



Report September 2020



Marine Protected Areas

Restoring Ireland's Ocean Wildlife II

Report on
Ireland's Failure to Protect
Marine Natura 2000 Sites

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SUMMARY

- Marine Protected Areas (MPA) in Ireland currently only exist in the form of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated under the EU's Habitats and Birds Directive respectively (SACs and SPAs are collectively referred to as Natura 2000 sites).
- The status of habitats inside MPAs is declining. Vulnerable communities such as Seagrass and Maërl inside the habitat '*Large shallow inlets and bays*' are especially at risk with many assessed as unfavourable-bad under the most recent Habitats Directive reporting by the Irish Government to the European Commission.
- Our case studies from Roaringwater Bay, Blacksod Bay, Kenmare Bay and Lough Swilly show clear failure of Irish authorities to mitigate damaging impacts from fisheries and aquaculture activities due to lack of management and enforcement, causing deterioration of ecosystems.
- This failure is due to several factors:
 - » The policy adopted by the National Parks and Wildlife Service (NPWS) for activities inside protected areas which allows 15% of damage. This policy is highly damaging to marine habitats and not compatible with the protection of habitats and species afforded under the Habitats Directive.
 - » Poor quality of '*Appropriate Assessment*'/risk assessments (required under Article 6 of the Habitats Directive) with little consideration of cumulative pressures and lack of scientific certainty.
 - » Many marine Natura 2000 sites lack site-specific conservation objectives as required under the Habitats Directive.
 - » Harmful fisheries and aquaculture practices take place in Irish MPAs without adequate mitigation measures. This was confirmed by the European Commission in their referral of Ireland to the European Court of Justice due to failure to establish conservation measures in all Irish [SACs](#).
- Solutions: Immediately begin with the establishment of site-specific management plans that have cross-departmental buy-in and are created with strong stakeholder input alongside the forthcoming Marine Spatial Plan. The management plans must clearly lay out the actions needed to bring sites to a favourable conservation status through management measures, active restoration and removal of harmful fishing activities. Bottom trawling and dredging must be excluded from all MPAs in order for habitats to recover. The NPWS must be properly resourced in order to protect, restore and enforce these actions.

General information on MPAs

The International Union for the Conservation of Nature (IUCN) defines a marine protected area as “any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment”.

Ireland has not yet legally defined what the term ‘MPA’ means. We do however have two types of protected sites that would more or less fit the IUCN’s definition, namely Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive. These sites combined form the so-called Natura 2000 network, a Europe-wide network of sites that protect certain terrestrial and marine habitats and species. There are currently 159 marine SACs and 89 marine SPAs in Irish waters, covering around 2.4% of Ireland’s exclusive economic zone (EEZ). Ireland had agreed in the Convention on Biological Diversity to designate 10% of their waters as MPAs by 2020 and have now supported the EU Biodiversity Strategy goal of protecting 30% of the EEZ by 2030 of which 10% will be strictly protected.

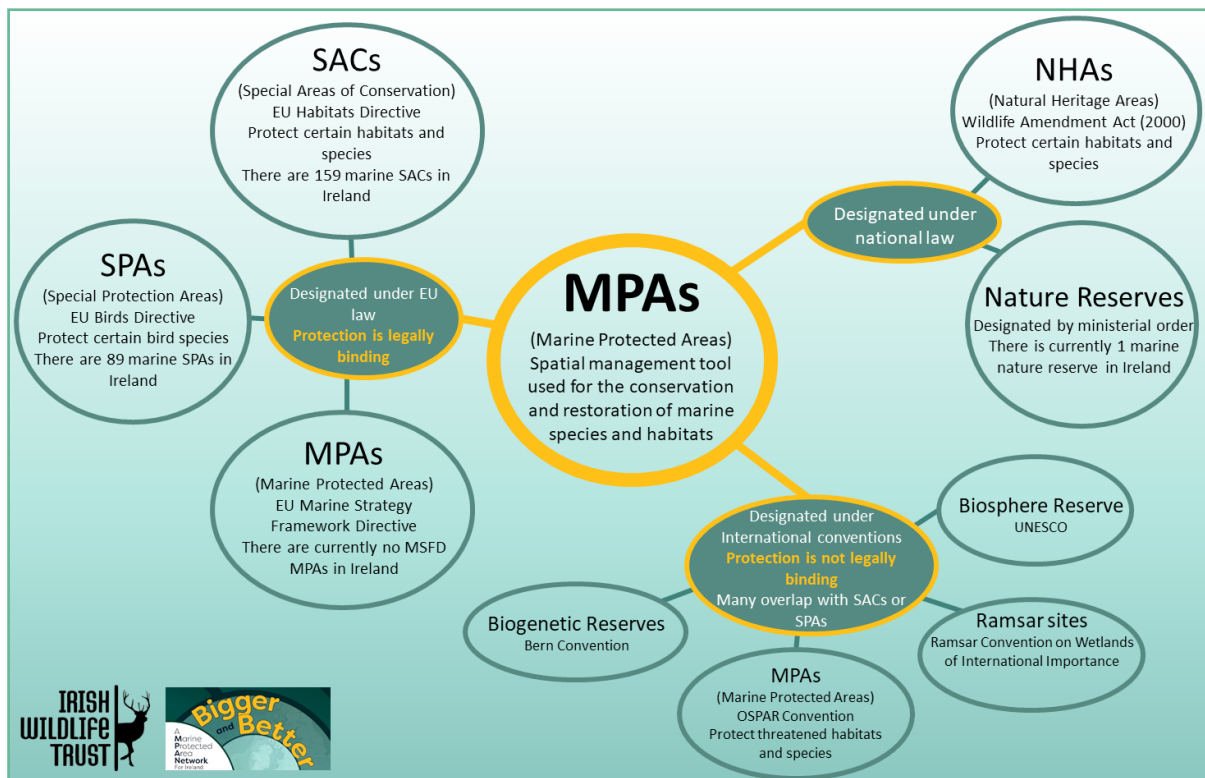


Figure 1: Types of MPAs in Irish waters.

There is a third type of European legislation which calls for the designation of MPAs in order to bring the marine environment to an overall good environmental status – the Marine Strategy Framework Directive. We can expect MPAs to be designated under this directive in Ireland over the next few years.

One important aspect to keep in mind about MPAs is that they rarely protect everything contained within its boundaries. The so-called ‘feature-based’ approach to conservation means that areas are designated to protect specific habitats and species, like dolphins, while other habitats and species in the same MPA are not protected, e.g. sharks or other threatened species. Ideally an MPA should protect all the habitats and species present inside its boundaries through the so-called ‘whole site approach’.

NATURA 2000 SITES IN IRELAND

The Department of Housing, Local Government and Heritage has an obligation under the Habitats Directive to bring protected habitats and species inside the Natura 2000 network to a '*Favourable Conservation Status*'. Marine habitats listed under Annex I of the Directive and for which SACs must be designated are: Large shallow inlets and bays, Reefs, Intertidal mudflats and sandflats, Sea Caves, Sandbanks and Estuaries. Marine species listed under Annex II of the Directive are: Common Seal, Grey Seal, Harbour Porpoise, Bottlenose Dolphin and Otter. In addition to these, the Birds Directive lists a number of marine bird species that require protection in a network of SPAs.

Measures must be taken specifically designed to maintain or restore natural habitats and species listed in these Directives. Human activities that might harm the so-called '*qualifying interests*' (Annex I habitats or Annex II species for which the sites have been designated) are subject to an '*Appropriate Assessment*' (AA) prior to licensing. In this assessment, the licence applicant must describe the proposed plan or project and must prove beyond reasonable scientific doubt that the plan or project will not have any significant adverse effects on the integrity of the site. If any doubt exists, or the effects of the plan or project on the qualifying interests are unknown, the precautionary principle applies, and the plan or project cannot be allowed to go ahead. This assessment has to be done for all activities which may affect SACs and SPAs and does not only apply to new plans or projects, but to on-going activities such as fisheries and aquaculture as well.

The Minister for Housing, Local Government and Heritage has the duty to be proactive in preventing any damage caused to qualifying interests by establishing necessary conservation measures involving, if need be, appropriate management plans. These management measures are missing in Ireland. Monitoring of sites by the NPWS has shown that the health of protected marine habitats is declining, especially in the habitat '*Large shallow inlets and bays*' which has been classed as unfavourable-bad¹.

