



Marine
Management
Organisation

Stage 3 MPA Call for Evidence Decision Document

May 2024



...ambitious for our seas and coasts

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1 Introduction

MMO is assessing the impact of, and where necessary introducing management to address the impacts of fishing in MPAs offshore of 6 nautical miles (nm) in English waters¹.

This work is taking place over 4 stages (**Figure 1**). Stage 1 of this work resulted in the implementation of MMO byelaws for four offshore MPAs¹. Stage 2 focussed on interactions between bottom towed fishing gear and rock and reef features in thirteen MPAs and resulted in the Marine Protected Areas Bottom Towed Fishing Gear Byelaw 2023 which came into force 22 March 2024².

Stage 3 of this work covers the remaining interactions between fishing gear and designated seabed features within all outstanding MMO led sites not already assessed in Stages 1 and 2. The impacts of fishing on MPAs designated for marine birds and harbour porpoise will be addressed in a separate Stage 4 (Stage 4 [call for evidence](#)³ closed 13 February 2024) (**Figure 2**).

As part of Stage 3, MMO drafted three 'Stage 3 Fishing Gear MPA Impacts Evidence' documents, each focused on the interactions between seabed MPA features and a particular fishing gear group: bottom towed gears, anchored nets and lines, and traps.

These documents collated and analysed the best available evidence on the impacts of fishing gears on seabed MPA features to inform MMO site level assessments of the impact of fishing on MPAs and management decisions.

¹ MMO Stage 1 MPA byelaws:

[www.assets.publishing.service.gov.uk/media/62569be5d3bf7f6002963937/Dogger Bank SAC Byelaw.pdf](http://www.assets.publishing.service.gov.uk/media/62569be5d3bf7f6002963937/Dogger_Bank_SAC_Byelaw.pdf)

[www.assets.publishing.service.gov.uk/media/62569c50d3bf7f6006f846dd/Inner Dowsing Race Bank and North Ridge SAC Byelaw.pdf](http://www.assets.publishing.service.gov.uk/media/62569c50d3bf7f6006f846dd/Inner_Dowsing_Race_Bank_and_North_Ridge_SAC_Byelaw.pdf)

[www.assets.publishing.service.gov.uk/media/62569cbae90e072a03206dcc/South Dorset MCZ Byelaw.pdf](http://www.assets.publishing.service.gov.uk/media/62569cbae90e072a03206dcc/South_Dorset_MCZ_Byelaw.pdf)

[www.assets.publishing.service.gov.uk/media/62569d10e90e0729fd14bcaf/The Canyons MCZ Byelaw.pdf](http://www.assets.publishing.service.gov.uk/media/62569d10e90e0729fd14bcaf/The_Canyons_MCZ_Byelaw.pdf)

² Marine Protected Areas Bottom Towed Fishing Gear Byelaw 2023:

[www.assets.publishing.service.gov.uk/media/65bb6a79c4734a000dd6cb78/Marine Protected Areas Bottom Towed Fishing Gear Byelaw 20231.pdf](http://www.assets.publishing.service.gov.uk/media/65bb6a79c4734a000dd6cb78/Marine_Protected_Areas_Bottom_Towed_Fishing_Gear_Byelaw_20231.pdf)

³ Stage 4 call for evidence: www.consult.defra.gov.uk/mmo/stage-4-call-for-evidence/

MMO ran a call for evidence from 17 January to 28 March 2023 to seek views and additional evidence on these documents. The questionnaire and documents were hosted on a platform called Citizen Space and organised into document level questions and all document questions. Further details on the call for evidence are provided [online](#)⁴

This document presents the responses received during the call for evidence, and how MMO has addressed those responses.

