Department
for Environment,
Food & Rural Affairs

Proposed seabream Fisheries Management Plan

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Abbreviations

The Act – the Fisheries Act 2020

BMP – Bycatch Monitoring Programme

Cefas – Centre for Environment, Fisheries and Aquaculture Science

CPUE – Catch Per Unit Effort

eNGO – Environmental Non-Governmental Organisation

EU – European Union

FIP - Fisheries Improvement Plan

FMP – Fisheries Management Plan

GES – Good Environmental Status

ICES – International Council for the Exploration of the Sea

IFCA – Inshore Fisheries and Conservation Authorities

JFS – Joint Fisheries Statement

JNCC – Joint Nature Conservation Committee

LPUE – Landings Per Unit Effort

MaxCRS – Maximum Conservation Reference Size

MCRS – Minimum Conservation Reference Size

MCZ – Marine Conservation Zone

MMO – Marine Management Organisation

MPA – Marine Protected Area

MPS – Marine Policy Statement

MRAG – Marine Resources Assessment Group

MSC - Marine Stewardship Council

MSY – Maximum Sustainable Yield

NQS – Non-Quota Species

SAC – Special Area of Conservation

SNCB – Statutory Nature Conservation Bodies

SPA – Special Protection Areas

TCA - Trade and Cooperation Agreement

UK – United Kingdom

UKMS – UK Marine Strategy

VMS – Vessel Monitoring System

I-VMS – Inshore Vessel Monitoring System

WG – Working Group

Executive summary

The seabream fisheries management plan (FMP) is one of 43 FMPs set out in the Joint Fisheries Statement (JFS). FMPs provide the tools for managing fishing activity towards more sustainable fisheries and are a requirement of:

- the Fisheries Act 2020 ("the Act")
- the Joint Fisheries Statement (JFS) 2022

The seabream FMP ("this FMP" or "the FMP") covers black seabream (Spondyliosoma cantharus) and gilthead bream (Sparus aurata) within English waters of the International Council for the Exploration of the Sea (ICES) areas 4b, 4c, 7a, 7d, 7e, 7f, 7g, 7h, 7j. The Department for Environment, Food and Rural Affairs (Defra) is the relevant authority, and the FMP meets the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA regulations).

ICES do not assess stock status or provide catch advice for either species in English waters. No assessment units or indicators are currently defined, and scientific evidence is insufficient to enable an assessment of Maximum Sustainable Yield (MSY) for these stocks. The FMP policy goals therefore focus on gathering evidence to support MSY assessments as per the obligations of section 6(3)(b) of the Act.

What is an FMP?

An FMP sets out a longer-term vision and goals for the fishery. It has policies and management interventions designed to restore or maintain one or more stocks of sea fish to sustainable levels. Where appropriate, it identifies actions to address wider environmental, social and economic considerations. To remain effective, the FMP will be reviewed and, if necessary, revised at least once every six years.

Why an FMP for seabream in English waters?

Many vessels land black seabream in English waters and gilthead bream is becoming more viable as a commercial species. Both are important recreational species.

Rising water temperatures have initiated a northward migration of both species, with gilthead now in the English Channel and black seabream anticipated in northeastern regions. Other high commercial value species such as couch's bream (Pagrus pagrus) and pandora bream (Pagellus erythrinus), are becoming more abundant in English waters.

A comprehensive FMP is essential to manage these fisheries and ensure they remain ecologically and economically viable to coastal ecosystems and communities.

Stakeholder engagement

This FMP was developed by the Marine Management Organisation (MMO) in collaboration with a Working Group (WG). The WG was made up of fisheries stakeholders, including:

- scientists
- Inshore Fisheries Conservation Authorities (IFCAs)
- commercial and recreational fishers

The MMO also engaged with:

- coastal communities
- environmental non-governmental organisations
- other government agencies

They contributed through informal discussion, formal in-person workshops and online sessions. The MMO also commissioned a joint online survey with the Wrasses complex FMP, asking respondents to identify concerns, opportunities and propose potential solutions. Read a detailed account of all FMP engagement in the FMP engagement report.

FMP vision

The vision of this FMP is to increase or maintain seabream stocks in English waters and ensure long-term social and economic viability of the fisheries. It will also contribute to achieving the Good Environmental Status (GES) of the marine environment.

FMP policy goals

The FMP policy goals focus on gathering evidence to support MSY assessments in line with the obligations of section 6(3)(b) of the Act.

The FMP will address three wider thematic areas:

1. sustainable fisheries
2. evidence gathering
3. social and economic interests

For each policy goal the plan sets out:

- a rationale
- short-term actions (within the next 2 years)
- medium to long-term actions (2 years or more after publication)

Performance indicators for the FMP are included in the implementation, monitoring and review section. The policy goals of this FMP are:

- increase or maintain stocks of seabream within English waters

- further our understanding of fisheries for seabream in English waters
- identify ecosystem-based fisheries management approaches to mitigate wider ecological and environmental impacts
- deliver a framework to support the role of the FMP in realising the social and economic benefits of seabream to coastal communities

Scope and purpose

The FMP supports 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, UK Marine Plans and the Climate Change Act 2008. The preparation process had regard for the prevailing Marine Plans (as required by section 58(3) of the Marine and Coastal Access Act 2009) and the Environmental Principles (as required by sections 17(5) (a-e) and 19(1) of the Environment Act 2021).

The goals and actions set out in this FMP for managing seabream in English waters have been developed taking into account the requirements of:

- the EU-UK Trade and Cooperation Agreement (TCA)
- cooperation with other coastal States on fish stocks that occur jointly in their respective waters

Management focused on black seabream caught by demersal trawl and seine vessels, as well as pelagic trawls, should be evaluated under the TCA given the large landings of black seabream by European Union (EU) vessels in English waters (shown in Figure 5).