HABITATS OF CONSERVATION AND RESTORATION IMPORTANCE

All habitats are of conservation importance and even large sandy or muddy areas must be preserved for their individual contributions to the functioning of ocean ecosystems. There are some habitats, however, that contribute significantly to biodiversity, carbon sequestration and water filtration. Worryingly, these are precisely the habitats that are characteristic of large shallow inlets and bays and/ or reefs which are currently declining around our coasts or are threatened by commercial extraction. Namely, these are *Zostera* dominated communities (seagrass beds), *Maërl* dominated communities, native oyster *Ostrea edulis* dominated communities, Laminaria dominated communities (kelp forests) and worm reefs built by *Sabellaria alveolata* and *Serpula vermicularis*.

Targeted restoration and strict protection of these keystone species should become the mainstream method of improving the health of Irish marine ecosystems. This will ensure recovery of not only these keystone species but also provide habitat for many

1. 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
2. Thurstan, R. H., Brockington, S., & Roberts, C. M. (2010). The effects of 118 years of industrial fishing on UK bottom trawl fisheries. Nature Communications, 1(2), 1–6. <https://doi.org/10.1038/ncomms1013>

other species including apex predators, which have declined by 90% since industrial fishing began². Habitats Directive case law shows that the Habitats Directive itself entails an obligation to restore habitats that were previously damaged by human activities: “[...]it is necessary for the Irish authorities not only to take measures to stabilise the problem of overgrazing, but also ensure that damaged habitats are allowed to recover.”³

The Marine Strategy Framework Directive also holds such obligations (Article 1 (2)):

“For that purpose, marine strategies shall be developed and implemented in order to:

(a) protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected;”

HUMAN ACTIVITIES OF PARTICULAR CONCERN

Many human activities have the potential to cause a modification of natural marine ecosystems either through direct resource extraction, pollution, or other means. When we authorise activities inside or outside of MPAs we need to understand the carrying capacity of the water body in question⁴. Not every estuary or bay will be able to support the same number and intensity of activities, because every area differs depending on size, depth, sensitivity of habitats present, hydrographic conditions, etc. In the case of SACs or SPAs, it must be assessed through an AA whether the proposed activities will be suitable in the area without adverse impacts on the integrity of the site.

Some of the highest impacting activities in Irish waters are discussed below.

1. Fishing

Bottom-towed gear

Fishing with bottom towed gears such as trawls and dredges is the highest impacting activity in Irish waters. Impacts include disturbing and/or damaging seabed habitats and species, extracting large amounts of biomass and contributing to bycatch of sensitive species. These fishing activities need careful management in all marine systems inside and outside of MPAs^{5,6}.

Best practice alternative to dredging for scallops

Hand-diving for scallops is a viable fishery in Scotland but is illegal in Ireland. Dive fisheries are carefully managed and divers return to the same patch year after year. No other organisms are harmed and the sustainably caught product is more valuable than dredge-caught scallops.

Pelagic gear

Pelagic trawling (where the fishing gear does not come into contact with the seafloor) can contribute to bycatch and is not justifiable inside SACs protected for seals or cetaceans. According to the IUCN definition of an MPA, **industrial scale fishing should not be allowed in any MPA**. Thankfully, large pelagic trawlers (vessels over 18 m long) and pair trawlers will be banned completely within six nautical miles from the Irish coast from 2021 onwards (most trawlers over 18m are banned inside six nautical miles from January 2020, with the exception of the sprat fishery which will be phased out by 2022)⁷. As Ireland designates new and

3. Case C-117/00 Commission v Ireland (Red Grouse) (2002), paragraph 31-33.

4. Ross, L. G., Telfer, T. C., Falconer, L., Soto, D., & Aguilar-Manjarrez, J. (2013). Site selection and carrying capacities for inland and coastal aquaculture. In FAO Fisheries and Aquaculture Proceedings No. 21.

5. Hall-spencer, J., Allain, V., Fossa, J. H., & Copernic, P. N. (2002). Trawling damage to Northeast Atlantic ancient coral reefs. Proceedings of the Royal Society London B, 269, 507–511. <https://doi.org/10.1098/rspb.2001.1910>

6. Thurstan, R. H., Brockington, S., & Roberts, C. M. (2010). The effects of 118 years of industrial fishing on UK bottom trawl fisheries. Nature Communications, 1(2), 1–6. <https://doi.org/10.1038/ncomms1013>

7. <https://www.gov.ie/en/press-release/5c519c-minister-creed-announces-commencement-of-two-important-new-conservat/> accessed June 2020

larger offshore MPAs in the near future, the issue of industrial fishing inside MPAs will have to be tackled in order to truly see improvements in biodiversity and climate resilience of our seas.

2. Aquaculture

Finfish

Finfish aquaculture can operate either offshore in open net pens or onshore in closed systems. In Ireland, fish are farmed in offshore cages. This type of farming has many negative impacts on the marine environment: Uneaten fish food and faeces sink to the seabed where they smother benthic fauna and establish oxygen-poor zones; diseases and parasites can be prevalent in densely packed cages and spread to migrating wild salmon; and lastly genetically different farmed salmon can escape and mix with the wild population, diluting the genepool and causing offspring to be less adapted to the natural environment⁸. These impacts have to be carefully assessed and mitigated. Another issue with farmed salmon is the source of feed. Salmon are predators which normally feed on smaller fish. In order to farm a product that has the same composition of nutritious oils (e.g. Omega 3), fish have to be fed with fish meal and fish oil derived from wild-caught fish species, which puts unnecessary strain on wild fish stocks.

Best practice alternative

Finfish aquaculture on land in closed systems is a much more sustainable option, because water can be filtered before being returned to the sea.

Pacific oyster

Oyster aquaculture has increased significantly on intertidal mudflats around the Irish coastline in recent years⁹. There are several issues with this practice: Access routes to and from aquaculture sites with heavy duty vehicles can damage saltmarsh and mudflat habitats¹⁰; pseudo-faeces (excrement) deposits from the oysters can accumulate on the seabed and smother organisms living there; vital feeding grounds become inaccessible to birds due to spatial coverage of trestles and disturbance from increased human activity; and the species of oyster farmed here is invasive to Ireland, which means escapees can colonise the area and compete with the native oyster for space and resources (unless infertile triploid oysters are used).¹¹

Mussels

In Ireland, seed mussels are sourced from the wild. They are harvested by dredging small wild mussels and brought to the aquaculture site for grow-out on ropes. Once on the longlines, mussels can impact benthic ecosystems due to the deposition of pseudo-faeces. This can smother seagrass and Maërl communities as well as bottom dwelling sessile (immobile) animals. It is important that mussel longlines are placed in deep enough water where currents are able to carry any pseudo-faeces away before they reach the bottom and dilute them in the process. Unfortunately, in Ireland this type of aquaculture is practiced intensively in shallow waters (e.g. five meters depth in Roaringwater Bay) where it can have detrimental impacts on seagrass and Maërl habitat.¹²

Best practice alternative

Seed mussels should be sourced from hatcheries in order to reduce dependability on wild stocks. Grow-out sites must be carefully chosen based on the carrying capacity of the bay.

8. Price, C.S. and J.A. Morris, Jr. (2013). Marine Cage Culture and the Environment: Twenty-first Century Science Informing a Sustainable Industry. NOAA Technical Memorandum NOS NCCOS 164. 158 pp.
9. BIM Aquaculture Survey (2018). <http://www.bim.ie/media/bim/content/publications/aquaculture/BIM-Annual-Aquaculture-Survey-2018.pdf>
10. Forde, J., O'Beirn, F. X., O'Carroll, J. P. J., Patterson, A., & Kennedy, R. (2015). Impact of intertidal oyster trestle cultivation on the Ecological Status of benthic habitats. Marine Pollution Bulletin, 95(1), 223–233. <https://doi.org/10.1016/j.marpolbul.2015.04.013>
11. Gittings, T. & O'Donoghue, P.D. (2012). The effects of intertidal oyster culture on the spatial distribution of waterbirds. Report prepared for the Marine Institute. Atkins, Cork.
12. Scally, L., Pfeiffer, N. and Hewitt, E. (2020) The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Fisheries and aquaculture activities are not inherently '*bad*' for marine ecosystems. Low levels of biomass extraction are usually compatible with the conservation objectives of a Natura 2000 site. The ongoing industrial extraction of certain species, however, is having adverse impacts on marine habitats and species and must be addressed in order to comply with EU and national laws and to ensure our impacts on natural ecosystems are within the limits of what these systems can support.