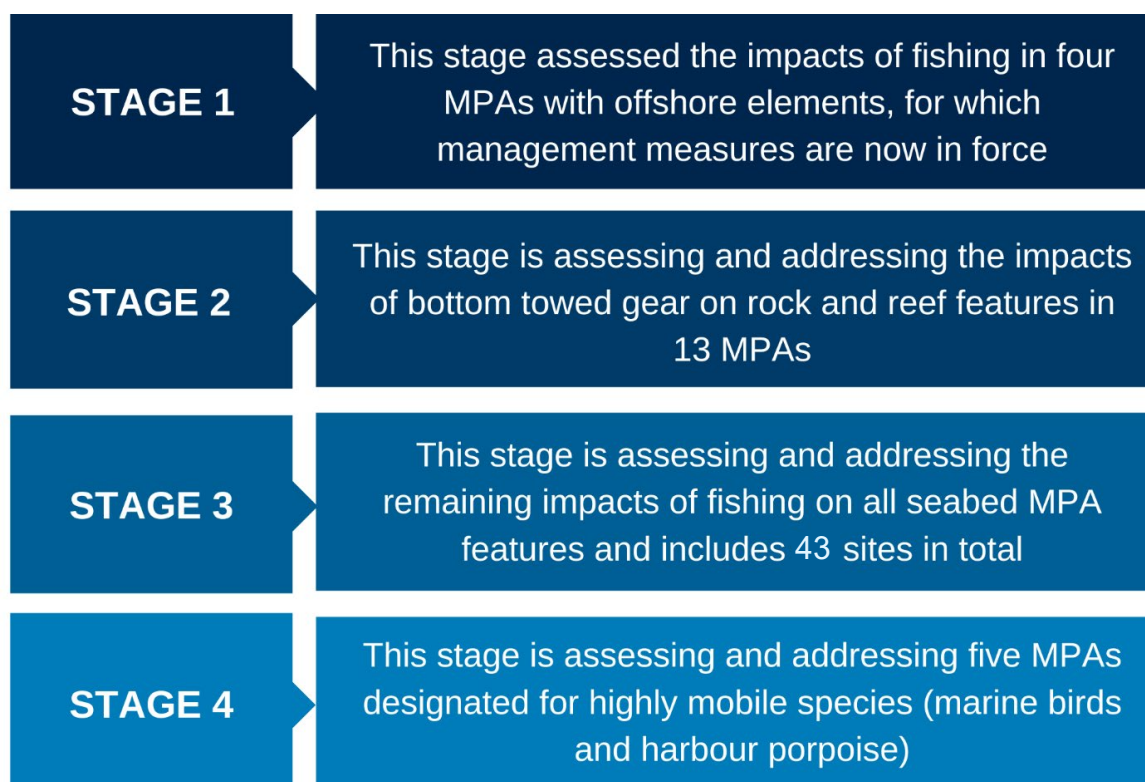


Figure 1. The four stages of the MMOs plan to assess the impacts of fishing in MPAs in England.

⁴ Stage 3 call for evidence: www.consult.defra.gov.uk/mmo/stage-3-call-for-evidence/



