Actions to develop industry skills will be delivered through 1. Advisory Services 2. Training to develop skills and develop human capital. 3. Development of process innovation	Where the development of process innovations give rise to land use effects such projects and innovation projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities under these actions is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)

Table 6.4: Mitigation measures for Priority 3 Actions

3.1.1Actions to diversify the income of fishers and coastal community economy. will be addressed through:	Objectives of the Tourism Sector of the NMPF and the supporting policies should apply though this action does not in and itself give rise to direct effects. Positive indirect interactions with PHH, and MA SEOs in the medium term should the above actions align with objectives below/ • Position Ireland as a world-class sustainable coastal and marine tourism destination through the sustainable development of coastal and marine recreation activities and industries in Ireland. • Support communities in coastal areas through the increase in sustainable marine-based and coastal tourism activities. • Support the coordination and promotion of all-island tourism initiatives through continued co-operation between the relevant tourism agencies and Tourism Ireland. • Maintenance of natural marine and coastal areas, which are a significant factor in bringing tourism and revenues to coastal communities in Ireland. • Continued and improved access to marine and coastal resources for tourism activities and recreational use At this stage given the absence of detail in relation to these actions that will be developed over the SDP lifetime, interactions across all SEOs are therefore identified as impacts that can be addressed through mitigation.
1. Investment in advisory services	
2. Additional investments to support business development (strategy development, administration, equipment)	
3. Other business-diversification operations not involving fisheries, aquaculture, or innovation	
4. Training to improve skills and develop human capital	
3.1.2 Actions that identify innovations that can lead to a transition towards smarter growth in coastal areas will be addressed through:	Mitigation measures are provided through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA). Process and product innovation should be guided towards a core environmental principles for the blue economy as suggested in the EU Commission Communication on same (2021); See preceding table for principles. The integration and application of these objectives could strengthen alignment with the EU Blue Economy as part of the Green New Deal and be broadly consistent with the objectives of the NMPF.
1. Investment in advisory services	
2. Training to improve skills and develop human capital	
3. Events	
4. Awareness raising, communication to the wider public	
5. Capacity building	

6. Development of marketing innovation	
7. Development of process innovation	
8. Development of product innovation	
9. Cooperation	
10. Pilot projects	
3.1.3 Actions to develop and promote niche tourism will be addressed through:	Several coastal local authorities have specific policies on tourism or have developed their own tourism strategies, some subject to full SEA and AA. Regional tourism plans and their mitigation and monitoring measures such as the Wild Atlantic Way should be considered as appropriate, in tandem with local leader companies and Visitor Environmental Development Plans such as those for the Burren and Aran Islands, also subject to full SEA and AA. Best practice guidance for marine based tourism activities under consideration will need compliance with the Habitats Directive Assessment and sensitivity of qualifying species and habitats relevant to the area. NMPF tourism policies and mitigation measures, as well as relevant local authority policies, and measures under the planning and consent process would also apply. The application of the EU European Tourism Indicator System (ETIS) on a trial basis in 2020 for the three Aran islands and Inishbofin off Galway, along with Donegal's Tory and Arranmore, will provide an evidence-based model for collecting information and measuring impacts associated with tourism. It involves collecting data on 43 specific areas, ranging from tourist spending patterns to gender equality, inclusion and accessibility, transport impact, climate change, energy consumption, waste generation and sewage treatment. The system helps to measure trends over time, such as the rising percentage of women in management roles; changes in waste water quality; reduction in carbon dioxide emissions, and changing impacts of tourism in the community. This accessible, international model may be useful to augment other environmental management and monitoring regimes in relation to tourism on sensitive island and coastal and marine environments at national scale. The outputs of this ETIS could be applied nationally as appropriate and should be considered in the SDP. Whilst the type, scale and location of actions under this objective such as diversification is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA,AA, EcIA).
1. Advisory services	
2. Additional investments to support business development (strategy development, administration, equipment)	
3. Other business-diversification operations not involving fisheries, aquaculture, or innovation	
4. Training to improve skills and develop human capital.	

3.1.4 Actions to build capacity develop greater co-operation between all relevant stakeholders in coastal communities will be addressed through:	Expansion and mainstreaming of environmental beneficial pilot projects should be a key action to maximise and tailor experience and evidence from such pilot projects Where pilot projects give rise to land use effects such projects will be subject to the Article 6 appropriate assessment process. Furthermore whilst the type, scale and location of land used activities associated with pilot projects is unknown, there exists mitigation measures through the NMPF policies and local authority planning and consenting process including County Development Plan mitigation measures as relevant and appropriate and subject to the outcome of relevant environmental assessment processes as appropriate (EIA, EcIA, and as identified above AA)
1. Awareness raising, communication to the wider public.	
2. Training to improve skills and develop human capital.	
3. Animation and capacity building for CLLD	
4. CLLD preparatory actions	
5. Cooperation in CLLD.	
6. Advisory services	
7. Pilot projects	
8. Studies and research	
3.1.5 Actions to ensure that Ireland's coastal resource is managed to sustain its physical character and environmental quality will be addressed through.	These actions are representative of positive environmental actions that have the potential to contribute towards the management of European Sites and the achievement of favourable conservation conditions of features of interest for which these sites are designated.
1. Advisory services	
2. Environmental Services	
3. Awareness raising, communication to the wider public	
4. Specific investments for improving aquatic habitats and biodiversity	