Spatially managing activities can be a useful tool to reduce human impacts. Taking account of all environmental parameters (e.g. water depth, current speeds, temperatures, turbidity, etc.) as well as the habitats present in the area should determine if the area is suitable for certain activities to take place – inside and outside of MPAs. Even the least impacting activities can have strong effects on habitats and species if they are undertaken in the wrong place at the wrong time. Maritime spatial planning (MSP) under the National Marine Planning Framework (NMPF) must contribute towards achieving the objectives of the MSFD, Habitats Directive, Common Fisheries Policy and Water Framework Directive. The NMPF to be published by the Department of Housing later this year (2020) will show whether Ireland has taken these obligations seriously.

Below we have collected several case study examples that show how Ireland has thus far neglected its duties under EU environmental law and how easily manageable human activities are contributing to the decline of EU protected habitats.

CASE STUDIES

1. Mullet/Blacksod Bay Complex SAC

Background

Mullet/Blacksod Bay Complex SAC is a marine Natura 2000 site protected for its qualifying interests Mudflats and sandflats not covered by seawater at low tide, Large shallow inlets and bays and Reefs. The bay is home to several very vulnerable marine community types such as *Zostera*- and Maërl dominated communities, *Serpula vermicularis* dominated community complex and *Laminaria* dominated community complex (kelp).

Other protected marine community types in the bay include Sand with *Angulus tenuis* and *Pygospio elegans* community complex; Sand with *Gastrosaccus spinifer* community complex; Fine sand with *Angulus fabula* community complex; Intertidal reef community complex and Sheltered subtidal reef community complex.

Several human activities are taking place inside the bay that may adversely affect the protected features present in the site, including benthic dredging for scallops and oysters. In 2015, a risk assessment of the effects of fisheries on Qualifying Interests in SACs in Irish coastal waters was published by the Marine Institute¹³. This assessment laid out the risks posed by scallop fisheries and native oyster aquaculture to the qualifying interests in the Mullet/Blacksod Bay Complex SAC and came to the following conclusion:

“Scallop dredging is incompatible with maintenance of Maërl and Seagrass communities and may significantly impact reef fauna including Serpulid reef and Laminaria reef in Clew Bay and Blacksod Bay. Impacts of scallop dredging in sedimentary habitats may be significant in Clew Bay, Broadhaven Bay and Blacksod Bay given the spatial extent of the fishery and the protracted fishing season. The seasonal oyster fishery will add cumulatively to this effect”.

The AA for aquaculture and fisheries risk assessment in Mullet/Blacksod Bay SAC therefore identified the Maërl dominated communities and *Serpula vermicularis* dominated community complex as most at risk from human activities¹⁴; however, several important sedimentary habitats are also at risk from frequent dredging.

As a result of this risk assessment, a mitigation plan was drawn up which excluded scallop dredging from sensitive habitats, including the Maërl dominated communities and *Serpula vermicularis* dominated community complex¹⁵. The mitigation plan calls for all vessels participating in the scallop fishery to carry an approved GPS tracking device in the rest of the SAC. These were to be supplied and fitted by the Marine Institute and subsequently monitored by the Sea Fisheries Protection Authority for control and enforcement purposes and by the Marine Institute to map the distribution of fishing effort in the Bay. These measures are generally a step in the right direction, however it is unclear whether they were ever implemented. They also did not apply to native oyster aquaculture which also uses dredges but is licenced by Inland Fisheries Ireland. The risk assessment of fisheries in the south and west coasts also states that the actual distribution of oyster fishing in Blacksod Bay is poorly known, which is very worrying.

13. Marine Institute (2015). Risk assessment of fisheries in Irish inshore waters.

14. Marine Institute (2018). Report supporting appropriate assessment of aquaculture and fisheries risk assessment in Mullet/Blacksod Bay Complex SAC.

15. Marine Institute (2015). Mitigation plan for Blacksod Bay.

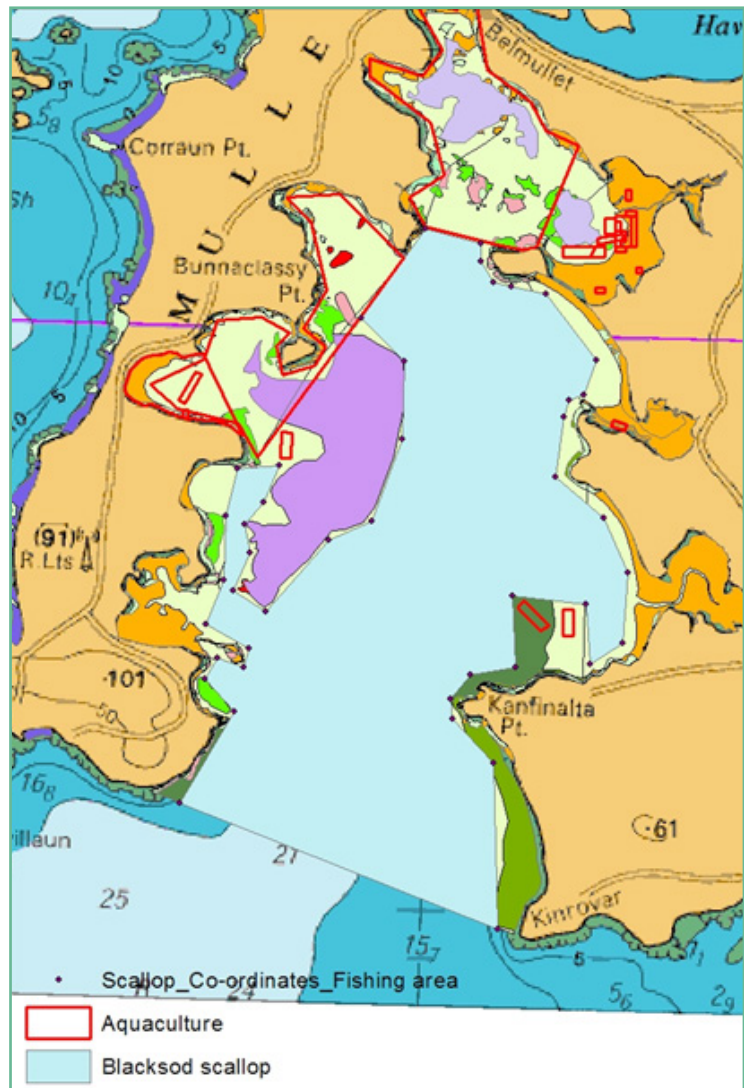


Figure 2: Proposed scallop gear fishing areas showing exclusion from sensitive habitats Maerl, seagrass and Serpula reef (purple). Aquaculture licences or applications as of March 2015 are shown in red lines.

Issues

The serpulid worm reef is shown in Figure 2 on the western side of Blacksod Bay in purple. After consultation with local fishermen the area open to the scallop fishery (area in light blue) was extended to engulf the Serpulid worm reef almost entirely around the western side between the reef and the coastline without a noticeable buffer zone.

The most recent report by Scally et. al (2020) indicates a **complete destruction** of the *Serpula vermicularis*-dominated community in the SAC¹⁶:

*“The Serpula vermicularis-dominated community complex in Blacksod Bay, which had previously (2008 survey) been shown to be comprised of large aggregations of biogenic reef formed by Serpula vermicularis, now consists of broken tubes of Serpula vermicularis. Very few living aggregations are still present, and the total habitat area of this Marine Community Type has been negatively impacted. The cause of this impact is physical damage due to **benthic dredging**”* (own emphasis).

16. Scally, L., Pfeiffer, N. and Hewitt, E. (2020). The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

It is unclear whether this destruction occurred before the exclusion zone was put in place or after, or which fishery was responsible for the damage. Either way, it occurred long after the site was first proposed as a candidate SAC (which was in 1999) and therefore management measures should have been in place long ago to protect this reef. It does not bode well for Irish priority habitats if a large reef in a known location inside an SAC cannot even be saved from total destruction.

The same report by Scally et. al also found Maërl habitat to be damaged even though 0% overlap between the Maërl and bottom fishery was recommended by the Marine Institute. While sedimentary habitats are less vulnerable to structural damage, frequent disturbance through benthic dredging will adversely alter these protected ecosystems¹⁷. The protected sedimentary habitats in Blacksod Bay are frequently dredged. A policy by the NPWS states that communities other than vulnerable keystone communities (e.g. broad sedimentary communities) can be frequently disturbed on up to 15% of their entire habitat area. This policy is not in line with the Habitats Directive requirements to *“take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated”* (Habitats Directive Article 6 (2), own emphasis).

