



Department
for Environment
Food & Rural Affairs

Proposed Fisheries Management Plan for Channel Demersal Non-Quota Species

Date: July 2023

Version: public consultation

Contents

Abbreviations	3
Executive Summary	4
Introduction	8
Context.....	10
Scope and status of the Channel demersal NQS fisheries.....	11
Species	11
Location	12
Description of the fisheries.....	13
Current status of the fisheries	14
FMP vision and goals	18
FMP vision	18
FMP goals.....	18
Management strategy.....	29
Harvest strategy.....	29
Harvest control rules	30
Maximum sustainable yield (MSY).....	30
Mixed and multi-species management approaches	30
Environmental considerations	34
Marine Protected Areas (MPAs)	34
Wider Sea Evidence: Beyond MPAs.....	35
Climate change mitigation and adaption	35
Secondary and dependent species (including bycatch)	36
Implementation, monitoring and review	36
Implementation	37
Monitoring.....	37
Review and revision of the FMP	38

Abbreviations

Cefas: Centre for Environment, Fisheries and Aquaculture Science

Defra: Department for Environment Food and Rural Affairs

FMP: Fisheries Management Plan(s)

FTE: Full-Time Equivalent. A standardised measure of employment calculated based on average vessel crew and effort assuming one FTE is representing 2,000 hours of work per year.

GES: Good environmental status

GT: Gross tonnage/tonnes

HCR: Harvest control rules

ICES: International Council for the Exploration of the Sea

IFCAs: Inshore Fisheries and Conservation Authorities

kW: Kilowatts

MCRS: Minimum conservation reference size. Also known as minimum landing size (MLS)

MMO: Marine Management Organisation

MPAs: Marine protected areas

MSY: Maximum sustainable yield

Nm: Nautical miles

NQS: Non-quota species

REM: Remote Electronic Monitoring

SNCBs: Statutory nature conservation bodies

TCA: UK/EU Trade and Cooperation Agreement

The Act: Fisheries Act 2020

Executive Summary

Context

Sustainable management of fisheries requires appropriate management of harvesting to protect our diverse stocks. Meeting our responsibilities will support vibrant, profitable, and sustainable fishing industries alongside a healthy and productive marine environment. Fisheries Management Plans (FMPs) are a requirement of the Fisheries Act 2020 (the Act), the UK Joint Fisheries Statement in 2022 and a commitment in the England Environmental Improvement Plan 2023 and provide a tool for managing fishing activity towards more sustainable fisheries.

The Channel Demersal Non-Quota Species Fisheries Management Plan (FMP) has been prepared for the purpose of meeting the requirements set out in the Act. This has been developed by the Marine Management Organisation (MMO) on behalf of the Department for Environment Food and Rural Affairs (Defra). The FMP was developed in collaboration with a working group made up of fisheries stakeholders, including commercial and recreational fishers. The MMO also engaged widely with coastal communities, supply chain businesses, scientists, and government agencies. Contributions from environmental non-governmental organisations have been considered across all FMPs in a group coordinated by Defra. Further detail of the engagement can be found in Annex 3: Record of Engagement.

What is a Fisheries Management Plan?

An FMP is an evidence-based action plan that chart a course to sustainable fisheries. An FMP sets out a vision and goals for the target fishery (or fisheries), together with the policies and management interventions necessary to achieve these goals. Defra intends to use FMPs to tackle environmental, social, and economic issues associated with our fisheries, significantly enhancing our ecosystem-based approach to fisheries management. FMPs will be regularly reviewed and updated to ensure they respond to new evidence and practical experience to remain effective.

Why an FMP for Channel Demersal Non-Quota Species (NQS)?

The Channel Demersal NQS FMP establishes a road map to achieve long-term sustainable management of demersal non-quota fisheries in English waters in the English Channel (International Council for the Exploration of the Sea (ICES) areas 7d and 7e) in line with the Fisheries Act objectives.

Demersal NQS fish are those species living close to the seafloor which do not have [quota](#) allocated to them. In 2020, landings of demersal NQS by United Kingdom (UK)

Proposed FMP for Channel Demersal Non-Quota Species

and European Union (EU) vessels fishing in UK waters in areas 7d and 7e totalled 12,761 tonnes valued at £33.1m. However, demersal NQS are data limited with many lacking comprehensive data collection programmes or formal stock assessments.

The overarching aim of the FMP is to deliver sustainable management of specified Channel demersal NQS to a position driven by robust stock assessments, supported by consistent data collection and research programmes. The management measures and actions linked to delivering the goals detailed in this FMP describe the key stages on that journey. The FMP also sets out the shared commitment that recreational and commercial fishers and Government have for fisheries catching NQS in the English Channel. A core principle driving the implementation of the FMP goals is iterative development to reflect that as the evidence base improves, management interventions should be more responsive and adaptive.

Vision and goals of the FMP

The FMP vision is that demersal NQS fisheries in the English Channel will be managed to achieve environmental, social, and economic sustainability, for the benefit of coastal communities and wider society.

The FMP goals are based around key themes of evidence, social and economics, and sustainable fisheries contributing towards delivering the Fisheries Act objectives. The FMP goals are as follows:

- **Under the sustainable fisheries theme:** 1) Deliver effective management of demersal NQS in the English Channel, and 2) Deliver wider biological sustainability.
- **Under social and economic theme:** 1) Better understand and optimise economic and social benefits, and 2) Build capacity for the industry to be able to input into matters effecting non-quota species fisheries management.
- **Under the evidence theme:** 1) Better understand wider NQS evidence gaps, and 2) Develop the NQS evidence base.

Establishing a Channel demersal NQS management group

The FMP sets out a goal for building capacity for the industry to input into FMP management. To support this, the FMP proposes creating a NQS management group, comprising of industry, recreational fishers, processors and markets, the regulatory authority, fisheries scientists, policy makers and other interested stakeholders, which will act as a means for addressing management concerns and needs.

Recommended management measures

During this first iteration, five proposed areas for priority management intervention have been identified. These have been developed through evidence gathering and engagement with stakeholders, who recognised that change is required to improve the sustainability of the stocks and fisheries. Further work and consultation will need to be undertaken to determine the applicability of each of these measures and refine where necessary. The priority areas are as follows:

- 1) **Restriction of future flyseining effort:** The recent increase in flyseine fishing or demersal seining capability, and the emergence of newer and larger vessels in the English Channel (ICES areas 7d and 7e), has the potential to cause significant harm to the stocks within the scope of the FMP. Following on from Defra's consultation on this issue in 2022, it is recommended to introduce a standard net mesh size of 100mm for all flyseine vessels operating in English waters of the Channel. In addition, it is also recommended to restrict effort by engine power to 221 kilowatts (kW) for flyseine vessels within 12 nautical mile (nm) of the English Channel.
- 2) **Minimum Conservation Reference Sizes (MCRS):** Cuttlefish, lemon sole, turbot, and brill were highlighted as key FMP species requiring protection during the juvenile life stages of their development. The proposed MCRS are cuttlefish – 23cm; lemon sole – 25cm; turbot – 30cm; and brill – 30cm. These sizes have been identified to align with the MCRS in Inshore Fisheries Conservation Authorities (IFCAs) in the short term and will be evidenced further to determine the appropriate size based on maturity sizes for these species. Considering an MCRS for other flyseine targeted species, such as red mullet, bib and gurnards is recommended as a medium-long term measure.
- 3) **Cuttlefish:** The common cuttlefish was identified by stakeholders as a critical targeted fishery requiring attention. The short life span of cuttlefish needs to be considered as part of a management strategy to promote stock recruitment and population size. A seasonal restriction would aim to protect critical spawning seasons or recruitment pools from high impact fishing gears. The FMP therefore also recommends considering temporary seasonal closures for cuttlefish trawlers to protect pre-spawn juvenile cuttlefish, or egg-laying habitat, pending further evidence for longer term management approaches.
- 4) **A monitoring programme:** Robust data collection is necessary to meet the requirements of the FMP. Remote Electronic Monitoring (REM) has been identified as a potential method for data collection that can assist in the monitoring and evaluation of the measures introduced as part of the FMP. The initial recommendation is to focus on an early adopter scheme for flyseining vessels alongside a holistic monitoring programme, subject to the outcomes of the consultation on REM in summer 2023.
- 5) **Education, adoption of voluntary guidelines and development of codes of conduct:** Through partnership working, the FMP proposes to develop voluntary

Proposed FMP for Channel Demersal Non-Quota Species

guidelines, education, and codes of conduct for both commercial and recreational fishers to improve the sustainability and benefits of the stocks for all sea users.