Whilst landings of seabream within other gears by EU vessels are limited, there may be stock connectivity between seabream stocks in UK and EU waters. Therefore, cooperative management of seabream will be beneficial to maintaining and indeed enhancing seabream stocks.

Description of the fishery and stocks

Stocks

Seabream is fished as non-quota species (NQS) and no formal stock assessment has been conducted. There is insufficient available scientific evidence to assess them at MSY, however, localised surveys, commercial landings data and recreational catch reporting

indicate these species are primarily concentrated in the south and southwest of the British Isles (ICES areas 7f, 7e and 7d).

Geographic area

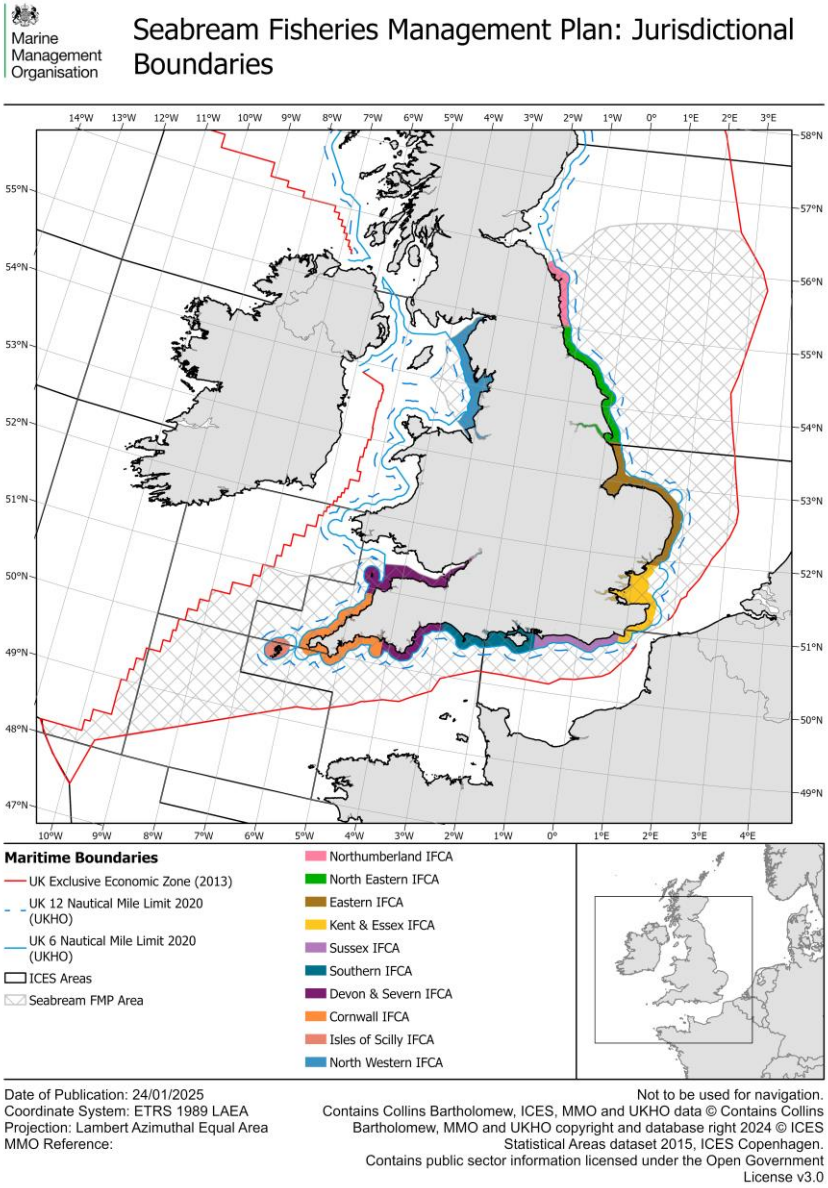

Figure 1. Jurisdictional boundaries within the area covered by the seabream FMP (Collins Bartholemew, ICES, MMO and UKHO copyright and database right 2024).

The FMP remit encompasses English waters (Figure 1), which are divided into 11 marine plan areas and covered by six marine plans. The MMO landings data from UK sea fisheries and annual statistics for 2016-2023, (explored in further sections) indicate that most black seabream and gilthead bream fisheries are currently concentrated along the south and southwest coast. In the current seabream fisheries landscape, the South West Inshore and Offshore Marine Plan and the South Inshore and Offshore Marine Plan are of particular relevance. However, as seabream distributions are projected to shift in future,

the FMP will be aligned with all English plans when implementing its policies (Townhill B L and others, 2023).

Species biology and distribution

Black and gilthead bream are demersal species favouring in inshore and estuarine habitats, including seagrass beds and rocky, and sandy areas. Gilthead bream have tall, laterally compressed bodies with a large black spot on the gill cover, a black tail and a long spined dorsal fin. They are typically silver, with a distinctive golden stripe which runs across the head, giving the fish its name. Black seabream is also silver but features dark vertical bars and occasionally faint yellow horizontal stripes, which become more pronounced during the breeding season. Nesting males often darken to nearly black, and juveniles display broken yellow stripes along their sides and a dark-edged tail. Black seabream feature a single elongated dorsal and anal fin, along with a slightly forked tail.

