Scottish MPA Project

Fisheries Management Guidance

NORTHERN SEA FAN AND SPONGE COMMUNITIES

JULY 2013[1]

The fisheries management guidance has been produced to provide advice on the impact various fishing activities may have on MPA search features in Scotland's seas. The advice is organised by features and gear types. Fishing gears are grouped to combine those with broadly similar impacts, but where there is likely to be variation within a group of features (e.g. for high and low energy sand habitats), this has been taken into account. Where possible the guidance has been based on evidence from peer-reviewed scientific journals.

The advice on fisheries management falls into three broad categories:

- Gear/feature combinations that are unlikely to cause unacceptable impacts (except possibly at very high levels of effort) and so no additional management is likely to be required;
- Gear/feature combinations that are likely to cause unacceptable impacts and for which no possible mitigation measures could be identified at this stage other than closure to that gear;
- Gear/feature combinations that are likely to cause some degree of impacts but for which management may be possible to mitigate the effects (e.g. modification or restriction of certain gears, partial or temporary area closures, effort limitation).

In the last type of cases in particular, further site-specific evidence gathering and discussion with stakeholders will be required to determine the appropriate management measures.

The fisheries management guidance has been used, along with the FEatures Activities Sensitivities Tool (FEAST), to inform the development of management options papers for each possible MPA.

[1] Based on Version 1.1 of the fisheries management guidance

Northern sea fan and sponge communities

Northern sea fan and sponge communities are found on hard substrates ranging from bedrock to boulder, characterised by aggregations of the sea fan *Swiftia pallida* and the cup coral *Caryophyllia smithii* living on the on upper and vertical surfaces. With increasing water depth (35-120m+), and in areas of low tidal flow, erect branching sponges replace sea fans. Rock is colonised by sea firs, soft corals (e.g. dead man's fingers) and large sea squirts, with crevices providing shelter for sea cucumbers, squat lobsters and wrasse[1].

Impacts

Demersal towed gears (including dredges, beam trawl, demersal otter trawl, scallop dredge, etc.)

This feature is likely to be avoided by towed gear fishermen due to the nature of the terrain. However where rocks or boulders are of low relief it is feasible that these areas may be fishable with rockhopper gear. Where mobile demersal fishing gears come into contact with these communities the slow-growing fragile epifauna is liable to suffer high mortality[2] from direct impact and from disturbance of their substrate (e.g. overturning of boulders)[3]. Re-colonisation of these delicate, long-lived and slow growing suspension feeders is variable depending on intensity and frequency of disturbance, and size of towed gear used[4,5].

Static gears (including pots, traps, lines and nets)

Mechanical abrasion arising from static gear when being deployed or recovered has the potential to cause mortality of the fragile epifauna of this habitat. There is some evidence from studies of pots and creels on similar rocky substrates which indicates that this impact may be limited and will be dependent on the intensity of fishing[6,7]. Recovery may be slow due to slow growth of some species[5].

JNCC/SNH advice

Demersal towed gear - Given the characteristics of this feature and the potential for impact even from low levels of activity, JNCC and SNH advise that use of demersal towed gear should be avoided on this feature.

Demersal static gear - The potential for adverse impact from static gear is likely to be directly related to fishing intensity. Fishing activity at low levels is not expected to adversely impact the feature, however further research will be required to determine the level of fishing that would be compatible with the feature.

Confidence in advice

Demersal towed gears - Medium certainty. There is no direct evidence and it has been necessary to make assumptions based on knowledge of similar habitats or comparable pressures. There is good reason to believe that the assumptions are justified (eg. occurrence of species with similar characteristics).

Demersal static gears - Medium certainty. The feature may encompass a number of sub-types which vary in their sensitivity to fishing pressure. The available evidence does not cover the full range of the variation so some cases may not be well supported by evidence.

Evidence

[1]Baxter *et al.,* 2011; [2]Løkkeborg, 2005; [3]Freese *et al.,* 1999; [4]Jennings *et al.,* 2008; [5]MacDonald *et al.,* 1996 ; [6]Bowden, 2010, [7]Eno *et al.,* 2001							
There is no direct evidence relating to impacts of towed gears on this habitat. The assessment is therefore based on knowledge of impacts of towed gear on other habitats with similar characteristics (Hard substrate and fragile, erect epifauna) in the UK and elsewhere. These are considered to be sufficiently similar for the quality of the evidence to be considered medium. There is good evidence of impacts of static gears in similar habitats (rocky substrate with fragile, erect organisms) in the UK but it is not clear whether it refers to this specific habitat.							
Directly relevant peer reviewed literature	✔	Directly relevant grey literature	✔	Inference from studies on comparable habitats, gears or geographical areas.	✔	Expert judgement or anecdotal evidence	✔