The FMP recognises that east and west Channel fisheries are distinct, given the physical characteristics of the two regions that support differing habitats and fish assemblages. Therefore, management interventions will need to take spatial-temporal variability into consideration.

Wider issues and environmental impacts

In addition to the objectives in the Fisheries Act 2020, all FMPs are subject to legal obligations for environmental protection arising from The Conservation of Habitats and Species Regulations 2017, Marine and Coastal Access Act 2009, Marine Strategy Regulations 2010, and the Environmental Principles policy statement for the Environment Act 2021.

The Channel demersal NQS FMP will contribute to the commitments to improve our marine ecosystem set out in the Environmental Improvement Plan 2023 and the UK Marine Strategy.

Implementation and monitoring

This FMP is a first iteration and will be further developed during a formal review process, which will be at a minimum completed every six years. Recommended management measures will be reviewed and taken forward by Defra and MMO separately once the FMP is published.

Conclusion

The Channel demersal NQS FMP has been prepared for the purpose of meeting the requirements set out in the Fisheries Act 2020. This statement and the contents of the plan meet the obligation set out in section 6 of the Act.

This FMP collates existing information for demersal NQS in the English Channel including existing management measures, science and evidence, and highlights where gaps exist. This is supplemented by an Evidence Statement. To protect the stocks that are potentially not being fished sustainably at present, the FMP proposes some precautionary management measures in the short-term whilst more evidence is gathered. Impact assessments will be carried out in parallel to the development of management measures to predict the impacts on the fishery. A research plan has been developed to highlight and fill specific evidence gaps, as well as gain further information about how to achieve the vision and goals this FMP sets out.

Introduction

The Channel Demersal NQS FMP (hereafter referred to as this/the FMP) establishes a road map to achieve long-term sustainable management of demersal NQS in the English Channel in English waters of ICES areas 7d and 7e.

This FMP has been prepared for the purpose of meeting the requirements set out in the Fisheries Act 2020. The FMP has been developed by the Marine Management Organisation (MMO) on behalf of the Department for Environment Food and Rural Affairs (Defra). It has been produced collaboratively with fisheries managers, statutory nature conservation bodies (SNCBs), and representatives from the UK fishing sector via a working group.

The FMP is applicable to demersal NQS fished by all methods and by all sized vessels from all nations operating in UK waters of the ICES areas 7d and 7e. The species in scope of the FMP are cuttlefish, squid, octopus, turbot, brill, lemon sole, red gurnards, grey gurnard, tub gurnards, red mullet, john dory, lesser spotted dogfish and smoothhound.

This FMP includes both commercial and recreational fisheries under the umbrella definition of 'fisheries' set out in the Fisheries Act 2020. Therefore, any reference to either the fishing sector or industry includes recreational and commercial fishing unless addressing matters specific to a certain gear or type of fishing.

This FMP collates existing information for Channel demersal NQS including current management measures, science and evidence, and highlights where gaps exist. To protect the stocks that are potentially not being fished sustainably at present, the FMP proposes precautionary management measures in the short-term whilst more evidence is gathered.

In terms of navigating this FMP the key sections are as follows:

- **Introduction.**
- **Context of the FMP** detailing how the Channel demersal non-quota species FMP meets the requirements of the Fisheries Act 2020 and wider legislation and policy initiatives.
- **Scope and status of the Channel demersal NQS fisheries** describing the species in scope of the FMP, the FMP location, and a description and outline of the current status of the fishery.
- **FMP vision and goals** sets out the overarching vision of the FMP and FMP goals which are based around the key themes of evidence, social and economics, and sustainable fisheries and will make contributions towards all of the Fisheries Act 2020 objectives.

Proposed FMP for Channel Demersal Non-Quota Species

- **Management strategy** describes the harvest management strategy for Channel demersal non-quota fisheries, including five priority areas identified as requiring management intervention.
- **Environmental considerations** details how wider environmental considerations will be addressed.
- **Implementation, monitoring and review of the FMP** details the approach that will be followed to implement the plan, how we will measure performance in terms of delivering the plan and how the state of the fishery has improved because of the activities undertaken.

There are seven accompanying documents that support this plan. These documents provide further detail not supplied within the main FMP document:

- **Annex 1: The Channel Demersal Non-Quota Species Evidence Statement** details the principles and approaches taken to develop the evidence base that supports the FMP, the current available information on non-quota stocks in ICES areas 7d and 7e, as well as wider environmental and ecological considerations.
- **Annex 2: The Channel Demersal NQS Research Plan** details the identified evidence gaps and strategy for addressing them.
- **Annex 3: Channel Demersal NQS FMP Record of Stakeholder Engagement** summarises the stakeholder feedback collected during a series of engagement events held to inform the development of the plan.
- **Annex 4: Legislative context, governance, roles and responsibilities** describes the legislative context that applies to the development and implementation of the FMP and gives details about the roles and responsibilities of the development of the FMP.
- **Annex 5: Scope and description of the Channel demersal NQS fisheries** describes the species in scope of the FMP including biology, stock status and evidence gaps; the location of the FMP and relevant spatial themes; and description of the fishery including available fisheries data, fisheries overview, social and economic data, and existing fishing restrictions.
- **Annex 6: FMP goals, management strategy and monitoring** describes the FMP goals, management strategy including the harvest strategy which outlines five key areas for management intervention; harvest control rules; maximum sustainable yield; and precautionary approach. How the FMP will be monitored to understand the effectiveness of measures and FMP approach is outlined and performance indicators are introduced.
- **Annex 7: Environmental considerations** details the Government's environmental obligations covering FMPs. This includes marine protected areas; indicators of good environmental status; climate change mitigation and adaption; and bycatch.

Context

Please see Annex 4 of the FMP and section 4.1 of the Evidence Statement for further detail on this section. This includes the requirements of the Fisheries Act and wider commitments and how these are met in this FMP. Roles and responsibilities and the process for developing the FMP are also described.

The UK Government has responsibilities under international law and is committed to managing our fisheries in a sustainable way. Meeting our responsibilities will support vibrant, profitable, and sustainable fishing industries alongside a healthy and productive marine environment. The UK Government White Paper 2018 on [Sustainable Fisheries for Future Generations](#) states the objective of “a more competitive, profitable and sustainable fishing industry across the whole of the UK and setting a gold standard for sustainable fishing around the world”. The subsequent [Fisheries Act 2020](#) sets out the legal framework governing fisheries in the UK and provides for UK Fisheries Policy Authorities to prepare and publish FMPs, setting out policies designed to restore stocks and maintain them at sustainable levels.

The [Joint Fisheries Statement](#) (JFS) published in November 2022 sets out further details of the policies the UK fisheries authorities will follow to achieve or contribute to achieving the eight Fisheries Act objectives. It includes a list of FMPs, setting out the lead authority for each FMP, the stocks covered and timescales for publication.

In addition to meeting the requirements of the Fisheries Act, the plan also supports the implementation of wider commitments on protecting the marine environment, restoring biodiversity, and addressing climate change. In particular, the [Environment Improvement Plan 2023](#) restated the commitment to deliver FMPs. Each FMP also supports commitments under the [UK Marine Policy Statement](#), the [UK Marine Strategy](#), the [marine wildlife bycatch mitigation initiative](#) and the [Climate Change Act 2008](#).