Both are known to be diet generalists, with gilthead bream being an important consumer of bivalves (Gonçalves J M S and Erzini K, 1998) (Avignon S and others, 2017). Seabream can tolerate and survive in a range of environments with varied environmental parameters, from marine to brackish water environments, including lagoons and estuaries (Arkley K ad Caslake R, 2004). Gilthead are commonly found at depths of 30 metres (m), and adults have been recorded at 150m, exhibiting migrations along the Eastern Atlantic from the Mediterranean to British Isles. Over recent decades, gilthead have appeared more frequently in the western English Channel and Celtic Sea in line with warming sea temperatures (Lewis J, 2020).

Within the western English Channel, black seabream have been found as deep as 150m, although juveniles are usually restricted to depths of 50m (Rogers S I and Millner R S and Mead T A, 1998). Black seabream over-winter offshore in the western English Channel and migrate eastwards along the English Channel during late-spring and early-summer months (Pawson M G, 1995). Available information suggests the spawning season begins in April in the south-western areas of the English Channel and in May in the Isle of Wight and Channel Islands. The latest spawning events can occur from September to October in the Baie de Seine (Ellis J R and others, 2020). Acoustic telemetry tagging studies have indicated that black seabream is highly migratory, travelling hundreds of miles over winter, with individuals often returning to the same nesting grounds each year, displaying strong homing abilities (Marine Conservation Society (2023).

There is limited robust information on the biology of seabream in the Celtic Sea and English Channel, where these fisheries are currently concentrated. Gilthead are protandrous hermaphrodites, changing sex from male to female (Mhalhel K and others, 2023). Black seabream are protogynous hermaphrodites, changing sex from female to male (Pajuelo J G and Lorenzo J M, 1999). Most studies on their spawning ecology have been conducted in other countries, therefore, the reported age and length of sex change remains uncertain for populations in English waters.

Male black seabream display a unique behaviour of excavating the seafloor using their tails to create nests of around one to 2m wide (James J W C and others, 2010). Black seabream juveniles stay near their hatching nest at the beginning of their lifecycle, and remain inshore until sexual maturity is reached, after which they will form part of the adult stock.

More information on each species biology and distribution is in the supporting evidence statement.

Stock assessment and maximum sustainable yield

ICES does not assess stock status or provide catch advice for black seabream or gilthead bream. No assessment units or indicators are currently defined for either stock and current scientific evidence is insufficient to enable an assessment of MSY. In line with section 6(3)(b) of the Act, the FMP outlines key steps to obtain the scientific evidence necessary for MSY stock assessments of black seabream and gilthead bream in English waters. It also outlines the indicators needed to monitor both black seabream and gilthead bream population trends. Actions to manage stocks of black seabream and gilthead bream at precautionary levels in the absence of stock assessments for these species are suggested.

The FMP policies provide further detail on the steps towards assessment, and the subsequent actions to be taken to maintain or increase levels of the FMP stocks.

Fishery status

The commercial fisheries landings data (live weight and value) for 2016 to 2023 comes from species codes BRB (black seabream), SBG (gilthead bream) and SBX (porgies, seabream nei). Comparisons were made between available data for both UK and EU vessels. Commercial landings data is also publicly available in the UK Sea Fisheries Annual Statistics and fisheries dependent information from the EU Scientific, Technical and Economic Committee for Fisheries.

Commercial fisheries

The proportion of landings differ between UK and EU vessels, with EU vessels accounting for 400 tonnes (80%) of the annual average landed live weight and UK vessels the remaining 97 tonnes (20%). EU vessels account for the majority of the landed value of seabream at 77% (£943,835) of the total annual average value. Figure 2 and Figure 3 present the annual live weight and value of seabream landings for UK and EU vessels in further detail.

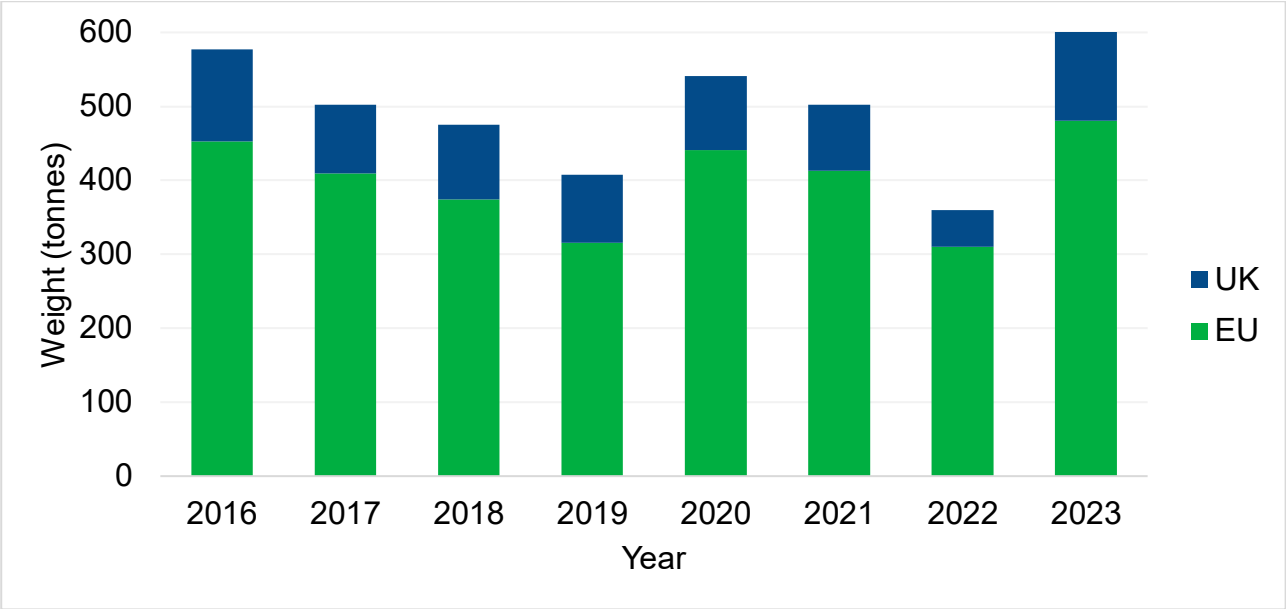

Figure 2. Annual live weight (tonnes) of seabream landings (BRB, SBG and SBX codes) by UK vessels (blue) and EU vessels (green) from 2016 to 2023 in English waters.