5. Natura 2000 areas management and monitoring (soft operations)	
6. MPA management and monitoring (soft operations)	
7. Investments in MPA restoration	

6.5 MONITORING

Monitoring of the Seafood Development Programme will be a requirement throughout the lifetime of the plan. Such monitoring is required under Article 10 of the European SEA Directive (2001/42/EC). Monitoring set out under the SEA ER will also be made applicable for monitoring of land use activities arising from the Seafood Development Programme that have the potential to interact with and effect the conservation status of European Sites.

The table overleaf presents the monitoring programme proposed for the SDP 2021-2027 and is derived from the National Marine Planning Framework SEA ER Monitoring Regime.

The Programme of Measures (POM) for the Marine Strategy Framework Directive is currently being prepared and has been published in draft form (March 2022). These programme of measures will deliver the Good Environmental Status required under the Marine Strategy Framework Directive. The EMFAF will be aligned to support the implementation of these POM. In addition, a monitoring approach for the National Marine Planning Framework is in development. It is recommended that the proposed monitoring regime set out in **Table 6.5** overleaf be aligned with these measures, once finalised, to ensure data gathering and sharing is co-ordinated to sufficiently address monitoring requirements. These are particularly important for Priority 4. The integration and reuse of marine data for both is key.

Table 6.5: Monitoring Table- National Marine Planning Framework and draft Programme of Measures from Marine Strategy Framework Directive

Environment Parameter	Monitoring Requirement	Remedial Action	MSFD Target for Good Environmental Status
Biodiversity, Flora and Fauna	It is proposed to monitor the following indicators to establish both the effectiveness of the protection policies already incorporated into the NMPF and also any unforeseen effects: • Condition of European sites [data source: NPWS (6 yearly reporting)] • Implementation of SEA and AA mitigations from plans arising from the NMPF [data source: DHPLG; Fáilte Ireland] • Development of an ecosystem services marine map to inform lower tier plans when	Where condition of European sites is found to be deteriorating this will be investigated with reference to the DECC, and the DHLGH for water and the corresponding local authority to establish if the pressures are related to NMPF actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance: • Where water bodies are failing to meet GES under the objectives of the MSFD and at least good status under the WFD this will be investigated with reference to the DHLGH Water Section, the DHLGH Marine Section;	The mortality rate per species from incidental by-catch is below levels which threaten the species, such that it's long-term viability is ensured. The population abundance of the species is not adversely affected due to anthropogenic pressures, such that its long term viability is ensured. The species distributional range and, where relevant, pattern is in line with prevailing physiographic, geographic and climatic conditions. The habitat for the species has the necessary extent and condition to support the different stages in the life history of the species.

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
	their relevant plans are either revised or drafted [data source: planning authorities; government Departments]; • Status of surface water bodies (transitional and coastal) [data source: EPA] • Reporting on progress towards Good Environmental Status (GES) for Ireland's marine waters [data source: DHLGH] • Number and nature of marine designations progressed (Marine Protected Areas, European Sites, Marine Reserves) [data source: DHLHG, DECC]	the EPA Catchment Unit, the relevant local authorities, and, as relevant, Irish Water to establish if the pressures are related to NMPF actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance • Where data and monitoring gaps are identified with respect to MSFD Descriptor 6, the DHLGH and the Marine Institute, in consultation with relevant stakeholders	The health of species and the condition of habitats (such as their species composition and relative abundance at locations of chronic pollution) are not adversely affected due to contaminants, including cumulative and synergistic effects. The diversity (species composition and their relative abundance) of the trophic guild is not adversely affected due to anthropogenic pressures. The balance of total abundance between the trophic guilds is not adversely affected due to anthropogenic pressures. The spatial distribution, temporal extent, and levels of anthropogenic impulsive sound sources do not exceed levels that adversely affect populations of marine animals.