Scope and status of the Channel demersal NQS fisheries

Please see Annex 5 of the FMP and sections 4.2 to 4.4 and 4.6 to 4.7 of the Evidence Statement for further detail on this section. This includes a description of the species in scope of the FMP including biology, stock status and evidence gaps; the location of the FMP and relevant spatial themes; and description of the fishery including available fisheries data, fisheries overview, social and economic data and existing fishing restrictions.

Species

The following species are in scope of the Channel demersal NQS FMP:

Bony fish

- Bib/pouting/pout (*Trisopterus luscus*); hereafter referred to as Bib
- Brill (*Scophthalmus rhombus*)
- Lemon sole (*Microstomus kitt*)
- Turbot (*Scophthalmus maximus*)
- John dory (*Zeus faber*)
- Red mullet/striped red mullet/surmullet (*Mullus surmuletus*); hereafter referred to as red mullet
- Grey gurnard (*Eutrigla gurnardus*)
- Red gurnard (*Chelidonichthys cuculus*)
- Tub gurnard (*Chelidonichthys lucerna*)

Elasmobranchs

- Lesser spotted dogfish/lesser spotted catshark (*Scyliorhinus canicula*); hereafter referred to as lesser spotted dogfish
- Starry smoothhound (*Mustelus asterias*)¹
- Common smoothhound (*Mustelus mustelus*)

Cephalopods

- Common cuttlefish (*Sepia officinalis*)
- Elegant cuttlefish (*Sepia elegans*)
- Common octopus (*Octopus vulgaris*)
- Curled octopus (*Eledone cirrhosa*)

¹ Note, for the purpose of this FMP, the two smoothhound species will be addressed at the genus level (*Mustelus* spp.) rather than individually.

Proposed FMP for Channel Demersal Non-Quota Species

- Veined squid / Long-finned squid (*Loligo forbesii*)
- European Common squid (*Alloteuthis subulata*)
- Common squid / European squid (*Loligo vulgaris*)

These species are considered to be data poor; the majority are subject to limited data collection regimes (i.e., landings data only), and only seven are assessed by ICES within the English Channel. An overview of the stock status, biology and key evidence gaps relating to these species are found within Annex 2 and Annex 5 of the FMP.

At present, it is considered that the stock boundaries for all species sit partly or wholly within the scope of this FMP.

Location

This FMP covers English waters of the Channel running from Kent to Cornwall. Specifically, the FMP area is defined by English waters in ICES divisions 7d (east) and 7e (west) (Figure 1).

The MMO has the responsibility for managing fisheries and carrying out assurance activities in English waters out to 0-200nm and leads on managing fishing activities between 6–200nm. Within the English Channel, five IFCAs deliver additional fisheries conservation and management within the inshore 0–6nm zone.

There are 52 protected area designations including [Marine Conservation Zones](#) (MCZs), [Special Protection Areas](#) (SPAs), Special Areas of Conservation (SACs) and [Highly Protected Marine Areas](#) (HPMAs). The management of fisheries activity occurring within Marine Protected Areas (MPAs) is addressed through separate work undertaken by the MMO and IFCAs ([Managing fishing in marine protected areas](#)). No fishing activity will be permitted within the HPMA at Dolphin Head.

Commercial UK and EU vessels operating in the English Channel have access to the shared Channel demersal NQS stocks in the scope of this FMP under the UK/EU Trade and Cooperation Agreement (TCA).

Proposed FMP for Channel Demersal Non-Quota Species

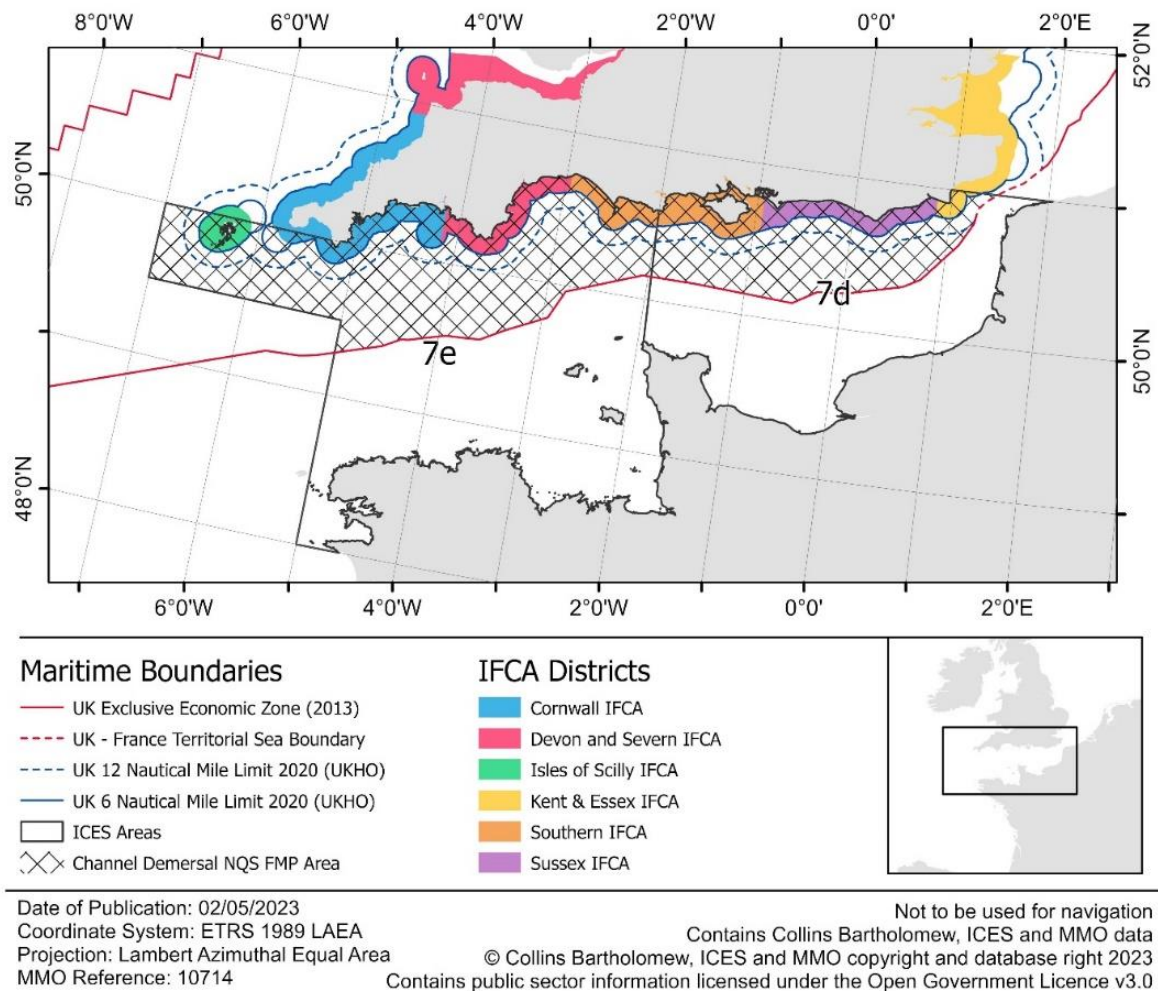


Figure 1 Jurisdictional boundaries in the English Channel

Description of the fisheries

The NQS within scope are caught across a range of seasonal and gear-specific fishery subsets and otherwise more generally caught in mixed fisheries with other quota stocks. For some species, such as cuttlefish, there are direct and targeted fisheries from demersal trawls during the winter, and traps during the spring-summer. For the most part, FMP species are caught in association with quota and other NQS, constituting an important part of fishers' earnings across different target fisheries (i.e., when targeting quota stocks).

UK vessels primarily employed beams trawl (47.5%), demersal trawl (36.5%) and demersal seine (7.7%) although drift and fixed nets (3.7%) and pots and traps (3.6%) also made contributions. Other gears represented only 1% or less of landings (Figure 2). The EU fleet has a slightly different catch makeup with otter trawls landing the bulk of non-quota catch (60.2%) followed by Demersal seines (19.9%),

Proposed FMP for Channel Demersal Non-Quota Species

beam trawl (16.0%), and drift and fixed nets (2.3%). Other gears represented only 1% or less of landings (Figure 2).