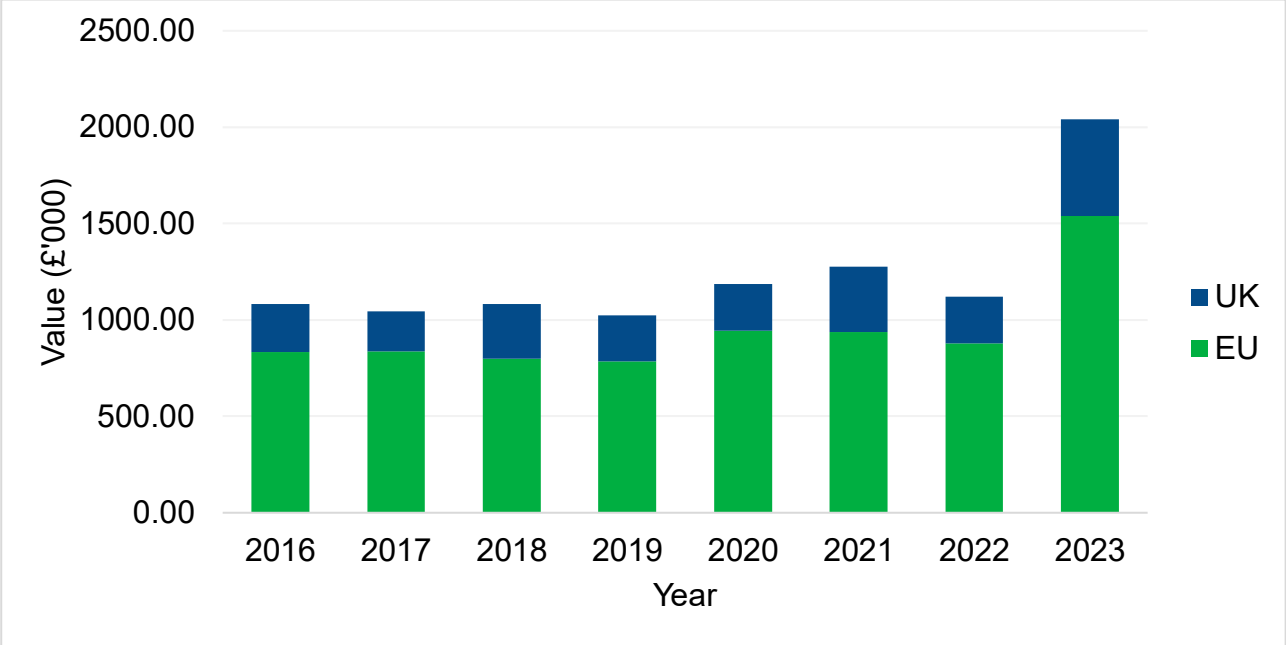

Figure 3. Annual value (£'000) of seabream landings (BRB, SBG and SBX codes) by UK vessels (blue) and EU vessels (green) from 2016 to 2023 in English waters.

Commercial fisheries for both species are seasonal. Lower landings correlate with black seabream nesting inshore during the late spring and early summer. Conversely, higher landings in the autumn and winter months align with the offshore migration of adult seabream, with high amounts caught via demersal trawls, pelagic trawls, and demersal seines.

Figure 4 displays the seasonal differences in landed live weight for seabream from UK and EU vessels, as quarterly landings averaged over the reference period. UK vessels

recorded 46% of their annual average landed live weight in April, May and June (quarter 2). EU vessels displayed the reverse pattern, with lowest average annual landed live weight in quarter 2 (April, May, June). EU landings were concentrated in quarter 1 (37% from January to March) and quarter 4 (35% from October to December).