MMO Offshore Marine Protected Area Fisheries Management Stages and HPMAs

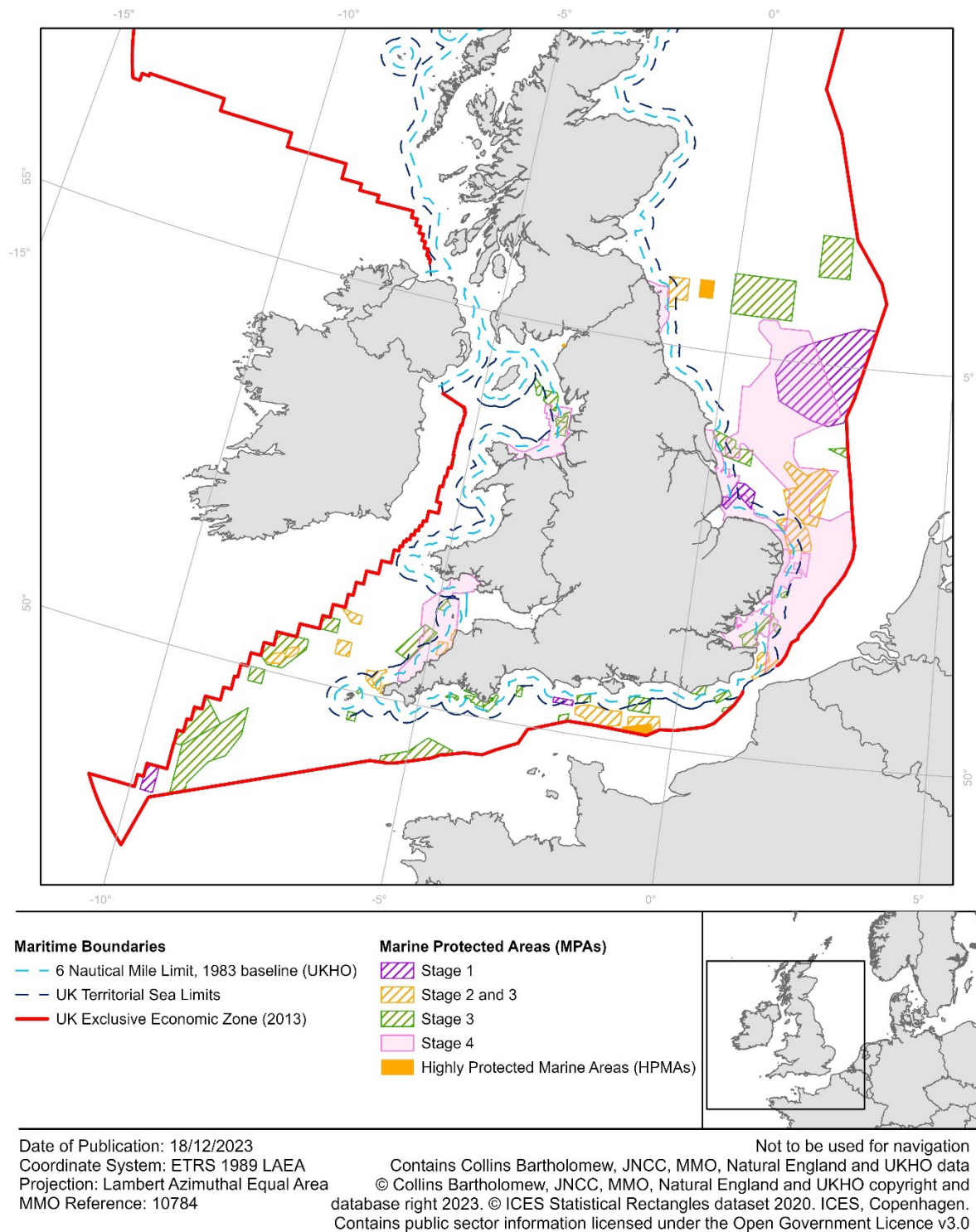


Figure 2. Stages 1, 2, 3 and 4 Marine Protected Areas and Highly Protected Marine Areas.

2 Call for Evidence

2.1 Methodology for collecting responses

The call for evidence included an online survey, which presented the three draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents:

- Stage 3 Fishing Gear MPA Impacts Evidence: Anchored Nets and Lines⁵
- Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears⁶
- Stage 3 Fishing Gear MPA Impacts Evidence: Traps⁷

Questions in the call for evidence sought additional information and evidence from stakeholders to ensure MMO have the best available evidence on the impact of fishing gear on seabed MPA features to inform site level assessments and decision for management.

MMO provided two questions for respondents to consider:

1. Do you have any additional evidence about the interactions of fishing gear and MPA seabed features?
2. Do you agree with the MMO analysis of the available evidence provided in each 'Stage 3 Fishing Gear MPA Impacts Evidence' document? If not, please provide details.

There was also the opportunity to upload further information outside these questions.

When providing responses, stakeholders could provide a response in relation to a specific 'Stage 3 Fishing Gear MPA Impacts Evidence' document or within the 'All gear comments' section if their response was relevant to all 'Stage 3 Fishing Gear MPA Impacts Evidence' documents.

Stakeholders also had the option to answer questions via email.

⁵ Stage 3 Fishing Gear MPA Impacts Evidence: Anchored Nets and Lines:
www.gov.uk/government/publications/stage-3-impacts-evidence

⁶ Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears:
www.gov.uk/government/publications/stage-3-impacts-evidence

⁷ Stage 3 Fishing Gear MPA Impacts Evidence: Traps:
www.gov.uk/government/publications/stage-3-impacts-evidence

2.2 Summary of responses

MMO would like to thank everyone who responded to the call for evidence. We have reviewed and considered all responses. (For a detailed summary of responses received and the MMO response please see section 4).

During the call for evidence, 49 responses were received, 19 by email, 30 via Citizen Space. These included responses from individuals, academics, fishers, NGOs, industry groups and other government departments. The number of responses relating to specific sections of the survey are listed below in **Table 1**.

Table 1. List of sections and number of responses for each

Specific section	Number of responses
Draft Stage 3 Fishing Gear MPA Impacts Evidence Bottom Towed Gear	18
Draft Stage 3 Fishing Gear MPA Impacts Evidence Anchored Nets and Lines	6
Draft Stage 3 Fishing Gear MPA Impacts Evidence Traps	2
All gears (or all sections)	30

Responses were categorised by MMO broadly as critical (57 %), neutral (37 %) or supportive (8 %).

Most responses were submitted on behalf of organisations, 39 in total, in addition MMO received 7 responses from individuals and 3 anonymous responses. For a full list of organisations which responded please see **Annex 1 Organisational respondents for the call for evidence**.

The subjects raised during the call for evidence fall within the following overarching categories:

- Evidence;
- Management approach;
- Monitoring and enforcement;
- Socio-economic and wellbeing impacts;
- Displacement and spatial squeeze;
- Other activities;
- Fishing gear impacts;
- Food security;
- Maritime heritage;

- Designation of MPAs;
- MPA monitoring;
- Stakeholder engagement;
- Climate change.