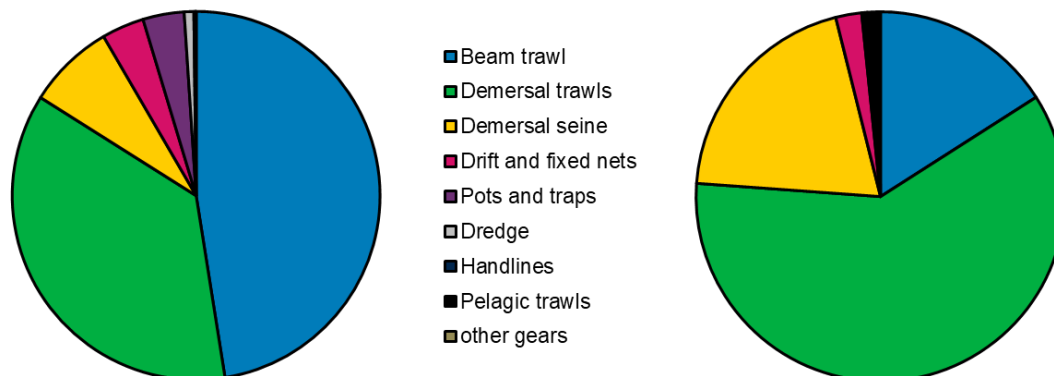


Figure 2 Proportion of landings weight by gear type (2013-2021) for UK and EU (right)

Some species within this FMP, such as bib, john dory, lesser spotted dogfish, gurnards, smoothhound, lemon sole, brill and turbot, are also key for recreational anglers, but all species may be caught by recreational fishers. Fishing for cuttlefish and squids is an emerging key recreational fishery. The value of recreational fishing along the south coast could be better defined, but existing research has indicated that it is of high economic and social value to the south coast communities.

Demersal NQS fishing occurs across the English Channel with the greatest quantities of landings coming from the mid-west of the region. It should be noted that there is significant spatial and temporal variation in the Channel demersal NQS fisheries and can be shown to be highly dependent on a small selection of stocks. For example, lesser spotted dogfish and bib are caught all year-round, while lemon sole, john dory, smoothhound and turbot catches peak in spring and autumn. Squid, brill, cuttlefish, red mullet, octopus, red, grey and tub gurnards catches peak in autumn and winter. These temporal fishing patterns should be understood in conjunction with stocks and breeding patterns.

Current status of the fisheries

The Channel demersal NQS fisheries averages £26 million to UK vessels per annum. 92.5% of this is landed by English vessels, 4.9% by Scottish vessels and 1.2% by Welsh vessels. The remainder is made up of landings by Northern Irish and Crown Dependency registered vessels. The Channel demersal NQS fisheries averages £24m a year for EU vessels. By weight of landings, UK (including crown dependency landings) registered vessels make up 51.1% and EU27 registered vessels make up 49.9% of the total.

Proposed FMP for Channel Demersal Non-Quota Species

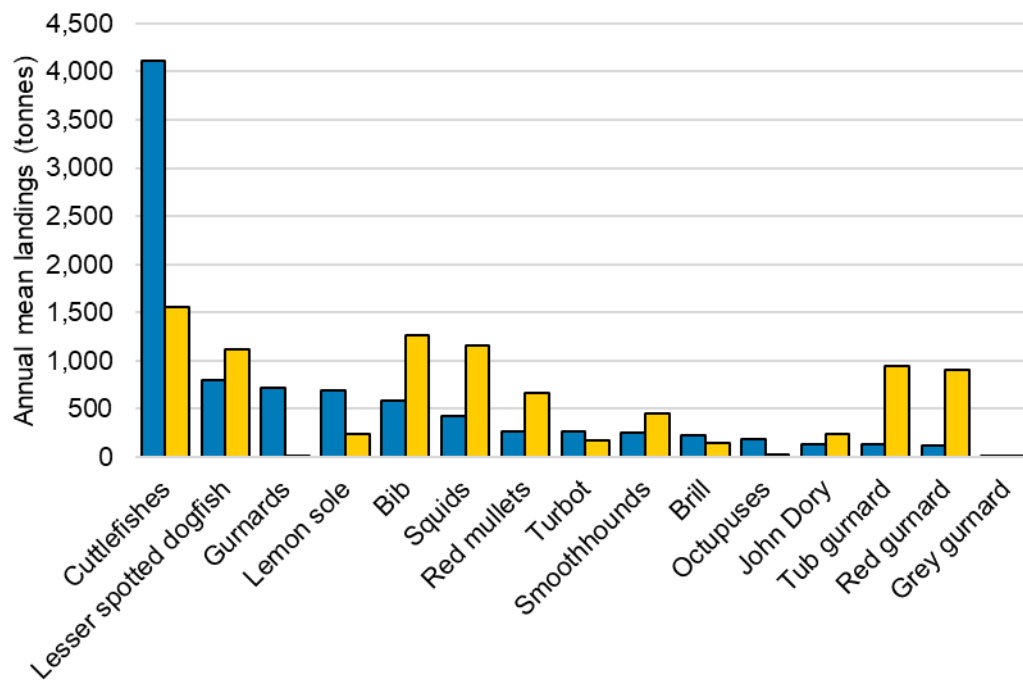


Figure 3 Annual mean landings by ranked by weight (tonnes) of UK landings (blue) compared to the EU27 (yellow) (annual average of 2016-2021)

Approximately 17,851 tonnes of focal species were landed annually from the FMP area (see Figure 3), 31.7% of which was cuttlefish, 10.7% was lesser spotted dogfish and 10.4% bib. Squids, tub gurnard, red gurnard, lemon sole and red mulletts comprise between 5-9% of the mean annual landings. Gurnards (not allocated at a species level), smoothhounds, turbot, brill, john dory, octopus and grey gurnards make up less than 5% of the mean landed catch annually. Combined these comprise 16% of the mean landed catch.

Proposed FMP for Channel Demersal Non-Quota Species

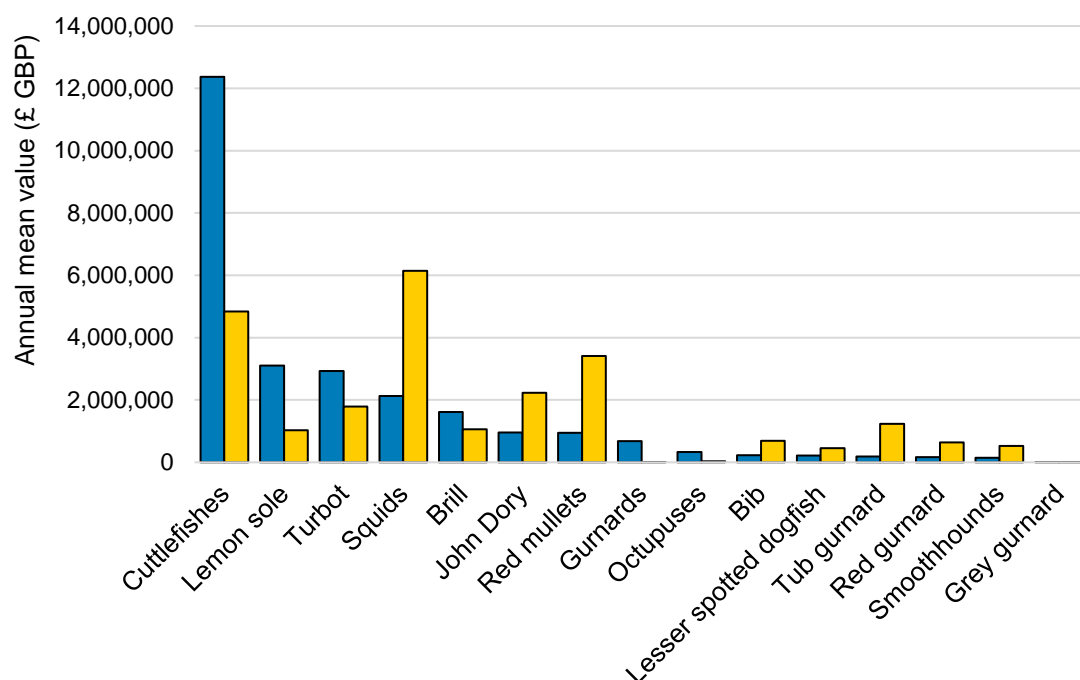


Figure 4 Annual mean landings by ranked by value (£GBP) of UK landings (blue) compared to the EU27 (yellow) (annual average of 2016-2021)