2. Roaringwater Bay and Islands SAC

Background

Roaringwater Bay and Islands SAC is protected for the qualifying interests Large shallow inlets and bays, reefs, sea caves, Harbour Porpoise, and Grey Seal. The marine community types in those habitats include Zostera; Maërl; Muddy sand with bivalves and polychaetes community complex; Mixed sediment community complex and Shallow sand/mud community complex; Laminaria-dominated communities and several other types of reef.

Licensed aquaculture in the bay at the time of the AA include rope mussel culture and intertidal oyster culture. Fisheries in the bay include shrimp, crab and lobster potting, tangle netting, scallop dredging, pelagic jigging, pelagic trawling, whitefish gill netting and demersal trawling.

The AA of fisheries and aquaculture in Roaringwater Bay¹⁸ recognised the sensitivity of Zostera, Maërl and Laminaria-dominated communities to structural damage from fishing gear and the impacts of aquaculture on these communities. Unfortunately, the impact on community types was once again only considered further if there was a significant spatial overlap of over 15%. In the case of rope mussel culture on Zostera and Maërl habitat, there is no spatial overlap and therefore these were excluded from further risk analysis.

Based on this AA, a mitigation plan was developed which closed four small areas in the bay to scallop dredging only.

Issues

In a recent report the conservation status of the bay had declined to unfavourable-bad. As a reason, the following is given:

17. Bradshaw, C., Veale, L. O., Hill, A. S., & Brand, A. R. (2001). The effect of scallop dredging on Irish Sea benthos: Experiments using a closed area. *Hydrobiologia*, 465, 129–138.

18. Marine Institute (2013). Article 6 Assessment of Aquaculture and Fisheries in Roaringwater Bay

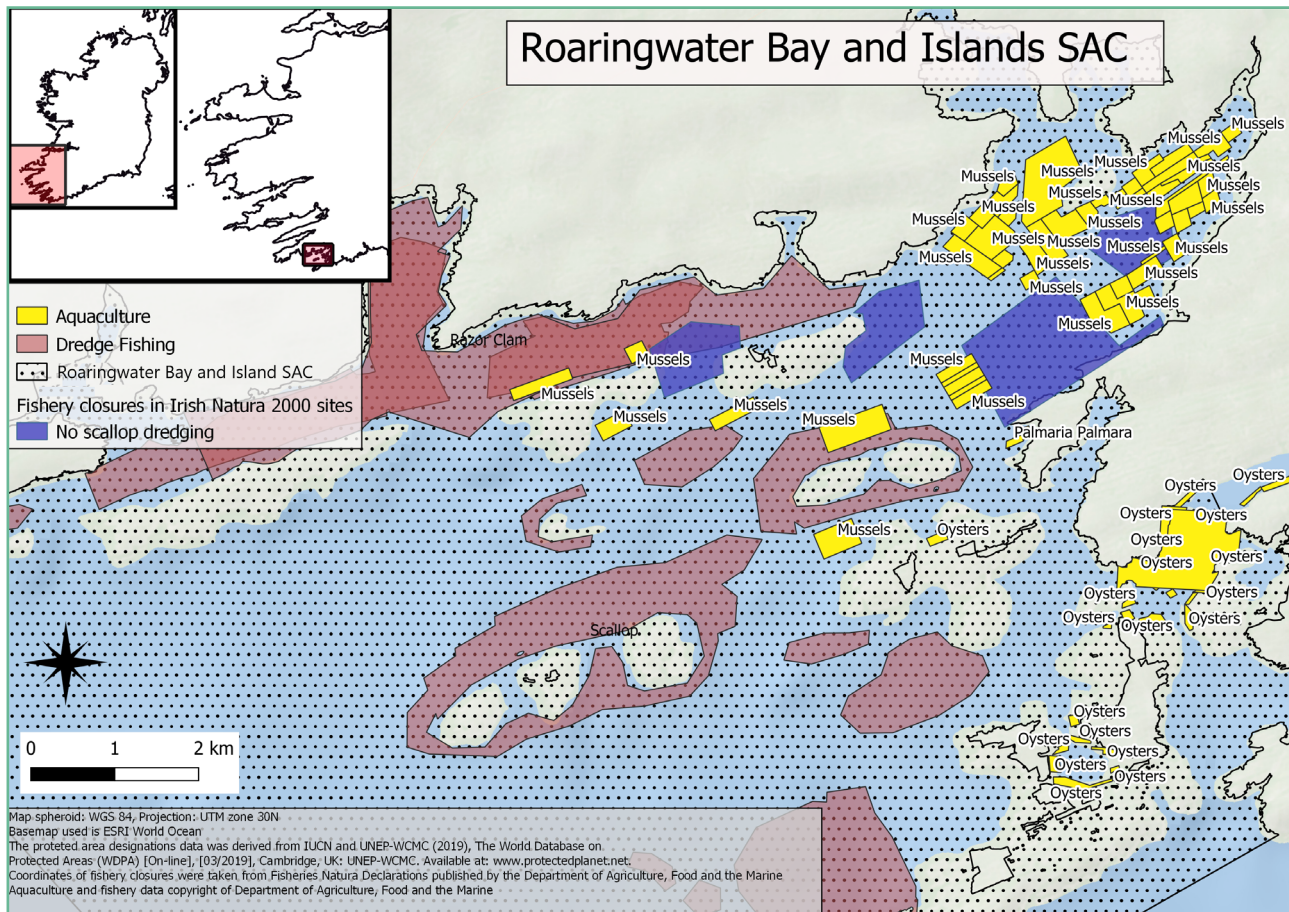


Figure 3: Map of Roaringwater Bay and Islands SAC. Scallop dredging restriction zones were put in place to protect seagrass and Maërl habitat, yet aquaculture is operated in the immediate vicinity to these vulnerable areas. Dredge fishing (shown in pink) takes place very close to reefs

“In Roaringwater Bay SAC, significant negative impacts were recorded in the Maërl community as a result of pseudo-faeces deposition and/or extensive algal cover on the Maërl beds; these beds included the rare Lithothamnion dentatum Maërl species. This impact was caused by the presence of mussel longlines directly over the beds. A proliferation of opportunistic ascidian species Ascidella aspersa was also recorded during sampling by diving; it formed an extensive community on the seabed adjacent to mussel lines” (own emphasis).¹⁹

The AA cites the NPWS’ conservation objectives for Roaringwater Bay and Islands SAC²⁰, but adapts them slightly to add that persistent disturbance of some habitats should be less than 15% of the total habitat area in order to be significant, as per the conservation objectives supporting document for marine habitats²¹.

Rope mussels are the largest aquaculture activity in the bay by spatial coverage, with nearly 290 ha currently licensed and an additional licence application of 22 ha pending (at the time of the AA in 2013). The combined spatial footprint of licenced aquaculture in the bay is over 400 ha.

The AA discounts any significant adverse effects of rope mussel aquaculture on the habitat shallow sand mud community, including cumulative effects with other

19. Scally, L., Pfeiffer, N. and Hewitt, E. (2020). The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

20. NPWS (2011). Conservation Objectives for Roaringwater Bay and Islands SAC

21. NPWS (2011). Roaringwater Bay and Islands SAC (site code: 101) Conservation objectives supporting document marine habitats
Version 1

activities, due to the fact that less than 15% of the habitat overlap with human activities. The shallow sand mud community includes vulnerable *Zostera* and Maërl beds.

Since the time of the AA, an aquaculture mitigation plan was drawn up which now recognises the need for a 30 m buffer zone between *Zostera* and Maërl and the mussel longlines²². This may have been put in place after it became apparent that the mussel longlines do impact on seagrass and Maërl beds. Depending on the hydrographic conditions of the site, a 30 m buffer may not be sufficient to stop the spread of pseudo-faeces from the mussel longlines to the seagrass and Maërl. Furthermore, increased presence of algae and opportunistic species on the seabed will also harm the sedimentary communities below the longlines. Any smothering of infauna can reduce oxygen concentrations in and on the seabed. **It is doubtful that these mitigation measures will be sufficient.** Furthermore, scallop dredging takes place outside of the closed zones on sedimentary habitat and very close to reef habitat which can have significant effects on these areas.

3. Kenmare River SAC

Background

Kenmare River SAC is protected for its marine priority habitats Large shallow inlets and bays, Reefs, Submerged or partially submerged sea caves and priority species Otter and Harbour Seal.