3 Evidence quality assurance process

MMO always seeks to use the best available evidence to inform our decisions. The Stage 3 call for evidence provided an opportunity for stakeholders to provide additional evidence to update the three draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents used to inform the site level assessments for the 43 Stage 3 MPAs.

Local fishers' and stakeholders' knowledge and data is an important part of understanding the marine activities within a site. Evidence sources, including information from the fishing industry and local experts, help strengthen our analysis when considering management options for each MPA.

It is important to understand the strengths and limitations of any evidence to understand how it can contribute to decision making. Upon receipt of new evidence provided in the call for evidence, MMO may analyse and verify through the MMO evidence quality assurance process (MMO, 2024). Where appropriate, (for example depending on the quality of the evidence submitted compared with that already used), new evidence was used to update and improve the three draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents.

4 Summary of responses

4.1 Evidence

This call for evidence aimed to seek feedback and evidence from stakeholders, those who are most affected by, or with the greatest interest in, this work. This ensured that the best available evidence was available for the site level assessments to determine if MPA conservation objectives were being hindered, or if there were any adverse effects on site integrity.

In response to question 1 of the call for evidence, a number of respondents submitted additional evidence about the interactions of fishing gear and MPA seabed features. All have been reviewed by the MMO and considered for inclusion in the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents, draft site level assessments and de minimis assessment (DMA).

4.1.1 Academic papers

All academic papers were reviewed and analysed in two phases. The initial analysis assessed the relevance of the evidence to the Stage 3 MPAs and potential for inclusion in the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents. Phase two of the analysis considered this evidence further to determine if appropriate for inclusion. Updates to the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents are described in section 5.

Additional evidence submitted which has not been included in the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents was ruled out during analysis due to:

- Its relevance to the scope of the 'Stage 3 Fishing Gear MPA Impacts Evidence' documents;
- Its relevance to the call for evidence consultation questions;
- Its relevance to Stage 3 MPAs;
- Its quality and suitability;
- If it did not provide new or stronger evidence not already included.

Where appropriate, the additional evidence has been considered instead in the draft site level assessments and DMA.

4.1.2 Site specific evidence

The site specific evidence provided by respondents has been reviewed and where relevant and appropriate used to inform site level assessments to determine whether management will be required.

4.1.3 Data

Some respondents provided data in relation to Spanish, French and Dutch fleet fishing activity. This data has been considered, however due to the years provided, this could not be apportioned in the same way as the data presented in the DMA, therefore; it is not reflected in the figures within the non-UK fishing vessels section of the DMA.

4.1.4 Sustainable fishing techniques

Some respondents provided evidence and requested that modified gear and more sustainable fishing techniques be considered in the 'Stage 3 Fishing Gear MPA Impacts Evidence' documents.

MMO response: Evidence provided has been included in the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents see section 5.2.

4.1.5 Carbon storage

A number of respondents highlighted the importance of protecting areas of blue carbon stores present in some MPAs and provided site specific evidence in organic carbon density maps and academic references.

MMO response: MPAs may result in ancillary benefits such as the protection of blue carbon stores through the feature-based protection provided. The academic references provided have been reviewed and considered in the monetised benefits of proposed management in the DMA in relation to valuing ecosystem services.

4.2 Management approach

Some respondents agreed with the outcomes of the draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents, however a number of respondents stated a preference for a whole site approach rather than a feature-based approach to MPA protection. A respondent also stated that the prohibition of bottom towed gear in all MPAs was required to meet good environmental status (GES).

There was concern from a respondent regarding potential management in Start Point to Plymouth Sound and Eddystone SAC and Skerries Bank and Surrounds MCZ. The respondent highlighted their previous support of the designation of the MPAs under the proviso of no changes in management.

MMO response: MMO has a legal duty under the Marine and Coastal Access Act 2009, the Conservation of Marine Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 to protect MPAs. The Stage 3 Fishing Gear MPA Impacts Evidence documents consider only designated features in relation to these legal duties.

MMO will implement management or prohibit fishing in parts of the site only where the site level assessments cannot rule out that it will result in an adverse effect on site integrity or a significant risk of hindering the achievement of the conservation objective of the MPA. If the site level assessments find that management is required for these features, any such potential management could have a wide range of ancillary environmental benefits.

The regulatory framework for MPAs considered in Stage 3 does not require a 'whole site approach' to be taken as these MPAs are designed to protect specific habitats and species (collectively referred to as 'features'). However, following an assessment of the impacts on the designated features an MPA, the required management measure may apply to the whole of the site. In other cases, the designated features only form part of the MPA, and therefore a whole site closure is not required.

MMO agrees that effective MPA management is important to help meet the government's ambition for nature recovery, including the achievement of GES.