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
Water resources	Status of surface water bodies (particularly transitional and coastal) as reported by the EPA Water Monitoring Programme for the WFD [data source: EPA]. • Indicators for descriptors as reported under Article 11 of the MSFD [source: DHPLG and Marine Institute] • Monitoring on marine litter under existing programmes for MSFD Descriptor 10 and OSPAR [data source: DHPLG; Marine Institute]	Where water bodies are failing to meet at least good status this will be investigated with reference to the DHPLG Water Section, the EPA Catchment Unit, the relevant local authorities, and as relevant Irish Water to establish if the pressures are related to NMPF actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance • Where marine water bodies are failing to meet good ecological status this will be interrogated with the Marine Institute and the DHPLG to establish if the pressures are related to NMPF activities. A tailored response will be developed in consultation with	Within coastal and territorial waters, the concentrations of contaminants do not exceed the threshold values set in accordance with the Water Framework Directive. Concentrations of contaminants in assessed marine matrices do not exceed OSPAR Environmental Assessment Criteria and concentrations are not increasing. The spatial extent and duration of significant acute pollution events are minimised. The health of species and the condition of habitats (such as their species composition and relative abundance at locations of chronic pollution) are not adversely affected due to contaminants, including cumulative and synergistic effects.

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
		the MI and DHLGH in such a circumstance • Where planning applications in key growth towns are rejected due to insufficient capacity in the Wastewater treatment Plant (WwTP) or failure of the WwTP to meet Emission Limit Values (ELV), the relevant regional assembly will coordinate a response between the relevant LAs, EPA and Irish Water to achieve the necessary capacity	The composition, amount and spatial distribution of litter on the coastline and on the seabed, are at levels that do not cause harm to the coastal or marine environment. In accordance with the provisions of Article 5 of Directive (EU) 2019/904 by year-end 2023 eliminate beach litter caused by the items prohibited from the market under the Single Use Plastics Directive Nutrient concentrations are not at levels that indicate adverse eutrophication effects Chlorophyll a concentrations are not at levels that indicate adverse effects of nutrient enrichment The concentration of dissolved oxygen is not reduced due to nutrient enrichment

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
			The number of non-indigenous species which are newly introduced via human activity into the wild, per assessment period, is minimised and where possible reduced to zero
Geology Soil and Landform	Volume of contaminated material generated from dredging or other activities by sector and cumulatively [data source: EPA waste licenses]; • Reporting on MSFD Descriptors 6 and 8 [data source: DHLGH; Marine Institute		The spatial extent and distribution of permanent alteration of hydrographical conditions to the seabed and water column, is at a level that ensures that the structure and functions of the ecosystems are safeguarded and that benthic ecosystems, in particular, are not adversely affected
Climatic Factors including Air Quailty	NOx, SOx, PM10 and PM2.5 as part of Ambient Air Quality Monitoring Programme (AAMP) [data source: EPA and DEEC]		

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
	• Reporting on MSFD Descriptor 11 (specifically underwater noise) [data source: DHLGH; Marine Institute		
Climate Change	Annual number of development consents achieved [data source: Planning Authorities] Number and uptake of energy efficiency and renewable energy measures and project supported under the lifetime of the SDP	Review and prepare tailored response by DAFM, DECC and DHLGH to address and support measuers to increase uptake over lifetime of the plan	
Seascape and Landscape	Number of applications for marine and coastal developments requiring consent which are supported by a robust route/site selection including assessment of	Where monitoring reveals lack of consideration of seascape /landscape in development consents, this	

Environment Parameter	**Monitoring Requirement**	**Remedial Action**	**MSFD Target for Good Environmental Status**
	environmental effects of alternatives. [Data source: Planning Authorities] • Number of applications for marine and coastal developments requiring consent which include a seascape assessment [Data source: Planning Authorities]	approach will be mandated through marine planning guidelines.	

7.0 CONCLUSION

This Natura Impact Statement has reviewed the impacts arising from the draft Seafood Development Programme and found that, without the implementation of mitigation measures and recommendations to ensure that the right actions arising from the plan are implemented in the right place, the draft plan will have the potential to impact upon the integrity of European Sites and the conservation status of the features of interest supported by these European Sites.

The potential impacts that could negatively affect European Sites and their features of interest as a result of potential impacts derived from land use interventions arising from the Seafood Development Programme are detailed in Section 5. Section 6 outlines mitigation measures and recommendations, the aim of which is to avoid the potential for the adverse impacts identified in Section 5.

The requirements outlined in Section 6 of this Natura Impact Statement will protect these Sites from potential adverse impacts.

The next step in the finalisation of the draft Seafood Development Programme is a period of public consultation when the plan and supporting environmental reports, including this Natura Impact Statement will be put on public display to allow for submissions. Following the completion of the public consultation period submissions will be considered and amendments to the draft Seafood Development Programme may arise. Submissions relevant to the content of both the SEA Environment Report and this Natura Impact Statement will also be considered. Any changes to the Seafood Development Programme arising from the public consultation period will be examined and reflected in the SEA Environmental Report and Natura Impact Statement for the final plan. Submissions relevant to the SEA Environmental Report and the Natura Impact Statement of the draft Seafood Development Programme will also be considered and where required will be reflected in the final environmental assessment documents.

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