Vulnerable marine community types present in these habitats include *Zostera*- and Maërl dominated communities, *Pachycerianthus multiplicatus* community, Intertidal mobile sand community complex; Muddy fine sands dominated by polychaetes and *Amphiura filiformis* community complex; Fine to medium sand with crustaceans and polychaetes community complex; Coarse sediment dominated by polychaetes community complex; Shingle; Intertidal reef community complex; Subtidal reef with echinoderms and faunal turf community complex and *Laminaria*-dominated community complex.

Fisheries in the bay include dredging for scallops, bottom trawling for Nephrops and mixed demersal fish, set net fisheries, pot fisheries, hook and line fisheries and pelagic fisheries.

Aquaculture activity includes intertidal oysters in bags and trestles, subtidal mussels with rope culture, Atlantic Salmon in net pens, subtidal scallops on the seafloor and clams on the seafloor.

The Report supporting the AA of Aquaculture and Fisheries Risk Assessment in Kenmare River SAC was published in 2019²³. The AA is based on conservation objectives from 2013, even though the SACs large shallow inlets and bays have deteriorated significantly since then from favourable to unfavourable-bad.

Issues

Large shallow inlets and bays were assessed as unfavourable-bad due to loss of eelgrass beds²⁴ and the super abundant presence of the opportunistic *Ascidella aspersa* in the Maërl bed which occurs in the inner reaches of Kenmare River SAC.

22. Appropriate Assessment Conclusion Statement by Licensing Authority (i.e. Minister for Agriculture, Food and the Marine) for aquaculture activities in Roaringwater Bay and Islands Special Area of Conservation (SAC) (Natura site)

23. Marine Institute (2019). Report supporting Appropriate Assessment of Aquaculture and Fisheries Risk Assessment in Kenmare River SAC

24. 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

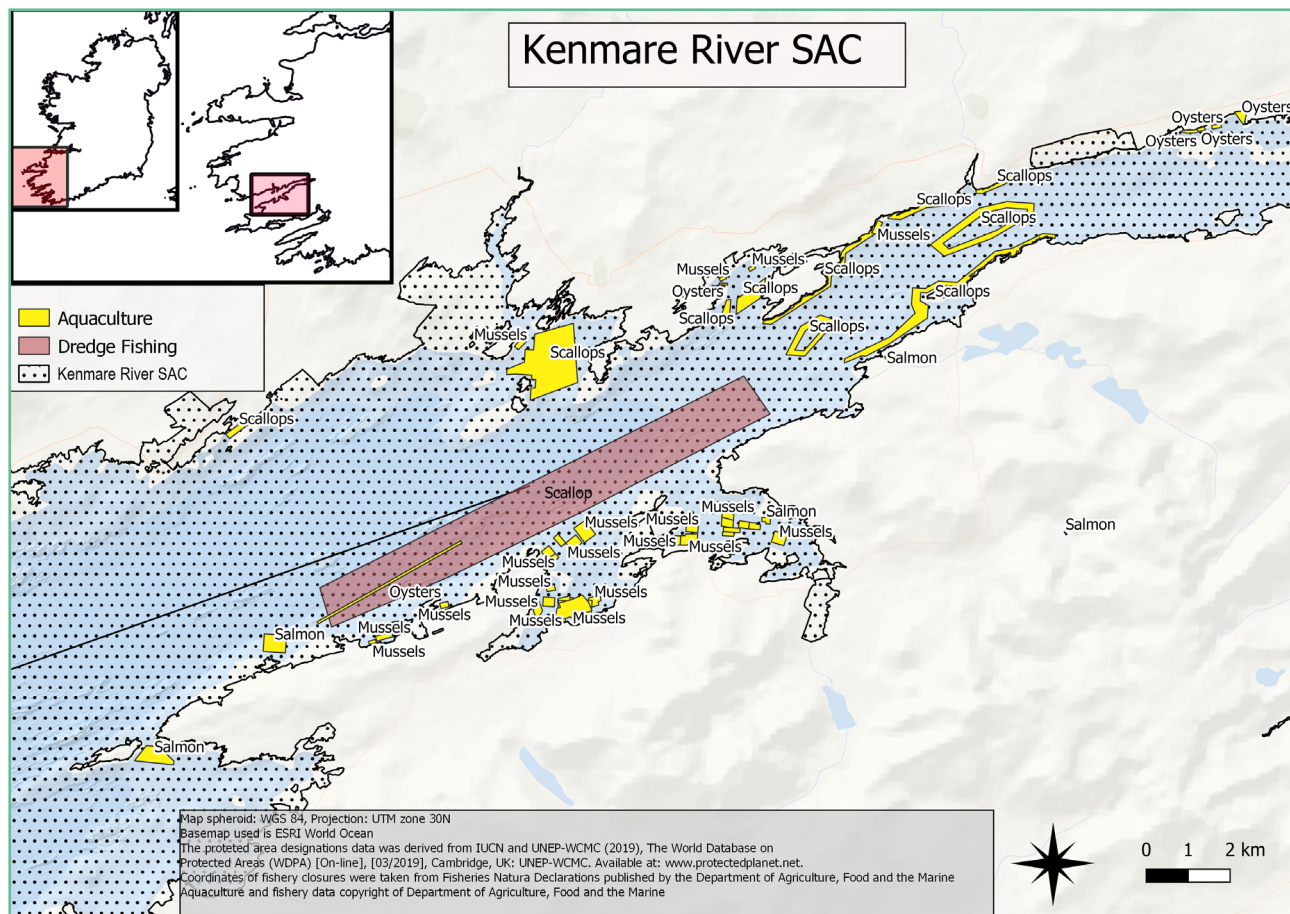


Figure 4: Map of Kenmare River SAC and associated activities.

The aquaculture activities in Kenmare Bay have been assessed and mitigation measures were put in place such as redrawing of site boundaries and the decision not to approve certain license applications²⁵.

For fisheries however, such a mitigation plan does not exist.

According to the risk assessment done by the Marine Institute, “the intensity of trawling by vessels over 15m in length in outer Kenmare River could be classed as medium (using scales provided by the Beaumaris approach to sensitivity assessment, ABPMer 2012. Muddy sands. Appendix F, p. 71) and some of the habitat probably experiences more than a single pass of the gear per annum. Activity by vessels under 15m is **unquantified**. The community therefore may be impacted. Impact would increase if fishing effort escalated” (own emphasis). Furthermore, the risk to reef by vessels over 15 m is considered low, but risk by vessel under 15 m is also unquantified. The risk assessment must guarantee that no deterioration or disturbance will occur, which means all activities must be quantified and the risk to the priority features properly assessed. Otherwise the precautionary principle applies and activities must be halted until it can be proven beyond reasonable scientific doubt that the activity is not adversely affecting the integrity of the site.

The AA for aquaculture in Kenmare Bay is also lacking in scientific certainty. The impacts of intertidal oyster culture on trestles is considered non-disturbing to both sedimentary communities and intertidal reef communities and therefore not

25. Appropriate Assessment Conclusion Statement by Licensing Authority for aquaculture activities in Kenmare River Special Area of Conservation (SAC) (site code 2158)

further assessed. The conclusion that oyster trestles are non-disturbing to these two community types is based on a 2015 study by Forde et. al which sampled areas in Clew Bay, Donegal Bay, Dungarvan Harbour and Bannow Bay²⁶. Firstly, the study did not take place in Kenmare Bay and therefore should not be used to discount any significant effects of oyster aquaculture on the communities in Kenmare Bay, as the local parameters will be different. The paper cites many other studies including from France and the UK where oyster trestle aquaculture **did** show significant effects, which shows that impacts are site-specific. Secondly, it was shown in the study that physical presence of the oyster trestles did not have significant effects on benthic infauna, however access routes to and from the trestles **did** show a significant effect thereof. Thirdly, the study's results showed that species found in all samples (including 'control') were so-called opportunistic species that are characteristic of organic enrichment. This shows that the entire study area was already impacted in some form by existing human activities (salmon aquaculture takes place in Clew Bay and Donegal Bay, and all study areas are dredged for various shellfish species). The trestles may not have significantly added to this existing pressure, but to conclude that oyster trestles have no effects on sedimentary communities based on one study is not sufficient and does not satisfy the requirements of the Habitats Directive. Furthermore, scallop aquaculture which uses dredging to relay scallop seed on the seabed is also not considered disturbing to sedimentary habitats in the AA if less than 15% of the total habitat are affected. We have described the issues with this 15% rule further in the 'general reasons for concern' section.