In response to the designation of Start Point to Plymouth Sound and Eddystone SAC and Skerries Bank and Surrounds MCZ, these relate to the decisions to designate these MPAs. These decisions were made by the Secretary of State after public consultation and consideration of the full range of responses received. Once designated MMO and other public authorities have legal duties to support the achievement of the conservation objectives.

4.3 Monitoring and enforcement

Several respondents raised concerns on the reliability of using vessel monitoring systems (VMS) to monitor fishing activity in MPAs. VMS devices send a vessel location report at least once every 2 hours. Respondents stated that this technology was not precise enough to enforce prohibition in smaller, patchy MPAs where a vessel could fish inside an area, then leave before the next VMS report.

Respondents called for the use of remote electronic monitoring (REM) as a more precise technology with onboard camera coverage to ensure compliance of management measures.

Respondents also raised concern regarding the transparency of MMO prosecutions and funding of the monitoring programme.

MMO response: Remote monitoring of MPAs using VMS has been an effective monitoring tool for the larger Stage 1 MPA byelaw areas since June 2022. Compliance with VMS usage is high, with vessels not being allowed to leave port if their VMS device is not fully operational. The MMO works with the device suppliers to determine the operational status of a device.

While some MPAs contain smaller byelaw specified areas, the monitoring of these sites, includes 5 nm buffer zones around each MPA. Fishing vessels detected entering the MPA buffer zones will have their VMS tracks examined for potential fishing activity for the duration they are within the buffer zone. This can include polling the VMS device to retrieve further positional data at an increased frequency, in order to determine activity across the smaller byelaw areas.

In addition to remote tracking, MMO has ability to undertake additional aerial and surface patrols using a range of surveillance assets.

MMO will continually monitor the effectiveness of its compliance and enforcement approach, with the aim to increase measures proportionally where necessary.

REM continues to be explored as a potential future monitoring tool.

Any prosecutions will be made public by the MMO through the MMO [gov.uk pages](#)⁸, if appropriate.

4.4 Socio-economic and wellbeing impacts

A number of respondents raised concerns regarding the socio-economic impact of management measures to the fishing industry. A concern was also raised about the wellbeing of owners and skippers.

MMO response: The social and economic impact of any proposed management has been estimated in the DMA and considered as part of the process of developing and introducing management measures. MMO aims to continue protecting and improving the health of the marine environment to help support a diverse, profitable, and sustainable UK fishing industry into the future. MMO strives to avoid any unnecessary costs to the fishing industry, financial or otherwise in the development of management measures. However, MMO has legal duties to ensure the activities we regulate are managed in a way compatible with the conservation objectives of our MPAs. The potential for management to have a socio-economic impact does not override this duty.

Wellbeing and impact to mental health has been considered in the non-monetised costs section of the DMA.

4.5 Displacement and spatial squeeze

A number of respondents raised concerns over displacement of fishing activity to other areas and spatial squeeze.

MMO response: MMO agrees that displacement of fishing activity may take place to existing fishing grounds which are already fished, as this is where commercially targeted species can be caught. Displacement may result in higher levels of fishing pressure on these areas although the actual location (and thus the associated environmental costs) of displaced fishing activity is unclear. However, displacement does not remove the need to ensure that fishing does not undermine the conservation objectives of MPAs.

MMO acknowledges that introducing management measures within MPAs alongside, for example, the expansion of offshore wind, poses challenges to the fishing industry. MMO is currently undertaking work alongside Defra to understand and address the impacts of displacement and spatial squeeze.

⁸ www.gov.uk/government/organisations/marine-management-organisation

4.6 Other activities

Some respondents questioned why fishing activities were being managed when other activities such as aggregate dredging, windfarm development, cable laying, vibrocoring and anchoring were not.

MMO response: The scope of this consultation is specifically the impact of fishing activities on the designated features of MPAs.

Marine licensable activities ([section 66 of the Marine and Coastal Access Act 2009](#)⁹) are managed via the marine licensing process and considered on a case-by-case basis. All marine licensable activities are subject to an in-depth, technical assessment of their impacts on relevant MPAs. MMO does not allow activities that undermine the conservation objectives of MPAs, except in very rare cases of public interest in which case environmental compensatory measures are required. Marine licensable activities are assessed against the conservation objective of MPAs at the point of marine licence application and managed at the point of being licenced.

In regards to marine non-licensable activities (mNLA), which includes anchoring, MMO is responsible for assessing and managing impacts in MPAs between 0 and 12 nm in English waters. mNLA are those which do not require a marine licence and excludes all types of fishing.