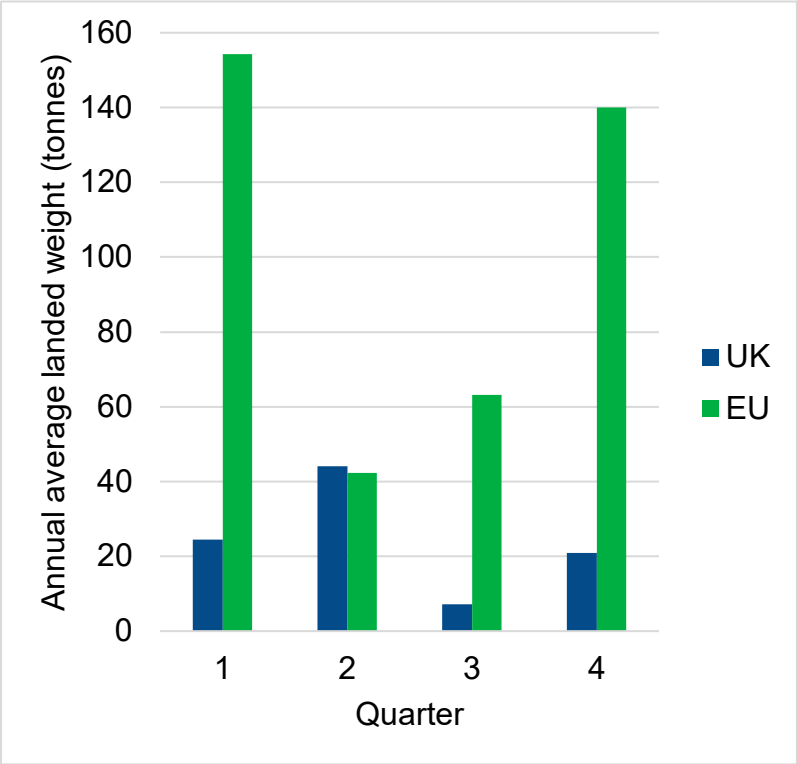

Figure 4. Annual average landed live weight (tonnes) of seabream (BRB, SBG and SBX codes) by quarters, in the period 2016 to 2023 of seabream in English waters.

In England, commercial fishing for seabream primarily occurs across the south and southwest coast. The annual average landings by live weight and value were substantially higher in ICES division 7d, from which 74% of the annual average live weight and 59% of the annual average value were landed.

ICES division 7e accounted for 24% of the annual average landed live weight and 38% of the annual average value. 98% of all seabream landings (codes BRB, SBG, and SBX combined) were landed in these two ICES divisions.

Data from 2016 to 2023 showed that the top three ports in which the UK vessels landed the highest annual averages of seabream (BRB, SBG and SBX codes) by live weight and value were Shoreham (33t; £74,849), Weymouth (5.96t; £37,018) and Brixham (4.60t; £17,255). Port landings data were not available for EU vessels.

When combining UK and EU vessel data, demersal trawls (64%) and pelagic trawls (16%) accounted for the greatest landed live weight of seabream. UK and EU fleet compositions are presented in Figure 5.

For the UK fleet, the predominant gear types were demersal trawls landing an annual average of 39.3t (41%), demersal seines landing 24.8t (26%) and drift and fixed nets landing 15.3t (16%). For the EU fleet, seabream landed from English waters were predominantly from demersal trawls (279.4t; 70%), pelagic trawls (68.9t; 17%) and demersal seines (49.3t; 12%). EU drift and fixed nets account for substantially fewer landings of seabream (less than 1%) when compared to UK drift and fixed nets (16%).

From 2016 to 2023, 45% of EU seabream landings in English waters were from vessels 18-24m in length (181t on average per year). Conversely, seabream landed by the UK fleet were predominately by vessels 12-18m in length (32t on average per year, 33% of total landed live weight).

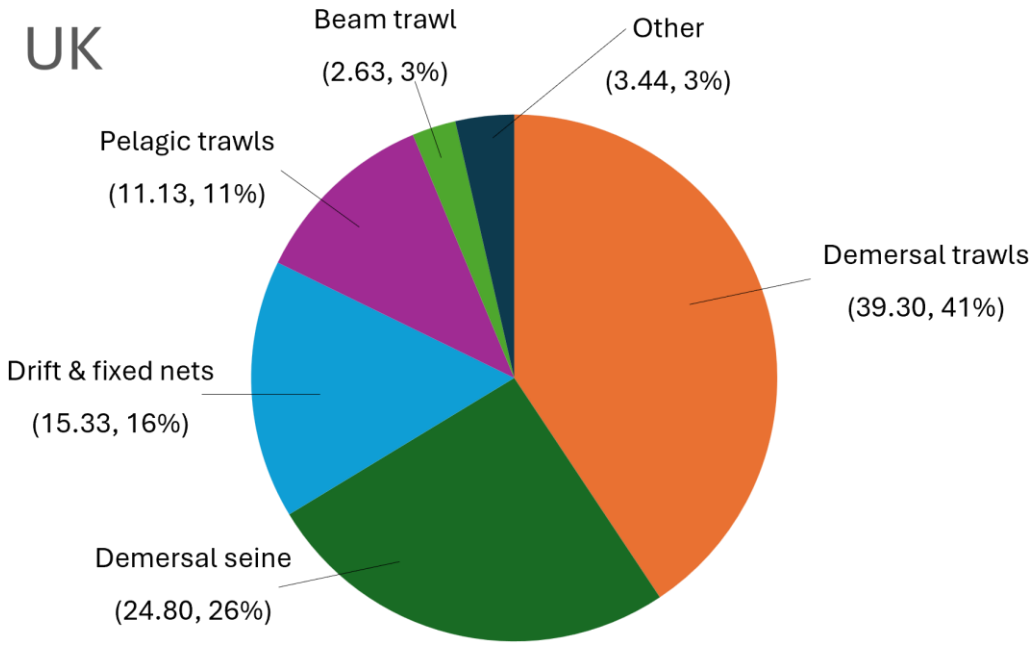

Figure 5. Proportion of annual average landed live weight (tonnes) of seabream (BRB, SBG and SBX codes) by top five gear types (2016-2023) for UK vessels in English waters.