Footage of Kenmare Bay was taken thirty years ago and recently shown on [RTE's Hot Air](#) – Ireland's Climate Crisis. The bay, three decades ago, was shown full of life with plentiful fish and kelp forests. The same spot that was once full of life was subsequently shown and described as an "underwater desert". The exact reasons for the decline in biodiversity were not discussed, but it shows that the current condition of the bay is poor in comparison to what the baseline should be. Conservation measures (which are currently non-existent in Ireland) must take into consideration the ecological requirements of the site (Habitats Directive Article 6 (1)). Since the 'Large shallow inlet and bay' habitat has since declined to an unfavourable-bad conservation status, the management must take this into account.

4. Lough Swilly SAC

Background

Lough Swilly is protected for its priority habitats Estuary, Coastal Lagoons and Atlantic Salt Meadows, the priority species Otter and many waterfowl species. The SAC includes a wide array of protected intertidal sedimentary communities including fine sand community complexes, intertidal mixed sediment communities with polychaetes, subtidal mixed sediment communities with polychaetes and bivalves, muddy fine sand communities with *Thyasira flexuosa*, muddy community complexes and *Ostrea edulis* dominated communities. The native oyster, *Ostrea edulis*, is one of the characterising habitats in the intertidal area of Lough Swilly²⁷.

Activities in Lough Swilly SAC include a fishery for the native oyster *Ostrea edulis* and shellfish (mussels and oysters) aquaculture.

26. Forde, J., O'Beirn, F. X., O'Carroll, J. P. J., Patterson, A., & Kennedy, R. (2015). Impact of intertidal oyster trestle cultivation on the Ecological Status of benthic habitats. *Marine Pollution Bulletin*, 95(1), 223–233. <https://doi.org/10.1016/j.marpolbul.2015.04.013>

27. Department of Culture, Heritage and the Gaeltacht (2016). Site synopsis for Lough Swilly SAC <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002287.pdf>

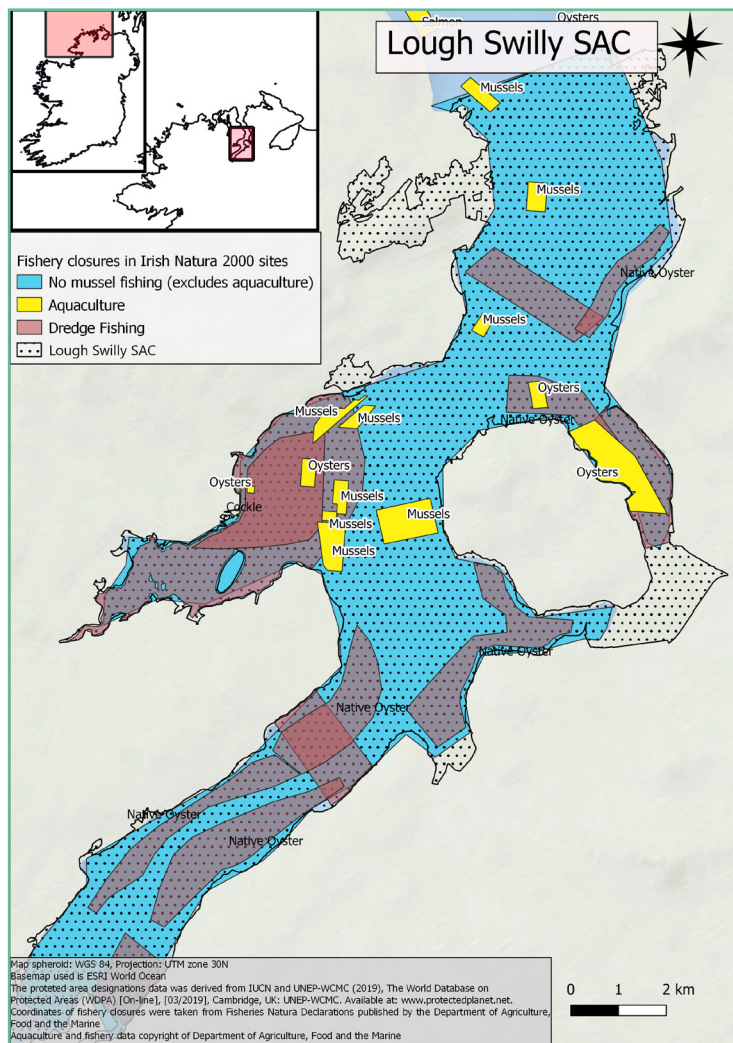


Figure 5: Lough Swilly SAC with aquaculture activity

Issues

An AA for fisheries and aquaculture was developed for Lough Swilly in 2013²⁸. Subsequently, a Fishery Natura Plan for native oyster fishery was proposed which laid out a five-year plan for the fishery in line with the conservation objectives for the site²⁹. In the risk assessment of fisheries on qualifying interests in all Irish inshore waters published two years later¹³, the following was noted for the oyster fishery: *“A fishery for native oyster occurs in L. Swilly. This fishery, and a five year plan for it, was subject to Article 6.3 assessment in March 2013. The plan was considered broadly consistent with the conservation objectives for habitats in L. Swilly. However, the plan has not been implemented.*

The current unlimited fishery poses a high risk to the Ostrea edulis dominated community in L. Swilly. Oyster density is significantly reduced by the fishery and in parallel with infrequent or irregular recruitment which is characteristic of native oyster stocks there is a real risk of population collapse.”

28. Marine Institute (2013). Appropriate Assessment of Fisheries and Aquaculture in Lough Swilly (SAC 002287)

29. Fishery Natura Plan for Native oysters in Lough Swilly 2012-2017 Proposed by Lough Swilly Wild Oyster Society Limited (LSWOSL)

In addition to the fishery, aquaculture of the non-native oyster *Magallana gigas* is increasing in Lough Swilly, which is impacting on the native oyster population due to farm escapees now having formed an established population. A report on the status of marine habitats in Irish SACs concluded the following³⁰:

*“The presence of the non-native Pacific oyster *Magallana gigas* (syn. *Crassostrea gigas*) and the non-native barnacle *Austrominius modestus* (syn. *Elminius modestus*) were the reason for the failure of Lough Swilly SAC to reach Favourable conservation status. It is considered **likely that deliberate and accidental introductions through aquaculture activity are the origin of this impact**”* (own emphasis).

Once again, **this shows that a protected site is deteriorating in spite of risk assessments**, because proposed mitigation measures were not sufficient or not implemented.

GENERAL HORIZONTAL ISSUES

The above case studies have a few common reasons for concern which they share with many other Irish marine SACs and SPAs not mentioned here. There is a clear overall trend in marine SACs where **ongoing damages caused by fisheries and aquaculture activities are not addressed**, leading to degradation in all protected habitats within the site, whether sedimentary or reef. It is important to note also that Roaringwater Bay and Mullet/Blacksod Bay are two examples of only a handful of sites in Ireland with a Fisheries Natura Declaration and a fisheries mitigation plan and yet even those sites are deteriorating. There are many more sites without any fisheries or aquaculture mitigation plans. This points to some underlying issues which urgently need to be addressed by all of government, due to the shared responsibilities for the marine environment between several departments. The points are laid out below.

1. 15% damage threshold

All AAs and risk assessments are based on a 15% damage threshold policy which is derived from conservation objective guidance documents drawn up by the NPWS. The NPWS policy states the following:

“This Department has adopted a prioritized approach to conservation of structure and function in marine Annex I habitats.