Where a site-level assessment indicates that mNLA's are impacting an MPA, MMO is responsible for implementing management measures to protect them. MMO will work with regional MPA networks to establish methods of management to reduce the impacts of mNLA on the feature of the MPAs.

4.7 Fishing gear impacts

A number of respondents raised that, in their opinion, certain gears did not have a significant impact on the marine environment, had less impact or were no more damaging than other types of gears.

MMO response: The draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents were based on the best available evidence and have been updated with relevant additional evidence received during the call for evidence. The finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents therefore represent MMO's best understanding of the impacts of fishing on MPA features.

These documents have informed the draft site level assessments which take into account site specific factors such as the nature and intensity of fishing activity, the

⁹ www.legislation.gov.uk/ukpga/2009/23/section/66

condition and makeup of protected habitats and species, and environmental conditions.

MMO recognise that there are significant evidence gaps in some areas, in particular around the impacts of static gears. The legislation underpinning the protection of all MPAs in UK waters requires that activities can only go ahead where it can be clearly demonstrated that they will not undermine the conservation objectives of the site. Where MMO cannot exclude the realistic possibility that activities will undermine the conservation objectives of the site, including due to gaps in the available evidence, then management of these activities may be required.

4.8 Food security

A respondent raised the importance of balancing food security against environmental protection.

MMOs response: MMO recognises the important contribution that fishing makes to UK food security. It is the MMO's statutory duty to ensure that activities are not undermining the condition of MPAs. MPAs are an important tool to protect and enhance marine ecosystems and therefore maximise the potential for the sustainable harvest of marine species. Though MPA management measures will restrict fishing activity, they are also anticipated to deliver significant benefits by protecting our marine natural capital and therefore enhancing the delivery of ecosystem services, including food production over the long term.

4.9 Maritime heritage

Two respondents raised concern regarding protecting the marine heritage of a site.

MMO response: MMO have the power to protect the designated features of a MPA for the purpose of conservation. There may be some additional benefits from the proposed Stage 3 management measures such as the protection of heritage features and refuge for certain species.

4.10 Designation of MCZs

A respondent questioned the initial designation of some MCZs.

MMO response: The designation of MCZs was led by Defra and is out of the scope of this consultation, which is to assess the management of fishing activities with regards to the conservation objectives for the Stage 3 MPAs.

4.11 MPA monitoring

A respondent raised the importance of monitoring and reviewing of management measures.

MMO response: MMO regularly monitors fishing activity levels in MPAs through a combination of remote monitoring of fishing vessel monitoring system (VMS) data, landings records, fisheries patrol vessels and aerial surveillance. MMO reviews the fisheries assessments for all MPAs every five years, to ensure all assessments contain the best and most up to date evidence available, and that management measures are appropriate and effective. More regular reviews could occur if the circumstances related to a change in fishing activity or site status that may hinder the conservation objectives of the site. Reviews of fisheries assessments take into account any updates to conservation advice that change our understanding of the impacts of fishing on the achievement of the conservation objectives for the site.

4.12 Stakeholder Engagement

A respondent stressed the importance of stakeholder engagement to implement successfully managed MPAs.

MMO response: MMO is working with stakeholders including fishers, government organisations and NGOs to raise awareness of this work and to better understand the impact of the management measures, as well as gathering evidence on the MPAs in our waters. During the call for evidence MMO met local, regional and national UK fisheries groups, non-UK fisheries representatives and environmental groups. MMO has also engaged through traditional communications such as press releases, as well as social media and blogs. MMO will maintain engagement with a broad range of stakeholders through the formal consultation on the draft site level assessments, draft DMA and proposed management measures.

4.13 Climate change

A respondent suggested that climate change is also causing an impact, not just fishing activity.

MMO response: The scope of this consultation is specifically the impact of fishing activities on the designated features of MPAs. By providing areas closed off to damaging activities, space is being provided for refuge of species, and negative impacts minimised, thereby promoting increased resilience against impacts including those from climate change.

5 Updates to 'Stage 3 Fishing Gear MPA Impacts Evidence' documents

After the call for evidence, a number of updates were made to the three draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents. These updates are described in section 5.1, 5.2 and 5.3 below.

26 responses provided academic references, after review and analysis, 8 academic papers were included in the finalised 'Stage 3 Fishing Gear MPA Impacts Evidence' documents. Respondents also provided anecdotal evidence which was considered but not included in the finalised documents.

In addition to the updates detailed below, MMO commissioned an independent panel of specialists from outside of government to review MMO's use of evidence in assessing the impacts of fishing on MPAs.

The panel reviewed the three draft 'Stage 3 Fishing Gear MPA Impacts Evidence' documents and a sample of 8 draft MPA fisheries assessments (excluding the 'in-combination' part of each assessment which had not yet been drafted).