Figure 4 fisheries landings data show cuttlefish to be the most important Channel demersal NQS in the scope of the FMP, by weight (UK: 4113t; EU: 1554t) and value (UK: £12.4m; EU £4.8m), and for both the UK and EU fleets. The order of importance by weight and value differs for the remaining species. Squids emerge as the second most important species group by value at 16.5% of the catch value. This is primarily driven by EU vessel landings (UK: £2.1m; EU: £8.2m). Turbot, red mullet, and lemon sole emerge as the third, fourth and fifth most economically important species individually comprising between 8% and 9.5% the mean catch value annually. Turbot and lemon sole are more important species for UK vessels (UK: ~£3m; EU: £1.0-1.7m) and red mullet for EU vessels (UK: £0.94m; EU: £3.4m).

Within the UK, vessel catches by weight and value are substantially higher in the western Channel, primarily driven by beam trawlers landing cuttlefish. Consequently, western Channel ports are of the highest economic value to the fishery. Brixham lands on average more Channel demersal NQS by value than all other UK and EU ports combined. Channel demersal NQS make up a sizeable but not majority proportion of income into these western Channel ports, in Brixham close to a third, Newlyn an eighth and Plymouth approximately a quarter.

Recreational sea fishing is a high participation activity delivering economic and social benefits. In the UK, it is estimated that around 772,000 UK adults participated in sea angling each year between 2016 and 2019 at a value of £1.6-1.9 billion each year. There are also both personal and societal benefits derived from sea angling. An

Proposed FMP for Channel Demersal Non-Quota Species

additional concentration of sea angling effort in the south of England significantly adds to the economic importance of the sector within the overall FMP area. Recreational fishing can be very seasonal and form a key component of coastal community income.

Seven finfish and elasmobranchs (eight if the assessment for North Sea turbot is included) have been assessed by ICES within the English Channel, of which four (brill, grey gurnard, red mullet, and turbot) have concerns around sustainability. The remaining species have not been assessed by ICES and therefore no information is available on whether these are fished to MSY. During engagement sessions, stakeholders suggested a general decline in abundance and size of most species, with specific reported declines in catches of lemon sole, red mullet, all three gurnards, and john dory across both 7d and 7e. Table 2 of Annex 6 provides an overview of the stock status, including stock trends and assessment types on a species-by-species basis for those stocks that are assessed. Further information is available in Annex 2 of the Evidence Statement.

Cephalopod stocks are not assessed by ICES, however trial assessments are being undertaken by Centre for Environment, Fisheries and Aquaculture Science (Cefas) for cuttlefish in 7e. During engagement sessions, stakeholders reported conflicting evidence around cuttlefish and squid. In 7e stakeholders reported increasing abundance in octopus, providing both an additional fishing opportunity but also concern around octopus eating lesser spotted dogfish eggs and taking crabs and lobsters from pots.

The FMP species are subject to a minimum towed gear mesh size of 80mm except for squid, for which there is a derogation allowing the use of 40mm trawls in a directed fishery. Recent technical measures for the Celtic Sea introduced a larger baseline mesh size for towed gears in 7e except for the 12nm belt where under 12 m vessels can continue to fish with 80mm gear.

The FMP species do not have a Minimum Conservation Reference Size (MCRS) - also known as a 'minimum landing size' - beyond the 6nm. Cornwall and Southern IFCA have introduced a MCRS for lemon sole (25cm), turbot (30cm), brill (30cm) and red mullet (15cm). Sussex IFCA are also currently in the process of introducing MCRS for a number of these FMP species.

There is no constraint on the amount of NQS that can be landed, with the exception of the TCA which places a general cap on the amount of NQS that the UK and the EU can take from each other's waters.

FMP vision and goals

Please see Annex 6 of the FMP for further detail on this section. This includes a further description of the FMP goals. The evidence gaps arising from these goals are captured within section 4 of the Evidence Statement.

FMP vision

The FMP vision is that demersal NQS fisheries in the English Channel will be managed to achieve environmental, social, and economic sustainability, for the benefit of coastal communities and wider society.

The FMP vision will be delivered using the following principles:

- Align with current and planned legislation and Government policy such as:
 - Fisheries objectives in the Fisheries Act 2020;
 - UK environmental targets for the marine environment such as the 25 Year Environment Plan and UK Marine Strategy;
 - UK/EU TCA including management of shared stocks through multi-year strategies; and
 - Other FMPs where there are shared stocks or interactions with gear/species.
- Adopt an evidence-based approach, with management measures implemented using the best available evidence. The plan will also identify evidence gaps and detail how these will be addressed. In light of new or changing evidence, and where appropriate, the plan will be reviewed and revised.
- Seek to apply the precautionary approach where insufficient evidence is available. Management may be applied on a risk-based approach and will be proportionate to the risk.
- Adopt a holistic approach, considering unintended consequences and work towards adopting an ecosystem-based management approach. This includes understanding the impact of fishing on the wider marine ecosystem, environment, and its contribution to climate change, as well as the impact of climate change and environmental events on fishing and fish stocks, including how to support the industry through changes.
- Deliver the plan collaboratively, transparently, objectively and in an iterative approach over time.

FMP goals

To support delivery of this FMP, the MMO and the FMP working group developed specific goals based around the key themes of evidence, social and economics and

Proposed FMP for Channel Demersal Non-Quota Species

sustainable fisheries which will make contributions towards the eight Fisheries Act objectives.

See Table 1 for the goals and actions that are being proposed for this first iteration of the FMP. These are given from the point of FMP publication and subsequently falling into the implementation phase of FMP delivery. Actions in support to these may be developed further and take place in the lead up to this. It is considered that short term is approximately within two years from FMP publication, medium-long term is three years or more. How these goals help with stock management is developed further in Annex 6.

Proposed FMP for Channel Demersal Non-Quota Species

Table 1: Channel demersal NQS FMP goals and sub-goals, actions, approach and timeframes. The actions from the goals and sub-goals are specific to help achieve the goals. The approach outlines how the actions will be achieved

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
Goal: Deliver effective management of demersal non-quota species in the English Channel			
Consider how to define the precautionary approach in the Channel NQS mixed fisheries. Including how it will be initiated, implemented, and assessed in line with data collection and management needs.	Short-term	A Channel demersal NQS methods paper scoping how to define the precautionary approach, how it is applied, mechanisms and triggers for initiation, research and data collection needed, and possible actions for implementation.	Precautionary and sustainability objectives
<p>Following Harvest Standard Specification guidance, progress toward sustainability or implement precautionary management for stocks of particular concern.</p> <p>Hereafter, MSY and suitable proxies are referred to as only 'MSY' but including the potential application of proxies in intent, where required/necessary/applicable for the stocks.</p>	Medium-long term	<p>Early precautionary management for stocks of concern, consider initiating data collection to support assessment of the stock.</p> <p>Sufficient data supports the implementation of MSY for priority stocks.</p>	Precautionary and sustainability objectives