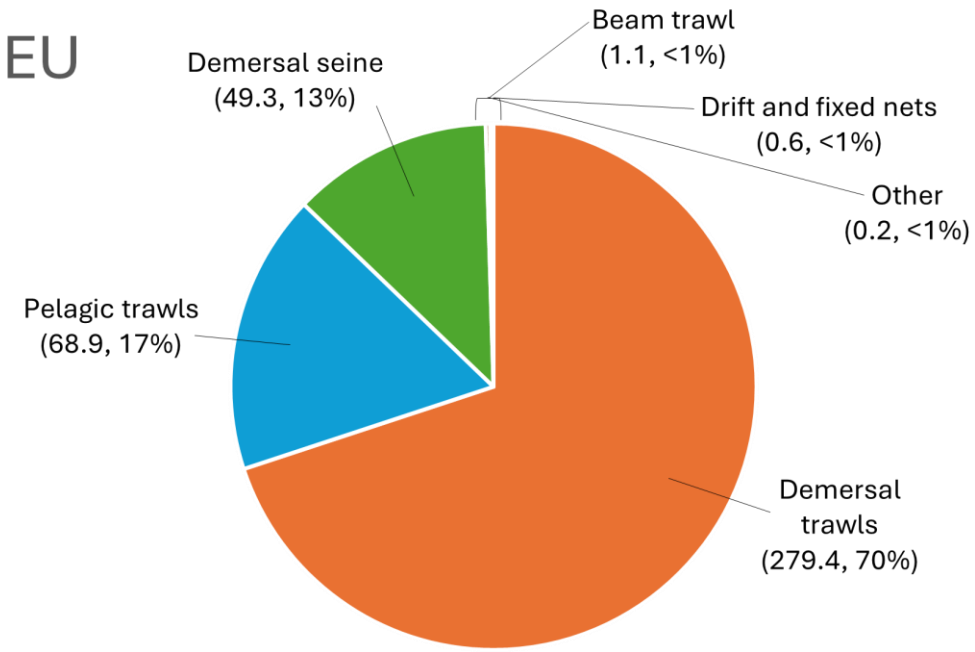

Figure 6. Proportion of annual average landed live weight (tonnes) of seabream (BRB, SBG and SBX codes) by top five gear types (2016-2023) for EU vessels in English waters.

Economic and social data for the commercial fishery

In Figure 7, economic dependence for UK vessels is reflected as the percentage of revenue from seabream landings in English waters compared to their total fishing income.

A large number of vessels (over 300) land FMP bream species but with a very low reliance on it for income. Most vessels landing FMP seabream species are less than 5% economically dependent on the fishery, and 75%-80% of these are less than 1% dependent. Since 2021, vessels less than 5% dependent on breams for their total fishing income contributed three quarters of all landings.

In 2023, of the 407 vessels that landed seabream species, 96% of these generated less than 20% of their total fishing income from this fishery. In the same year, 16 UK vessels generated more than 20% of their total fishing income from seabream, accounting for 14% of the total landed live weight. Most vessels involved in the FMP seabream fishery are registered in England and under 10m in length.

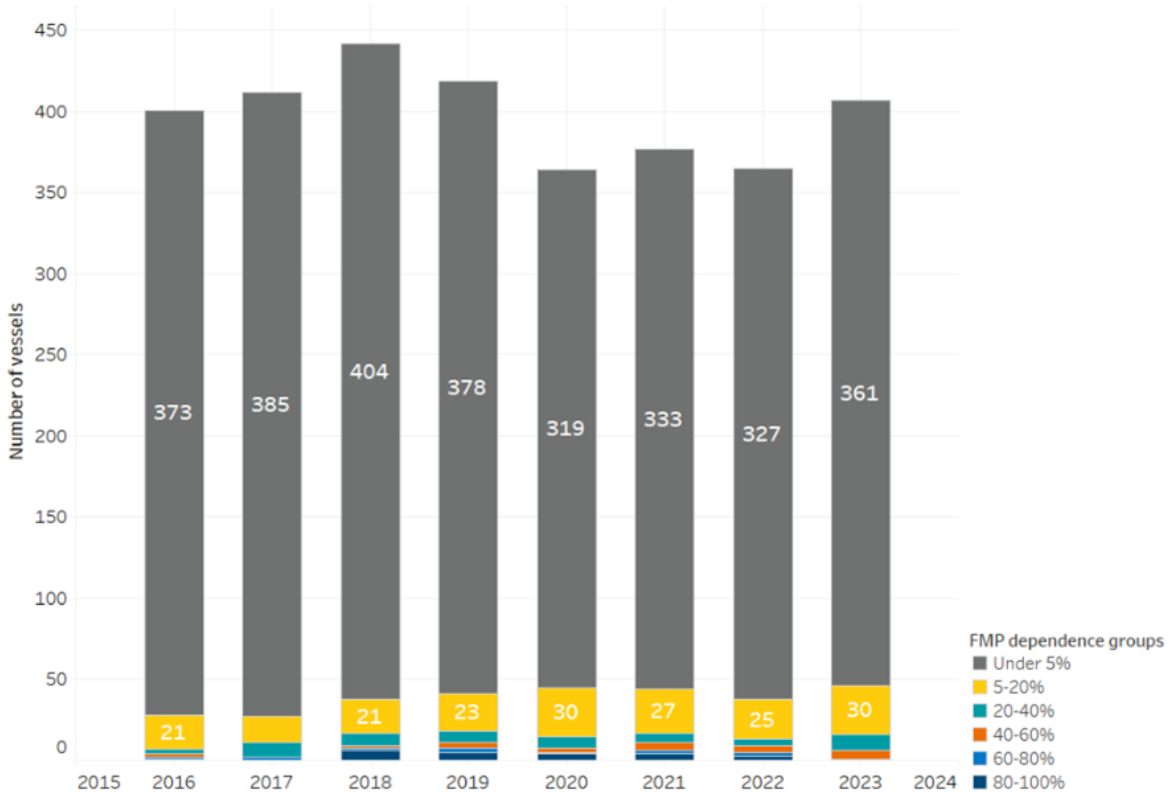

Figure 7. Number of UK vessels involved in the seabream fishery by level of economic dependence on the FMP (2016-2023).