- 1. Those communities that are key contributors to overall biodiversity at a site by virtue of their structure and/or function (keystone communities) should be afforded the highest degree of protection and any significant anthropogenic disturbance should be avoided.*
- 2. In relation to the remaining constituent communities that are structurally important (e.g., broad sedimentary communities) within an Annex I marine habitat, there are two considerations. Significant anthropogenic disturbance may occur with such*

30. Scally, L., Pfeiffer, N. and Hewitt, E. (2020). The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

intensity and/or frequency as to effectively represent a continuous or ongoing source of disturbance over time and space (e.g., effluent discharge within a given area). Drawing from the principle outlined in the European Commission's Article 17 reporting framework that disturbance of greater than 25% of the area of an Annex I habitat represents unfavourable conservation status, this Department takes the view that **licensing of activities likely to cause continuous disturbance of each community type should not exceed an approximate area of 15%**. Thereafter, an increasingly cautious approach is advocated. Prior to any further licensing of this category of activities, an inter-Departmental management review (considering inter alia robustness of available scientific knowledge, future site requirements, etc) of the site is recommended. Some activities may cause significant disturbance but may not necessarily represent a continuous or ongoing source of disturbance over time and space. This may arise for intermittent or episodic activities for which the receiving environment would have some resilience and may be expected to recover within a reasonable timeframe relative to the six-year reporting cycle (as required under Article 17 of the Directive). This Department is satisfied that such activities could be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site" (own emphasis).³¹

The policy from the NPWS was loosely based on from an EU guidelines document (which is not legally binding) on applying thresholds to describe the conservation status of habitats. **It is our view that the NPWS has misinterpreted this guidance to permit activities in SACs in breach of its legal obligations under the Habitats Directive** to

- "take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated" (Habitats Directive Article 6 (2))
- Carry out "Appropriate Assessments" on plans or projects "likely to have a significant effect" on a protected site and to only authorise such a plan or project where it has been ascertained that it will not adversely affect the integrity of the site concerned (Habitats Directive Article 6(3)). Under the policy, the NPWS appears to take the position that up to 15% of a protected habitat can be damaged by a plan or project without the need for an AA. This approach does not accord with the very low threshold of 'likely significant effect' established under Article 6(3).
- Generally take measures under the Habitats Directive that are "designed to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest" (Article 2 (2)).

The EU guidelines for applying thresholds to describe the conservation status of structure and function of a habitat is as follows:

"Ideally the entire surface area of a habitat should be in good conditions for Structure and functions to be considered 'favourable'. In practice this is hardly achievable, but the proportion should be high and a threshold of 90 % of the habitat area is recommended. If more than 90 % of the habitat area (field 6.1) is in 'good' conditions as regards its specific Structure and functions the status is 'favourable'. If a different threshold than the recommended 90 % is used (for example a higher threshold close to 100 % may be used for very rare habitats, **while a proportion below 90% might be appropriate for common and widespread habitats**) this should be noted and explained in the field 10.8 'Additional information'" (own emphasis)³².

31. NPWS (2011). Roaringwater Bay and Islands SAC (site code: 101), Conservation objectives supporting document marine habitats, Version 1

32. DG Environment (2017). Reporting under Article 17 of the Habitats Directive: Explanatory notes and guidelines for the period 2013-2018. Brussels. Page 187

We understand these guidelines to mean that if a habitat is well-managed and improving with 90% or more in favourable conservation status, it is acceptable if up to 10% of this habitat is still showing signs of damage (or more in the case of **common**, widespread habitats). The aim, however, should always be to bring 100% of the site to a favourable conservation status, however unrealistic this may be.

It is also worth noting that the purpose of this document is to help Member States with their Habitats Directive reporting obligations; it does not purport to provide legal guidance to Member States on complying with Article 6 of the Habitats Directive. The European Commission has in fact published a legal guidance document for this purpose³³. At no stage does this document endorse the use of such a threshold as has been adopted by the NPWS.

This 15% threshold is applied in all risk assessments/AAs and is often used to justify the continuance of a damaging activity, if said activity overlaps with less than 15% of the habitat. This is very dangerous and has directly led to the deterioration of habitats (e.g. Roaringwater Bay).

2. Article 6 (2) risk assessment approach for fisheries (instead of full Article 6(3) AA)

Aquaculture and fisheries are often assessed together in Irish SACs due to their strong links regarding impacts and spatial coverage in Irish inshore waters. The assessments created by the Marine Institute are often titled ‘*appropriate assessments for aquaculture and risk assessments for fisheries*’ or simply ‘*Article 6.2 risk assessment for fisheries*’. In the preface of these risk assessments it is explained that “*In Ireland, the implementation of Article 6 of the Habitats Directive in relation to aquaculture and fishing projects and plans that occur within designated sites is achieved through sub-Article 6(3) of the Directive. Fisheries not coming under the scope of Article 6.3, i.e. those fisheries not subject to secondary licencing, are subject to risk assessment. Identified risks to designated features can then be mitigated and deterioration of such features can be avoided as envisaged by sub-article 6.2.*” This approach would in theory be fine and Member States are able to pursue the management of fishing activities under the scope of Article 6(2), “***provided it is guaranteed that no deterioration and disturbance will occur.***”³⁴

The risk assessments, however, often do not guarantee this due to lack of scientific certainty and consistent application of the 15% damage threshold. Damaging fisheries, such as scallop dredging, are highly likely to cause deterioration of the marine habitats for which the site was designated. Nevertheless, it is unclear to us when scallop dredging and other harmful fisheries are in need of a full AA and when they require only a risk assessment. While scallop fisheries in Roaringwater Bay were subject to a full AA with proposed management and a Fisheries Natura Declaration, scallop fisheries in Kilkieran Bay, Blacksod Bay, Galway Bay (to name a few) were only subject to risk assessment with no resulting management action that we are aware of.

Where a risk assessment identifies measures needed but does not give them statutory basis (i.e. voluntary measures), this does not fulfil the obligations under Article 6(2). Fisheries measures need to be **proactive**, seeking to avoid damage and disturbance, **as well as reactive** as a response to such effects in order to put an end to negative impacts (Case C-241/08). We believe that our case studies show that this has not been achieved in Ireland and a full AA for all fisheries is recommended.

33. https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_6_nov_2018_en.pdf

34. DG Environment (2019). Application of Article 6(2) and 6(3) of the Habitats Directive (92/43/EEC) to fishing activities in marine Natura 2000 sites

3. General lack of scientific certainty

AAs/risk assessments often use terms like “*probably*” or “*likely*” when stating effects of an activity on a priority feature. This shows that there is lacunae and the authors of the AAs have not proven beyond reasonable scientific doubt that the activity will not have adverse effects on the integrity of the site. In these cases, the precautionary approach should be applied. For example, in the Roaringwater Bay AA³⁵ assumptions are made regarding reefs, in which it is claimed that “*resilience may be low but recoverability of this species is **probably** moderate or high*” (own emphasis). Furthermore, the activity of vessels under 15 m is **unquantified** in Roaringwater Bay. In Blacksod Bay, risk of disease transmission from cultured oysters to other species is **unknown**³⁶. To the best of our knowledge, in these cases the activity was allowed to continue despite uncertainty. Furthermore, information on species’ sensitivity is often taken from Marlin.ac.uk where confidence on actual sensitivity is usually low due to a lack of information. The guidance of the EU is clear: “*In carrying out the necessary assessments, it is important to apply the precautionary principle and the focus of the assessment should be on objectively demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of the Natura 2000 site. Where this is not the case, **adverse effects must be assumed***” and “*If at this stage information or evidence is lacking, **then adverse effects should be assumed***” (own emphasis).³⁷

Furthermore, in the Case C-258/11 Sweetman v An Bord Pleanála the following was made clear:

“So far as concerns the assessment carried out under Article 6(3) of the Habitats Directive, it should be pointed out that it cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned (see, to this effect, Case C-404/09 Commission v Spain, paragraph 100 and the case-law cited).”

4. Lack of consideration for cumulative pressures

Most AAs/risk assessments include an account of the combined pressures of fishery and aquaculture activity on the protected features. Other existing activities, such as maintenance dredging, shipping and other boat traffic, windfarm operations or activities on land that may impact on priority features are not properly assessed in fisheries and aquaculture risk assessments. According to Scally et.al (2020)³⁸, one of the most observed pressures on sublittoral reef habitats were those associated with lost fishing gear and the use of tangle nets. The threat of lost fishing gear to benthic marine habitats has not been mentioned at all in fisheries risk assessments. The Habitats Directive article 6 (3) clearly calls for the assessment of the implications of a plan or project for the site either individually or **in combination with other plans or projects**. Furthermore, case law has shown that “*all the aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those [conservation] objectives must be identified in the light of the best scientific knowledge in the field.*” (Case C-127/02)

35. Marine Institute (2013). Article 6 Assessment of Aquaculture and Fisheries in Roaringwater Bay, page 56

36. Marine Institute (2018). report supporting appropriate assessment of aquaculture and fisheries risk assessment in Mullet/Blacksod Bay Complex SAC

37. European Commission, Environment DG (2001). Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, page 28

38. Scally, L., Pfeiffer, N. and Hewitt, E. (2020). The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

5. Validity of appropriate/risk assessments

The risk assessment of fisheries in Irish coastal waters says the following: “*European Union (Birds and Natural Habitats) (Sea Fisheries) regulations 2013 (S.I. 290/2013). Under this legislation Appropriate Assessments (AAs) and risk assessments (RAs) are carried out against the conservation objectives (COs), and more specifically on the version of the COs that are available at the time of the Assessment, for designated ecological features, within the site, as defined by the National Parks and Wildlife Service (NPWS).*”³⁹ Some AAs are very old, e.g. from 2013 in the case of Roaringwater Bay. If the Natura site was in good conservation status at the time of the AA, any mitigation measures would have been targeted at maintaining the site at favourable conservation status. If the habitats in the Natura site subsequently deteriorate because the AA did not sufficiently investigate the adverse effects of the plan or project, it should follow that the conservation objectives are changed from ‘*maintain*’ to ‘*restore*’ and management measures are adjusted to ensure this restoration. According to the NPWS, any AA based on the conservation objectives will remain valid even if the targets of the conservation objectives are subsequently updated. Does this mean an AA is valid indefinitely? Surely, if the circumstances change, a new AA must be drawn up to ensure that the ecological requirements of the site are met.