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
For all stocks that are data poor and consequentially unable to be assessed for stock status, at MSY and to seek to improve datasets to allow for assessment.	Medium-long term	<p>When sufficient data supports the implementation of MSY for data poor stocks.</p> <p>When data quality is sufficient to share and contribute to ICES assessments of these stocks.</p> <p>Implement effort data into fishing records – logbooks, under 10 m length catch recording to create a better data set and assess effort on stocks.</p> <p>Implement changes to recording on sales notes to ‘grade’ fish accurately to collect size data for fish landed. Number of fish sold at what grade will give an insight into composition of the catch by age. Use existing market data and Cefas data to determine the current problem.</p>	Scientific evidence objective
Deliver a mixed and multi-species management approach in the Channel demersal NQS fishery.	Medium-long term	<p>Approach to mixed species management in the Channel identified and tested.</p> <p>Approach to mixed species management applied and assessed.</p>	Sustainability and ecosystem objectives

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
<p>Seek to ensure stocks are managed sustainably. Pursue the establishment of MSY or other sustainability assessment for these stocks.</p> <p>Seek to manage catches below MSY or suitable acceptable proxy for a mixed fishery for all stocks in scope of the FMP. Hereafter referred to as 'MSY.'</p>	Medium-long term	When sufficient data supports the implementation of MSY for all Channel demersal NQS stocks.	Sustainability objective
<p>Goal: Deliver wider biological sustainability</p> <p>Sub goal: 1) Where possible identify and mitigate pressures on the Channel demersal NQS</p>			
Seek to scope how to define key interactions between all Channel fisheries and non-quota stocks.	Short-term	Consider research into quota fisheries to model interactions from catching and fisher behaviours on Channel demersal NQS.	Sustainability, ecosystem, and bycatch objectives
Better understand and define the targeting behaviour of the fleet.	Short-term	Consider research to identify and capture fisher targeting patterns.	Sustainability, scientific evidence, and bycatch objectives

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
Manage key interactions to minimise adverse impacts on Channel demersal NQS.	Medium-long term	Key interactions understood and managed effectively to minimise unintended consequences.	Sustainability, ecosystem, and bycatch objectives
Identify and afford appropriate protections for fish habitats important to key life stages of Channel demersal NQS.	Medium-long term	Consider research to identify fish habitats for NQS, introduce protections where required.	Sustainability, scientific evidence, ecosystem, and bycatch objectives
Understand the impact and map species sensitivities to climate change on Channel demersal NQS.	Medium-long term	Undertake research into the impact of climate change on Channel demersal NQS. Adapt the fishery management strategy to align with species sensitivities.	Climate change and scientific evidence objectives
Identify where climate change mitigation and adaptation measures can be implemented to reduce impacts on the fishery.	Medium-long term	Consider research to identify opportunities to implement climate change mitigation and adaptation measures. Climate adaptation and mitigation are aligned with work being delivered externally/nationally.	Climate change, national benefit, and scientific evidence objectives
Better understand the impact of anthropogenic non-fishing pressures on Channel demersal NQS stocks.	Medium-long term	Consider research to look at Channel demersal NQS lens of broader anthropogenic impacts.	Scientific evidence and climate change objectives

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
Goal: Deliver wider biological Sustainability			
Sub goal: 2) Understand and reduce where needed the impact of Channel demersal NQS fisheries on the wider marine environment			
Investigate key issues in current unwanted and protected species bycatch within the fishery.	Short-term	Consider research to identify and reduce unwanted/protected species bycatch.	Bycatch, scientific evidence, sustainability, and ecosystem objectives.
Better understand the impact of fishing gear interactions with the marine environment in the Channel demersal NQS fishery.	Medium-long-term	Research considered to map and define the demersal gear and benthos interactions.	Bycatch, scientific evidence, sustainability, and ecosystem objectives.
Establish data collection requirements to monitor and track key Channel demersal NQS fishing impacts on unwanted/protected species bycatch.	Medium-long term	Data collection programme tracking bycatch and target species considered.	Bycatch, scientific evidence, sustainability, and ecosystem objectives.
Social and economic goals			
Goal: Better understand and optimise social and economic benefits			
Identify who is reliant upon NQS fisheries/impacted by them.	Short-term	Groups within the Channel that are reliant upon Channel demersal NQS fisheries will have been	National benefit, scientific evidence,

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
		identified and research identified to understand who is benefitting and how.	and equal access objectives
Identify social and economic data on current direct and indirect benefits derived from Channel demersal NQS fisheries on coastal communities.	Short-term	The direct social and economic benefits of the Channel demersal NQS fishery are for the groups identified will be understood. Management is targeted appropriately so that these benefits are maintained and optimised.	National benefit, scientific evidence, and equal access objectives
Identify social and economic indicators used to monitor social and economic impacts and how this information will be gathered.	Short-term	A full set of monitoring indicators that can be used to assess the effectiveness of the social and economic goals of the plan are established.	National benefit, scientific evidence, and equal access objectives
Where data are not currently available, seek to identify new/ novel ways to collect social and economic data.	Medium-long term	Evidence gaps identified and work is being done to close them.	National benefit, scientific evidence, and equal access objectives
Seek to understand if there are opportunities to optimise direct and indirect benefits from Channel demersal NQS fisheries.	Medium-long term	Benefits mapped and understood – mechanisms to optimise have been put in place.	National benefit, scientific evidence, and equal access objectives

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
Goal: Develop on partnership working to build capacity for the industry to be able to input into matters affecting NQS fisheries management			
Formally establish a Channel demersal NQS management group to allow for continued engagement in ongoing management of NQS fisheries.	Short-term	Government will formally establish a Channel NQS management group that will be recognised as the key group for matters related to the review/revision of the FMP. The FMP suggests that the group will comprise of industry, recreational fishers, wider supply chain, the regulatory authority, fisheries scientists, policy makers and other interested stakeholders, this will be determined through consultation. The remit of this group in its proposed state will be to act as a forum for engagement and give the group the initiative to set the direction of FMP development.	Scientific evidence and national benefit objectives
Evidence goals			
Goal: Better understand the wider non-quota species evidence gaps			
Building on the Evidence Statement and Research Plan, establish what evidence is required to meet the wider goals of the FMP, as well as any further policy/legislative objectives. Identify	Short-term	Evidence strategy will be published within two years of the publication of the first iteration of the FMP. It will cover all (fisheries, environmental, ecological, and social and economic) data requirements.	Scientific evidence objective

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
what evidence is currently available through a robust and systematic process. Understand the data channels that currently source this evidence.			
Identify what evidence gaps exist based on current evidence baselines and evidence gaps. Prioritise these based on species/fleet basis.	Short-term	In drafting the evidence strategy and highlighting evidence gaps through the Evidence Statement, evidence gaps can be identified and assessed. These will be listed and prioritised as part of the evidence review report.	Scientific evidence objective
Goal: Develop the non-quota species evidence base			
Identify how current data channels can be adapted or improved to meet evidence gaps.	Short-term	As part of the evidence review report, a section identifying and evaluating current data channels will be produced.	Scientific evidence objective

Proposed FMP for Channel Demersal Non-Quota Species

Sustainable fisheries goals			
Action	Timeframe	Approach	Links with Fisheries Act Objectives
Where necessary, establish new data collection channels to close evidence gaps. Investigate opportunities to gather non-traditional or novel sources of data to complement this, including using new technologies.	Medium-long term	Evidence gaps unable to be filled by existing data are addressed by new evidence/data where available. Where possible, this will be collected using new technologies and/or through novel, non-traditional methods. *(Species prioritisation may mean expedited delivery)	Scientific evidence objective
Explore methods to consolidate new data with existing data in a singular platform.	Medium-long term	The approach to managing data will be consistent with data protection regulation, it will aim to be transparent and accessible for use by agreed partners and stakeholders.	Scientific evidence objective

Management strategy

Please see Annex 6 of the FMP and section 5 of the Evidence Statement for further detail on this section. This includes further detail on the FMP management strategy including the harvest strategy, focusing on six key topic areas (flyseining, MCRS, towed gear, cuttlefish, octopus and recreational measures). How the recommended measures contribute to the FMP goals is explained. Development of harvest control rules, maximum sustainable yield and a precautionary approach is described.