Recreational fisheries

Recreational fishing for black seabream is important for sea anglers along the south coast of England who typically fish for black seabream through private or charter boat-based fishing, targeting the spawning grounds. Consequently, recreational catches are almost entirely from within ICES divisions 7e and 7d, with some occurring in 7a and 7f. UK anglers can record their catches as part of the Sea Angling Diary programme.

From 2016 to 2023, the estimated average annual catch-and-release tonnage for black seabream was 178t and retained was 101t. The gilthead estimated average annual catch-and-release tonnage was 4t, and retained catches were 5t. Black seabream was amongst the top five species caught and recorded by sea angling diarists in both 2020 and 2021. Confidence in the survey estimates is high across the FMP area, particularly within ICES divisions 7d and 7e, however, estimates outside these areas are subject to higher survey error and should be treated with caution.

Reported catches of gilthead bream by recreational anglers are limited, with low confidence in survey estimates and medium-high survey errors, possibly due to the species' limited presence in inshore areas. Although the impact on the stock may be limited, anecdotal evidence suggests that catches of gilthead bream are increasing over time, particular within estuaries. Levels of mortality from recreational fisheries remain

uncertain. Further details on the Sea Angling Diary methodology and outputs are in the supporting evidence statement.

Fisheries management

Harvest strategy

A harvest strategy acts as a pre-agreed proactive framework for making fisheries management decisions. However, a considerable amount of data is required to inform a robust harvest strategy.

The FMP harvest strategy aim is for seabream fisheries to be managed sustainably. While there is no clear indication that the species within this FMP are fished at unsustainable levels, there is not enough data to assess MSY for either stock. While evidence is collected to better understand their stock status, the effectiveness of current management will continue to be monitored. Alongside this, and given the potentially shared nature of seabream stocks, due regard will be given to the TCA and wider collaboration with the EU in the efficacy and impacts of management.

Current UK technical measures

Technical conservation gear legislation applies to all vessels within UK waters of the North Sea (ICES division 2a and sub-area 4) and North Western waters (ICES sub-areas 5, 6 and 7). Details of the technical regulations which impact seabream and gilthead bream are in the supporting evidence statement.

Table 1. Technical regulations which impact black seabream and gilthead bream fisheries are listed in the table below.

Regulation	Gear type	Area	Restrictions
EU 2019/1241 Annex V	Static nets and driftnets	All areas within the UK North Sea and North Western Waters	It shall be prohibited to deploy any bottom set gillnet, entangling net and trammel net at any position where the charted depth is greater than 200 m. It shall be prohibited to have on board or deploy one or more driftnets the individual or total length of which is more than 2.5km.
EU 2019/1241 Annex V	Static nets	Specified areas	Vessels of 12 metres or over, using bottom set gill or entangling nets, must be equipped with acoustic deterrent devices in: Area 4 and the net's mesh size is 220mm or more – all year

			Area 4 and the net is of any mesh size and is 400metres or less - all year Area 7 d, e, f, g, h and j – all year
EU 2019/1241 Annex V	Towed gear, static and drift nets.	North Sea (includes ICES sub-area 4)	Vessels shall use a mesh size of at least 120mm.
EU 2019/1241 Annex VI	Towed gear	North Western Waters.	Vessels shall use a mesh size of at least 120mm, or at least 100mm in ICES sub-area [7d–7j]. Exceptions apply.
EU 2019/1241 Annex VI	Static nets and driftnets	North Western Waters	Vessels shall use a mesh size of at least 120mm. Exceptions apply.
EU 2019/1241 Annex V	Beam trawl	Within 12 nautical miles of the coast of the UK	Vessels shall be prohibited from using any beam trawl inside the areas within 12 nautical miles of the coasts of the UK. Fishing with beam trawls within the specified area shall be permitted provided that: The engine power of the vessels does not exceed 221 kilowatt-hour, and their length does not exceed 24m; The beam length or aggregated beam length, measured as the sum of each beam, is no more than 9m, with a cod-end mesh size of less than 31mm.

Regional inshore fisheries management

In the absence of national UK legislation some IFCAs have implemented local management for black seabream though not for gilthead seabream.

The current byelaws which may manage, or contribute to the management of black seabream fisheries and their environment are available on the IFCA websites:

- North Western IFCA
- North Eastern IFCA
- Northumberland IFCA
- Eastern IFCA
- Kent and Essex IFCA
- Sussex IFCA
- Southern IFCA
- Devon & Severn IFCA
- Cornwall IFCA
- Isles of Scilly IFCA

Current voluntary and mandatory management measures

There is no national Minimum Conservation Reference Size (MCRS) or Maximum Conservation Reference Size (MaxCRS) for either FMP species.

For black seabream, in the North Western, Cornwall and Southern IFCA districts an MCRS byelaw sets out an MCRS of 23cm. There is no MaxCRS.

For black seabream in Sussex IFCA, an MCRS byelaw sets an MCRS of 23cm. The spearfishing code of conduct sets a MCRS of 26cm. There is a MaxCRS of 0cm set by the voluntary code of conduct for anglers within Kingsmere MCZ.

To date, no IFCAs have an MCRS for gilthead bream.

In Sussex, within the District West of a line drawn due South from the landward end of the Western Breakwater of Shoreham Harbour there are restrictions on demersal pair trawling.

Sussex IFCA Fishing Instrument byelaw sets out that from 1 April to 30 June, the cod-end shall consist along its length of not less than 40 rows of meshes of a minimum size of 110mm. These restrictions are to protect stocks of juvenile black seabream and bass present at this location during these times.