6. The need for conservation measures

As mentioned above, if information or evidence is lacking, as is the case in many Irish AAs/risk assessments for fisheries and aquaculture, adverse effects should be assumed. This means that mitigation measures must be put in place to prevent these adverse effects. Currently there are only a handful of Fisheries Natura Declarations in place to prohibit certain fisheries from fishing on vulnerable habitats inside SACs (see maps in Annex 3). These prohibitions often only cover small parts of the relevant SAC, not the whole site, and they are specific to one type of fishery or aquaculture activity. There are a total of 159 Irish marine SACs with a variety of fishing pressures, so the small fishery exclusion zones for very specific fisheries is not nearly at the level of mitigation required to halt biodiversity loss. Furthermore, examples like Mullet/Blacksod Bay show that **even where these mitigation measures are in place, they are not able to stop the total destruction of a priority habitat**. The European Commission has recently concluded in their July 2020 infringement package that Ireland has not established necessary conservation measures for any of the 423 SACs⁴⁰. Clearly the level of mitigation that currently exists is not enough to satisfy the requirements of the Habitats Directive.

According to the aquaculture AA conclusion statement of Mullet/Blacksod Bay SAC, the Minister for Agriculture and the Marine has the authority to amend licences and put measures in place to rectify problems presenting “*in the event that activities associated with licensed aquaculture operations are deemed to be causative to the deterioration of the conservation status*”⁴¹. The minister, however, has the responsibility to be **proactive** in preventing any damage caused to the habitats or species for which the site was designated. In Ireland, any action is usually reactive rather than proactive. A full site-specific management plan is needed with an associated budget and staff to truly combat further deterioration.

39. Marine Institute (2015). Article 6.2 (Habitats Directive) Risk Assessment, The effects of fisheries on Qualifying Interests in Special Areas of Conservation in Irish coastal waters. https://ec.europa.eu/commission/presscorner/detail/en/inf_20_1212

40. https://ec.europa.eu/commission/presscorner/detail/en/inf_20_1212

41. Appropriate Assessment Conclusion Statement by Licensing Authority in support of the Appropriate Assessment of Aquaculture in: Mullet/Blacksod Bay Complex SAC (Site Code: 0470) Broadhaven Bay SAC (Site Code: 472) Glenamoy Bog Complex SAC (Site Code: 500) Blacksod Bay / Broadhaven SPA (Site Code 004033) (Natura 2000 sites)

7. Statutory designation of cSACs

The six-year deadline to fully designate all remaining marine cSACs as laid out in Article 4 (4) of the Habitats Directive has passed in Ireland. This means that the Habitats Directive Article 6 now fully applies to all Irish cSACs, including the need for conservation measures as laid out in Article 6 (1) (Commission v Spain, case C-90/10, para. 24-28). The need to take urgent action on this issue is underscored by the fact that in July 2020 the European Commission referred an infringement action against the Irish government to the ECJ over the government's failure to designate 154 SCIs (out of 423) as SACs in the Atlantic biogeographical region, although the relevant deadline expired in December 2014⁴².

8. Non-existent or unambitious site-specific conservation objectives

The third complaint in the EU's 2020 infringement package refers to the lack of site-specific conservation objectives for 87 sites. Furthermore, where conservation objectives do exist, they are not very ambitious. Due to the scarcity in historical data from marine systems, baseline conditions of protected habitats and species were generally set at whatever condition they were in around the time the site was designated. The conservation objective would then be to maintain the habitat or species in the current condition. The issue is that when compared to past conditions, be it 20, 50 or even several hundred years ago (i.e. before the advent of industrial fishing), the site's features would have been very different. Some habitats would have been present that are now extinct due to overfishing or they would have covered a larger area, while apex predator populations would have been much larger. One good example for this phenomenon is oyster beds: they were once likely present all around the Irish coastline and records show that at the beginning of the 19th century the oyster dredging grounds on the east coast stretched almost continuously from Wicklow Head to Carnsore Point⁴³ - yet none of the SACs in the region mention the restoration of oysters in their conservation objectives because they were already extinct by the time the SAC was designated. This is the result of '*shifting baseline syndrome*' and should be rectified in future conservation objectives⁴⁴. A re-evaluation of conservation objectives coupled with research projects to identify past conditions will be vital when it comes to setting restoration targets as envisaged under the EU Biodiversity Strategy.

42. https://ec.europa.eu/commission/presscorner/detail/en/inf_20_1212

43. Went, A. E. J. (1963). Oyster Fisheries. Dublin Historical Record, vol. 18, no. 2, pp. 56–63. JSTOR, www.jstor.org/stable/30104139. Accessed 30 Apr. 2020.

44. Plumeridge, A. A., & Roberts, C. M. (2017). Conservation targets in marine protected area management suffer from shifting baseline syndrome: A case study on the Dogger Bank. Marine Pollution Bulletin, 116(1–2), 395–404. <https://doi.org/10.1016/j.marpolbul.2017.01.012>

FINAL POINTS – WHY MARINE PROTECTION IS SO DIFFICULT IN IRELAND

A host of Departments and agencies is unnecessarily involved in marine issues. With some restructuring of government departments, it would be a lot simpler to achieve the objectives set out in various cross-departmental plans, such as the Climate Action Plan, Biodiversity Action Plan and achieve well-managed marine protection without delays.

Body	Responsibility	Department
Sea-Fisheries Protection Authority (SFPA)	Enforcement action for sea fisheries	State agency of the Department of Agriculture and the Marine
Marine Institute	Research and appropriate assessments	State agency of the Department of Agriculture and the Marine
Department of Agriculture and the Marine	Licensing of fisheries	Department of Agriculture and the Marine
National Parks and Wildlife Service	Conservation of natural habitats and species, N2000 network designation	Department of Housing, Local Government and Heritage
Department of Housing, Local Government and Heritage	Foreshore licensing and MPA designations, marine spatial planning	Department of Housing, Local Government and Heritage
Environmental Protection Agency	Water quality improvements	State agency of the Department of Communications, Climate Action and Environment
Inland Fisheries Ireland	Issuing of oyster dredge licences, protection, management and conservation of the inland fisheries resource, including oysters	State agency of the Department of Communications, Climate Action and Environment

OUR SOLUTIONS

A cross-departmental approach between the Department of Housing, Local Government and Heritage, the Department of Agriculture and the Marine and the Department of Climate Action, Communications and the Environment as well as other stakeholders is desperately needed to produce site-specific management plans. This process must be aligned with further developments on the National Marine Planning Framework.

The protection and restoration of Ireland's marine habitats and species has various benefits to society ranging from climate change mitigation, water quality improvements and enhanced fish and shellfish stocks to thriving marine tourism. The health of our oceans must be a government priority for nature and society.

Future MPA designations under the Habitats Directive, Birds Directive or Marine Strategy Framework Directive must cover at least 30% of Ireland's EEZ by 2030 of which one third should be strictly protected (according to the EU Biodiversity Strategy). This is best done by designating large multi-use MPAs where all harmful activities are banned and where low-impact sustainable fishing is well managed. Establishing no-take zones based on scientific advice should be part of restoration measures.

For information on the Irish Wildlife Trust's position on MPAs please visit the policy section on our website.



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Marine Protected Areas

Restoring Ireland's Ocean Wildlife II

Report July 2020
By R. Classen