Harvest strategy

The FMP harvest strategy is for fisheries to be managed sustainably. Whilst there is no clear indication that any stock is fished at unsustainable levels, other than potentially red mullet in ICES 7d, the species within this FMP are data deficient. These species need to be better understood to evaluate each stock's status and implement sustainable management if required. However, in line with obligations to apply the precautionary approach, there are indications of less sustainable fishing practices which would benefit from intervention on the short and medium-long term whilst additional evidence is being collected and the effectiveness of these management interventions is monitored.

Targeted management measures are being recommended in this FMP for stocks where concerns have been raised by the fisheries stakeholders – these cover the MCRS for lemon sole, turbot, and brill; and measures placed on flyseining activity. Flyseining has been identified as a priority fishery for introduction of precautionary management. Sustainability concerns have been identified for Channel demersal NQS, such as gurnards, red mullet and squid specifically associated with flyseine catch. This was confirmed through Defra's [Managing flyseine vessel pressure on demersal Non-Quota Species - Defra - Citizen Space](#) consultation in 2022 and subsequent stakeholder engagement. The Government response to the consultation will be published soon, but the responses show strong support for action, with 78% in favour of introducing some form of measure to manage flyseine vessel pressure.

These targeted measures are being considered alongside the complementary technical measures on mesh sizes for flyseiners. Table 2 provides a summary of the recommended measures and suggested timescales for implementation. We will be exploring all these options further after publication to further determine deliverability and prioritisation.

Harvest control rules

During this first iteration of the FMP, there are insufficient data to support a stock assessment approach to introducing harvest control rules (HCRs). Instead, the proposed approach will follow precautionary management, where there are concerns for the sustainability of a stock, while monitoring and data gathering take place to enable stock assessments to be performed in the future.

These FMP species are mobile, transboundary fish, distributed and/or migratory across UK and EU waters. Therefore, stock assessment units will need to take into consideration UK and EU catches across the shared Channel area; with a stock assessment regime detailing a Channel wide harvest strategy for implementing HCRs.

Where data collection for FMP species supports an assessment at MSY in the future, HCRs will be devised based around suitable and precautionary reference points assessing fishing impact on stock health.

Maximum sustainable yield (MSY)

The FMP proposes actions under the sustainable fisheries goal theme to help reach harvest below MSY. This is initially focused on stocks of particular concern such as lemon sole, turbot, brill, and red mullets. Cephalopods species such as cuttlefish are relatively short lived, and difficult to assess under typical ICES assessment processes. Therefore, management will consider suitable proxies which may be used for the assessment of the stock to ensure that harvest is sustainable. Commitments for the long-term will look to close the data gaps on all Channel demersal NQS, in order to conduct an MSY assessment, and that all species will be fished at or beneath this.

Mixed and multi-species management approaches

Mixed fishery and multi-species management approaches have been developed to address the linked nature of certain fish or shellfish stocks that occupy the same habitats/ecosystems and often caught together. This allows implementation of measures effective for a cohort of species rather than a single stock. As this FMP covers an inherently complex and poorly understood collection of species that are caught alongside quota and other NQS, the FMP has the long-term ambition of developing sufficient evidence so that mixed and multiple species management can be applied effectively. The steps needed to implement a mixed-fishery approach for these fisheries need to consider three separate but linked processes: 1) data collection, 2) method development and 3) decision making. Additional detail on the key steps to delivering a mixed fishery approach are detailed in Annex 6.

Table 2: Summary of recommended management measures and suggested timescales for implementation

Topic	Measure	Purpose	Timeframe
Flyseining	Propose introducing a 221kW restriction in ICES areas 7d and 7e in UK waters for 0-12nm for flyseiners.	To reduce flyseining pressure within the 12nm. Precautionary measure given concerns surrounding impacts to the stock.	Short-term
	Consider a gross tonnage limitation in ICES areas 7d and 7e for flyseiners.	To limit large capacity flyseining pressure within the English Channel. Precautionary measure given concerns surrounding impacts to the stock.	Short-term
	Propose that all flyseiners use 100mm mesh as standard.	To reduce fishing pressure on juvenile individuals within the English Channel – need to explore compatibility with MCRS for priority species.	Short-term
	Subject to outcome of consultation on REM, propose introducing early adopter scheme that could become mandatory in time.	To support the collection of robust evidence and data on channel demersal NQS species and fill key evidence gaps. Also, to monitor the impact of the proposed measures.	Medium-long term
	Further consider consulting with further details related to introducing a permitting scheme for flyseiners.	To regulate flyseine fishing in the English Channel. Potential to limit impact of flyseiners on the flyseine species.	Medium-long term
	Consider restrictions on time spent in area restrictions.	To reduce flyseining pressure through reducing fishing time within the English Channel. Precautionary measure given concerns surrounding impacts to the stock.	Medium-long term

Proposed FMP for Channel Demersal Non-Quota Species

Topic	Measure	Purpose	Timeframe
	Consider seasonal closure for flyseiners.	To reduce flyseining pressure within the English Channel – need to explore whether seasonal limits or time in area limits prove more effective to the stocks.	Medium-long term
	Consider an overall engine size limitation for flyseiners.	To limit top end flyseining pressure within the English Channel.	Medium-long term
	Further consider potential rope length and diameter restrictions for flyseiners.	To regulate catching potential for these vessels and limit fishing impacts within the English Channel.	Medium-long term
MCRS	Consider introducing MCRS for lemon sole (25cm), turbot (30cm), brill (30cm), common cuttlefish (23cm).	To protect pre-spawn juveniles and promote recruitment population. Precautionary measure given concerns surrounding stock health. Alignment with IFCA restrictions while FMP establishes appropriate MCRS for the stock and fishery. Compatibility with gear mesh size is required for successful implementation and will be explored further.	Short-term
	Consider introducing MCRS for flyseine species – red gurnard, red mullet, bib etc.		Medium-long term
Towed gears	Consider gathering evidence on potential viable options for towed gear management measures in ICES areas 7d and 7e, in particular in relation to 0-12nm, that would enhance stock sustainability and deliver social and economic benefits to the whole sector.	To reduce fishing pressure on juvenile individuals within the English Channel explore compatibility with MCRS for priority species.	Medium-long term

Proposed FMP for Channel Demersal Non-Quota Species

Topic	Measure	Purpose	Timeframe
Cuttlefish	Consider introducing codes of practice on cuttlefish trap handling.	To promote recruitment of juvenile cuttlefish and increase egg survival.	Short-medium term
	Investigate the benefits of underwater structures to benefit egg survival.		
	Consider temporary seasonal closures for trawlers.	To provide protection for cuttlefish within the English Channel seasonal closures could focus to providing protection to the pre-spawn juvenile population or habitats for cuttlefish eggs.	Short-term
Octopus	Propose to monitor catches, create research plan, and gather evidence.	To assess a future potential octopus fishery and impacts on other fisheries from population growth.	Short-term
Recreational	Support the recreational sector to consider introducing voluntary guidelines and education on how recreational fishers can fish more sustainably. This could include voluntary MCRS information, guidance on methods and equipment to reduce damage to fish, as well as information on how anglers can handle and release fish to reduce post-release mortality.	To support evidence gathering, engagement and partnership working with the recreational sector. To encourage the introduction of good practices to improve sustainability of the stocks.	Short-medium term

Environmental considerations

Please see Annex 7 of the FMP and 4.5 and 4.8 of the Evidence Statement for further detail on this section. This includes more information on marine protected areas; indicators of Good Environmental Status (GES) and how goals and measures contribute to GES; ongoing environmental data collection; climate change mitigation and adaptation; and bycatch.

The FMP will contribute to policies relating to the wider marine environment, specifically the requirement to ensure the health of our seas for future generations, ambitions to restore biodiversity, and to address climate change.

A range of current monitoring and evidence programmes gather data to inform on the risks of fishing activity to both MPAs, and the good environmental status (GES) descriptors relevant to this FMP.

However, given the comparative lack of data on the direct impacts of Channel demersal NQS fisheries a suite of new work is required. As a key goal of the FMP, this should be undertaken in partnership between the fishing industry, the wider research community, environmental non-governmental organisations, and Government. To that point, this FMP was not able to fully quantify the pressures associated with Channel NQS fisheries, and instead provides a high-level risk assessment based on best available evidence.