Although the panel questioned and interrogated aspects of the assessment methodology and the evidence collation and synthesis approach, no matters were raised by the panel that would affect the conclusions of the review of evidence of the impacts of fishing on the MPAs. A report of the independent panel process and outcomes has been published ¹⁰.

5.1 Stage 3 Fishing Gear MPA Impacts Evidence: Anchored Nets and Lines

A study on the effects of a large fishing closure on benthic communities (Grizzle *et al.*, 2009) has been included in the finalised "Stage 3 Fishing Gear MPA Impacts Evidence: Anchored Nets and Lines" document as provides an additional reference for the impact of anchored nets and lines on benthic communities.

5.2 Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears

A paper on the indirect effects of bottom fishing in the productivity of marine fish (Collie *et al.*, 2016) has been included in the finalised "Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears" document as an additional reference for the impact of bottom towed gear on sediments and sandbanks as a result of the impact of sediment resuspension on primary production and the feeding behaviours of certain species..

A study on the selection of indicators for assessing and managing the impacts of bottom trawling on seabed habitats (Hiddink *et al.*, 2020) has been included in the finalised "Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears"

¹⁰ Independent Scientific Panel Review Report:
www.gov.uk/government/publications/stage-3-mpas-independent-scientific-panel-review-report

document as an additional reference on the impact of bottom towed gear on sediments and sandbanks. The study conducts a meta-analysis determining which metrics are the most useful/informative for assessing trawling impacts. It reported that the type of trawl (linked to penetration depth) is linked to overall impact, and concluded that coarser sediments have greatest impact because of the increased use of hydraulic dredges (deeper penetration). Sandy sediments were found to have lowest relative impacts.

A paper on trawl impacts on the relative status of biotic communities of seabed sedimentary habitats (Pitcher *et al.*, 2022) has been included in the finalised “Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears” document as an additional reference on the impact of bottom towed gear on sedimentary habitats. The study conducts a meta-analysis of different markers of relative benthic status (RBS) and reports that bottom towed gear usage at a sustainable benchmark level is not incompatible with high RBS.

A study on Marine Spatial Planning Addressing Climate Effects (MSPACE) (Marra *et al.*, 2024) has been included in the finalised “Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears” document as an additional reference on the impact of bottom towed gear on muddy habitats. The paper focusses on the proportion of habitat impacted and the level of disturbance to muddy habitats and the associated benthic features. It reports that 89% of sea-pens/burrowing megafauna habitat is highly impacted by bottom towed gears and that changes to species assemblages are larger for muddy habitats than other habitat types.

A study on fishing gear modifications to reduce benthic impact (Szostek *et al.*, 2022) has been included in the finalised “Stage 3 Fishing Gear MPA Impacts Evidence: Bottom Towed Gears” document as evidence of different impacts of modified fishing gears on various sediments. The study developed a tool using published data to provide estimated penetration depths of beam trawls and otter trawls in different sediments and their resulting impacts on biological communities. The tool also provides an appraisal of the impact on penetration depth and depletion of benthic fauna when gear types are modified to remove seabed penetrating components. It shows that when seabed penetrating components are removed from beam trawls or otter trawls, the penetration depth of the whole gear can be reduced indicating that bottom towed gear impacts also vary depending on modifications or removal of gear components.

5.3 Stage 3 Fishing Gear MPA Impacts Evidence: Traps

A study on fish and invertebrate by-catch in the Isle of Man crab pot fishery (Öndes, Kaiser and Murray, 2018) has been included in the finalised “Stage 3 Fishing Gear MPA Impacts Evidence: Traps” document as an additional reference on the impact of traps on non-target species in sandbank and sediment habitats. The study found

that overall, by-catch was low relative to target species catch which may be partially attributable to the use of escape panels in pot fisheries in the Isle of Man.

A paper on the optimal pot fishing effort to benefit both fisheries and conservation (Rees, Sheehan and Attrill, 2021) has been included in the finalised “Stage 3 Fishing Gear MPA Impacts Evidence: Traps” document as an additional reference on the impact of potting on reef building species. The paper reports that high potting effort/density results in higher negative effects on reef building species.

6 Decision and next steps

Having analysed all responses received during the call for evidence, MMO has updated and finalised the three 'Stage 3 Fishing Gear MPA Impacts Evidence' documents.

These documents have been used, alongside other information (including site characteristics and fishing activity data) to produce draft site level assessments on the impact of fishing on each Stage 3 MPA. Based on the outcome of these draft site level assessments, MMO has proposed, where required, management measures for Stage 3 MPAs.

