



Article 6 Assessment of Aquaculture and Fisheries in Inner Donegal
Bay SAC (Murvagh, 0133), SPA (Donegal Bay, 004151), SPA
(Durnesh Lough, 004145)

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1 Introduction

This document assesses the potential ecological impacts of aquaculture and fisheries activities within Donegal Bay (Murvagh) SAC (site code 000133) on the Conservation Objectives of the site (COs) and also the potential impacts of those activities on the Special Conservation Interests (SCIs) in the Donegal Bay (004151) and Durnesh Lough (004145) SPAs.

- The assessment of fisheries and aquaculture in the SAC is detailed in Annex I
- The assessment of fisheries and aquaculture in the SPA is detailed in Annex II
- The executive summary, below, outlines the main findings

2 Executive summary

2.1 The SAC and SPAs

Donegal Bay (Murvagh) SAC is located to the west of Donegal Town, is located in the inner part of Donegal Bay and comprises the majority of marine habitat inside the Murvagh peninsula. Most of the site consists of intertidal habitats, notably mud and sand flats, sea inlets and bays, tidal rivers, estuarine channels and sandy beaches. The SAC is primarily estuarine in character, with shallow water and intertidal sand and mud flats being the dominant habitats. The site is also designated for Harbour Seal.

The Special Conservation Interests (SCIs) of the Donegal Bay SPA include wintering populations of Light-bellied Brent Goose, Common Scoter, Great Northern Diver and Sanderling and the SCIs for Durnesh Lough SPA include the wintering populations of Whooper Swan and Greenland White-fronted Goose. In addition wetland habitats supporting these populations should be maintained in favourable condition

2.2 Fishing and aquaculture activities in the SAC and SPAs

There is no fishing activity within the Murvagh SAC or in Durnesh Lough SPA. There is limited potting for crab and lobster in a small proportion of the Donegal Bay SPA. There are significant pelagic fisheries for sprat, demersal mixed fisheries, line fishing and potting for crustaceans in this area.

The only significant aquaculture activity in the SAC is the culture of Pacific oysters in bags and trestles on intertidal habitat. In the Donegal Bay SPA there are aquaculture applications for the on-bottom (extensive) production of Pacific oysters, for intensive intertidal culture of Pacific oysters and for the extensive culture of the native purple sea urchin.

2.3 The appropriate assessment and risk assessment process

The function of the appropriate assessment and risk assessment is to determine if the ongoing and proposed aquaculture and fisheries activities are consistent with the Conservation Objectives for the sites or if such activities will lead to deterioration in the attributes of the habitats and species over time and in relation to the scale, frequency and intensity of the activities. NPWS (2011b) provide guidance on interpretation of the Conservation Objectives which are, in effect, management targets for habitats and species in the sites. This guidance is scaled relative to the anticipated sensitivity of habitats and species to disturbance by the proposed activities. Some activities are deemed to be wholly inconsistent with long term maintenance of certain sensitive habitats while other habitats can tolerate a range of activities. For the practical purpose of management of sedimentary habitats a 15% threshold of overlap between a disturbing activity and a habitat is given in the NPWS guidance. Below this threshold disturbance is deemed to be non-significant. Disturbance is defined as that which leads to a change in the characterizing species of the habitat (which may also indicate change in structure and function). Such disturbance may be temporary or persistent in the sense that change in characterizing species may recover to pre-disturbed state or may persist and accumulate over time.

In the case of designated bird species trends in populations and range of habitat use are important especially with respect to conditions that prevailed in the mid 1990s (baseline period).

The appropriate assessment and risk assessment process is divided into a screening stage and appropriate assessment or risk assessment proper. The assessment begins by screening out those activities which cannot have, because they do not spatially overlap with a given habitat, any impact. This is a conservative screening in that other activities which may overlap with habitats but which may have very benign effects are retained for full assessment. In assessment of species activities outside the site which may have an effect on them are included. This is particularly important for highly mobile widely distributed species. In the case or risk assessments of fisheries, consequence (impact) and likelihood of the consequence occurring are scored categorically as separate components of risk. Risk scores are used to indicate the requirement for mitigation.

2.4 Data supports

Distribution of habitats and species population data are provided by NPWS. Fishing data are compiled from various sources including hard data and expert knowledge of staff at BIM and MI. Information on Aquaculture licences and applications are provided by DAFM. Scientific reports on the potential effects of various activities on habitats and species have been compiled by the MI and provide the evidence base for the findings. The data supporting the assessment of individual activities vary and provides for varying degrees of confidence in the findings.

2.5 Findings

The appropriate assessment and risk assessment finds that the majority of activities, at the current and proposed or likely future scale and frequency of activity pose no risk to the Conservation Objectives for the SAC and SPA. The following are the exceptions:

- SAC
 - Aquaculture
 - Increased licencing (applications) of intertidal oyster trestle culture may result in disturbance of Harbour Seal due to the locations proposed in a number of applications.
 - Fisheries
 - There is a low risk of by-catch of Harbour Seals, foraging from the SAC, in inner Donegal Bay pelagic fishery.

- SPA
 - Aquaculture
 - Bottom (extensive) culture of Pacific oyster and dredging of them will disturb benthic communities and there is a risk of introduction of other alien species into the SPA and therefore potentially into the SAC. Bottom culture of oyster will not have negative effects on birds.
 - There is a possibility of displacement of up to 10% of sanderling by oyster trestle culture
 - Fisheries
 - There is a low risk, due to possible depletion of the prey base, to Great Northern Diver due to pelagic fishing of sprat and herring in Inner Donegal Bay and also due to continued low biomass of herring.
 - There is a low risk of by-catch of Great Northern Diver and Common Scoter in unattended trammel nets used by some operators to catch bait for the lobster and crab fishery.

2.6 Recommendations

- Aquaculture
 - Access routes used by oyster farmers, as indicated in the assessment, should be strictly adhered to minimize disturbance to species and habitat
 - The potential effects of extensive bottom culture of Pacific oyster in the SPA should be mitigated

- Fisheries

- Although some risks were identified, as described above, these are not significant (very low risk score) and will not compromise the conservation objectives for the SAC or SPA. Given the current and expected level of fishing activities in the area no mitigations or management measures are required.