Marine Protected Areas (MPAs)

There remains the potential for fishing activity occurring outside of an MPA to have impacts on the designated features protected within an MPA, or mobile designated features travelling outside of the MPA. There are two key areas of risk:

1. Bycatch of mobile species that are designated features of MPAs. For bottom-towed gears, this was classified as moderate risk (bycatch is either documented or suspected but may be highly localised due to limited overlap between species and the gear used in the fisheries). It was noted that use of static nets may also risk bycatch of birds, fish, and mammals, although their use in the fisheries may be limited and further data are required to better understand these interactions.
2. The potential bycatch of important prey species that designated species depend on. This was classified as low risk: a theoretical pathway exists for bycatch, but this may not be occurring at a scale which is of concern.

Wider Sea Evidence: Beyond MPAs

The [UK Marine Strategy](#) provides the framework for delivering clean, healthy, safe, productive, and biologically diverse oceans and seas. It consists of a three-stage framework for achieving GES in our seas through protecting the marine environment, preventing its deterioration, and restoring it, where practical, while allowing sustainable use of marine resources. The following GES descriptors are relevant to the FMP scope during its first iteration: D1 biological diversity; D3 commercially exploited fish; D4 food webs; D6 seafloor integrity; and D10 litter. A screening exercise found four key issues and a rapid assessment of risk has been undertaken against key indicators of Good Environmental Status (GES):

1. The impact of targeted fish removal on stocks. Any management brought in to meet the precautionary objective should also achieve targets for D3.
2. Where demersal mobile gear is used, there is a concern around benthic disturbance associated with indicators D1, D4 and D6. The impacts will need to be considered by the FMP management group following publication of the FMP.
3. The impact of bycatch of species on D1, D3 and D4. A better understanding of the actual risk posed by the fisheries will require a closer look at the bycatch associated with this activity. Any management brought in should contribute to achieving GES targets for D3 and D4.
4. The contribution to fishing related litter. Loss of gear such as trawls and nets will add to overall levels of fishing related litter within the sea and can have unintended consequences such as ghost fishing, related to D10. The FMP management group will need to consider how best to avoid or minimise loss and achieve sustainable end of life disposal.

Working with stakeholders, Defra will consider the evidence and then develop further recommendations on the potential effects of fishing activities [alongside other activities] on seafloor integrity and the state of benthic habitats, including contributing to the implementation and coordination of the Benthic Impact Working Group. This work will consider the issues at a strategic level and within the context of ongoing changes in marine spatial use and environmental protection to achieve the objective of Good Environmental Status under the UK Marine Strategy.

Climate change mitigation and adaption

The [Climate Change Act 2008](#) establishes the target to reach net zero by 2050. The UK seafood sector will need to consider how they will reduce emissions to contribute to meeting the net zero target.

The future of climate impacts in the Channel are not very well understood. Further research on the impact of climate change on the fisheries covered under this FMP will be carried out. However, it is not currently perceived as within scope of this

Proposed FMP for Channel Demersal Non-Quota Species

iteration of the FMP to directly deliver mitigation strategies against climate but may be within its remit to support fisheries through national transition to low carbon fishing.

The Climate Change objective in the Fisheries Act ensures that future fisheries management policy can, where appropriate, adapt to any future impacts of climate change on the UK fishing industry to support climate adaptive fisheries management. Evidence will be collected modelling the potential movement of fish stocks and the impacts this will have on regional fisheries. As stocks move into and out of UK waters, assessments of stock levels will be conducted to adapt allocation of fishing opportunities. Further research will be required to predict the scale of impacts to the environment and over what timeframe this will be applicable to the Channel.

Secondary and dependent species (including bycatch)

The [marine wildlife bycatch mitigation initiative](#) sets out how the UK will achieve its ambitions to minimise and, where possible, eliminate the accidental capture and entanglement of sensitive marine species in UK fisheries.

The definition of bycatch included within this section represents the risk of unwanted protected species bycatch which may be caught alongside the FMP species. Currently no specific bycatch associations were identified as part of fisheries targeting of the Channel demersal NQS. This is a recognised evidence gap; deliberate actions have been incorporated into the goals for the sustainable fisheries which focus on identifying interactions between the FMP stocks and other fisheries; and undertaking research to identify and address key bycatch issues.

The FMP's key recommendations, given the current lack of data on bycatch associated with NQS fisheries, is to collect additional evidence to understand levels of bycatch associated with static and towed gear use on birds, mammals, and fish, as well as benthic habitat integrity, and then use this evidence to develop robust mitigation strategies. This information should also be used to support the national bycatch mitigation programme.

Implementation, monitoring and review

Please see Annex 6 of the FMP and section 4.9 of the Evidence Statement for further detail on this section. This includes more information on indicators to support monitoring including identification of indicators for associated development processes, outcomes and impacts. An evaluation and review process for indicators is also explained.

Implementation

This FMP sets out the road map to achieve the long-term sustainable management of Channel demersal NQS in ICES area 7d and 7e, in line with the objectives of the Fisheries Act 2020. Section 4 sets out the FMP goals, which have been described in terms of the key actions and timeframes that should be taken to ensure the goal is delivered.

Section 5 sets out recommended management measures suggested to be implemented to help achieve the FMP goals. These will be reviewed and taken forward by Defra and MMO separately once the FMP is published.

Monitoring

Monitoring and periodic reporting on the FMP is a legal requirement under section 11 of the Fisheries Act. The effectiveness of the FMP will be monitored using a logic model framework. This framework will assess the effectiveness of FMP goals, management measures and contribution towards the Fisheries Act objectives.

Indicators have been identified as being most suitable to use for the monitoring of the FMP. The indicators make use of both quantitative and qualitative data, ensuring extensive use of appropriate existing environmental, social, and economic data collection programmes.

All indicators will have a target assigned to them. This will be used to measure the effectiveness of goals and against which the success of management measures will be assessed. This will include (but not be limited to) the following sources:

Indicators to support the monitoring of associated development processes include:

- Number of stakeholders involved in the development of the FMP
- Number of different stakeholder groups involved in the development of the FMP
- Number of engagement events
- Feedback received on level of engagement; and
- Feedback received on contents of the FMP

Indicators for outcomes include:

- Monitoring interviews
 - **Target:** An increase in positive changes to the fishery due to FMP interventions.
- [ICES Stock Assessments](#) (where available)
 - **Target:** To have a stock assessment in place for all species within the FMP
- [MMO Annual UK Sea Fisheries Statistics](#)

Proposed FMP for Channel Demersal Non-Quota Species

- **Target:** TBD
- [Seafish Economics of the UK Fishing Fleet Annual reports](#)
 - **Target:** No decrease in the benefits derived from the NQS fisheries that have been identified through the evidence goals.
- [Cefas Sea Angling in the UK reports](#); and
 - **Target:** No decrease in the catches of NQS within the remit of the FMP for recreational anglers
- Channel demersal NQS FMP Management Group input into fisheries management.
 - **Target:** Building on the current working group, there is a formally established NQS management group with appropriate representation allowing for input into fisheries management
- [United Kingdom Marine Strategy](#); and
- [The 25-Year Environment Plan](#)

Review and revision of the FMP

Monitoring data, as outlined above, will be collected on a yearly basis where possible and reported on every three years to re-estimate the indicators if new data becomes available or if there are other external factors that influence the fishery. This data will be important to inform the setting of any future management measures and to assess whether the FMP is on target to achieve its goals.

As set out in the Fisheries Act 2020, this FMP will be reviewed no longer than every six years. This formal review will assess how the FMP has performed in terms of delivering against Fisheries Act 2020 objectives. However, further reviews of the FMP could be carried out within the six-year period if the responsible authority feel there is a need to do so based on the evidence and monitoring of effectiveness of the plan. The findings of this review will also inform the development of subsequent iterations of the FMP. Furthermore, the FMP will be assessed as part of the process to report and review the JFS.