MMO is now seeking stakeholder views and additional evidence through formal consultation on these draft site level assessments, proposed management measures and draft de minimis assessment which estimates the wider impacts of the proposed measures.

7 References

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A1 Annex 1 Organisational respondents for the call for evidence

NGOs

- Blue Marine Foundation
- Oceana
- Marine Conservation Society
- The Wildlife Trusts
- Whale and Dolphin Conservation
- Goodwin Sands Conservation Trust
- Wildlife and Countryside Link
- RSPB

UK Government departments or bodies

- Historic England
- UK Hydrographic Office
- Natural England
- Foreign Commonwealth Development Office
- Cefas
- Offshore Petroleum Regulator for Environment and Decommissioning (OPRED)
- Devon and Severn Inshore Fisheries and Conservation Authority
- Eastern Inshore Fisheries and Conservation Authority

Non-UK Government departments or bodies

- Department of Agriculture and Fisheries of the Flemish Government
- General Secretariat of Fisheries in Spain

UK Fishing Industry

- National Federation of Fishermen's Organisations (NFFO)
- Humberside Fish Producers Organisation Ltd (HFPO)
- Wales and West Coast Fish Producer Organisation (WWCFPO)
- Western fish Producers Organisation (WFPO)
- Eastern England Fish Producers Organisation (EEFPO)
- Lauroana Fishing Ltd
- Temple Fishing Ltd
- Leach Fishing
- South Devon and Channel Shellfishermen Ltd
- Holderness Fishing Industry Group

- Thanet Fishermen's Association

Non-UK Fishing Industry

- CNPMM (French fishery organisation)
- COBRENORD PO (French Producer Organisation)
- Dutch Fishermen's Association (Dutch fishery organisation)
- Organisation de Producteurs CME Manche-Mer du Nord (French fishery organisation)
- Les Pêcheurs De Bretagne (French Producer Organisation)

Other

- Joint Nautical Archaeology Policy Committee
- University of Plymouth

A2 Annex 2 Glossary

Conservation objectives - conservation objectives are set for each designated feature of an MPA, to either maintain or restore a designated feature of the protected site.

Designated features – a species, habitat, geological or geomorphological entity for which an MPA is identified and managed. The designated feature of a HPMA is not a single species or habitat but the entire marine ecosystem of the area.

De minimis Assessment (DMA) – is a financial impact assessment is an assessment which addresses the financial and socio-economic impacts of management measures. The purpose of the De minimis Assessment in this case is show the financial impacts of the Stage 2 Bottom Towed Gear Marine Protected Area Byelaw 2023.

Ecosystem services – the benefits provided by ecosystems that contribute to making human life both possible and worth living. Ecosystem services is the term used in conservation advice to describe the service provided by the habitat or species. For example: nutrition, nutrient cycling, climate regulation or bird and whale watching.

Impact - the consequence of pressures (such as habitat degradation) where a change occurs that is different to that expected under natural conditions.

Inshore Fisheries and Conservation Authorities (IFCAs) – IFCAs are responsible for fisheries management from 0 to 6 nautical miles (nm). There are ten IFCAs in England, each one funded by local authorities

Joint Nature Conservation Committee (JNCC) - a public body that advises the government on UK and international nature conservation. This includes aspects related to the marine environment from 12 nm to 200 nm and have a statutory responsibility to provide conservation advice for MPAs and report on the condition of protected features.

Marine conservation zone (MCZ) – a type of MPA in English, Welsh and Northern Irish waters designated under the Marine and Coastal Access Act 2009¹¹ (for

¹¹ Marine and Coastal Access Act 2009:
<https://www.legislation.gov.uk/ukpga/2009/23/contents> (Last accessed on: 20 February 2024).

England and Wales) or the Marine Act (Northern Ireland) 2013¹² (for Northern Ireland).

Marine Management Organisation (MMO) - MMO is an executive non-departmental public body, sponsored by the Department for Environment, Food and Rural Affairs and is the manager and independent regulator of England's seas.

Marine plans – MMO marine plans have been designed to help manage the seas around England.

Marine protected area (MPA) - a generic term to cover all marine areas that are a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. This includes special areas of conservation (SAC), special protection areas (SPA) and marine conservation zones (MCZ).

Natural England - government advisor for the environment in England. This includes aspects of the marine environment of 0 to 12 nm. This organisation has a statutory responsibility to provide conservation advice for MPAs and report on the condition of protected features.

Pressure – the mechanisms through which an activity has an effect on a feature. Individual pressures are broadly defined in [JNCC's Marine Pressures-Activities Database \(PAD\)](#) in the 'pressures' tab of the data tables (JNCC, 2022).

¹² For more information see: www.legislation.gov.uk/nia/2013/10/contents