Throughout the Sussex IFCA district, there is a prohibition of nearshore trawling. Towed gears are prohibited in the nearshore (between 0.75km to 4km from shore). This includes a large area out to 4km between Selsey and Shoreham, which until the late 1980s held extensive kelp forests and other essential fish habitats that support important commercial fish species such as, black seabream. This mandatory management measure is set out in the Nearshore Trawling Byelaw (2019).

In Kent and Essex, within the District West of a line drawn due South from the landward end of the Western Breakwater of Shoreham Harbour there are restrictions on demersal pair trawling. Under Area B Byelaws, the Fishing Instrument Byelaw sets out that between 1 April to 30 June, the cod-end shall consist along its length of not less than 40 rows of meshes of a minimum size of 95mm. These restrictions are to protect stocks of juvenile black seabream and bass present at this location during these times.

Sussex IFCA have implemented management within the Kingmere Marine Conservation Zone (MCZ) that has black seabream nesting and breeding areas as a designated feature.

The MCZ is split into four zones that have restrictions for each gear type, with these being more restrictive during the breeding or spawning season April to June as shown in table 2 and table 3.

Table 2. The current temporal and spatial restrictions within the Kingmere MCZ from 1 April to 30 June.

Zone	Towed gear	Netting gear	Potting and trap gear	Lining	Angling	Dive gathering
Zone 1	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Zone 2	Prohibited	Prohibited	Prohibited	Prohibited	4 seabream bag limit	Prohibited

Zone 3	Prohibited	Prohibited	Open but no retention	Open but no retention	4 seabream bag limit	Open but no retention
Zone 4	Prohibited	Prohibited	Open but no retention	Open but no retention	4 seabream bag limit	Open but no retention

Table 3. The current temporal and spatial restrictions within the Kingmere MCZ from 1 July to 31 March.

Zone	Towed gear	Netting gear	Potting and trap gear	Lining	Angling	Dive gathering
Zone 1	Prohibited	Open	Open	Open	4 seabream bag limit	Open
Zone 2	Prohibited	Open	Open	Open	4 seabream bag limit	Open
Zone 3	Open	Open	Open	Open	4 seabream bag limit	Open
Zone 4	Prohibited	Open	Open	Open	4 seabream bag limit	Open

In addition, it is prohibited to possess any parts of black seabream other than whole or gutted fish, retain any live black seabream in any container, keep net, or receptacle, transfer any black seabream, dead or alive, between vessels, or return any dead black seabream to the fishery. The vessel master is not allowed to retain on a vessel a number of black seabream exceeding four times the number of persons fishing on the vessel. It is also prohibited to use any seabream as bait.

Black seabream is a designated feature of three further MCZs located within Southern IFCA, namely Southbourne Rough MCZ, Poole Rocks MCZ, and Purbeck Coast MCZ. At the time of writing, Southern IFCA is consulting on the management of these sites.

Recreational seabream management

Sussex IFCA has mandatory and voluntary measures in place for black seabream in the Kingmere MCZ. Along with the MCRS byelaw of 23cm, there is a recommended MaxCRS of 40cm within Kingmere MCZ. Recreational sea anglers are encouraged to promote catch and release of black seabream during spawning season, especially males. Furthermore, if retaining fish within the mandatory bag limit, Sussex IFCA suggests anglers to select individuals showing signs of damage and return females with eggs. Anglers are recommended to use barbless or de-barbed hooks and landing nets to lift fish into boats, as well as maintain a log of black seabream captures and vessel observations.

Sussex IFCA's spearfishing code of conduct recommends a voluntary MCRS of 26cm for black seabream species. The code emphasises that fish should only be speared if intended for human consumption and limits the total catch to a maximum of 10 fish per outing. It prohibits spearfishing in areas such as marine sites of nature conservation importance, confined waterways, estuaries, rivers, marinas, and harbours. Additionally, spear fishers are advised to avoid targeting fish that display territorial behaviour or are engaged in guarding, mating, spawning, or nesting activities.

Current monitoring and enforcement

Control and enforcement in England is the responsibility of the MMO and the IFCAs. Commercial landings data is publicly available from the UK Sea Fisheries Annual Statistics and fisheries dependent information from the EU Scientific, Technical and Economic Committee for Fisheries (STECF).

Within UK waters, there are legal requirements for fishers and buyers to provide records of fishing activities and first sales of fishery products under UK law. Further details are in the government guidance about buyers and sellers of first-sale fish

If you buy less than 30kg of fish per day directly from a commercial fisher then you do not need to register as a buyer or submit sales notes.

Vessels of 10m or more are required to complete logbook submissions detailing their catches. All vessels under 10m must record their catches on the 'Record your Catch' application (Catch App), web service or phone line. Fishers are encouraged to report their catch to a species-specific level. When identification is not possible, seabream is reported under the general seabream and porgies code (SBX).

For vessels over 12 metres fishing in English waters, using the Vessel Monitoring System (VMS) to record their positions is mandatory. Furthermore, all English under-12m vessels registered with a commercial fishing vessel licence must have a functional MMO type-approved I-VMS (inshore) device when at sea.

Scientific trawl surveys provide fishery-independent information on black seabream catches including numbers at length. There are currently three main UK surveys in the English Channel: Eastern Channel beam trawl survey (BTS7D), the Western Channel sole and plaice survey (UK-FSP) and the South-west Ecosystem beam trawl survey (referred to as Q1SWBEAM or Q1SWECOS).

The Centre for Environment, Fisheries and Aquaculture Science (Cefas) conducts an annual inshore trawl survey on bass in the Solent area which also collects catch data for black seabream. The Q1 Southwest otter trawl survey (SWOTTER) collects samples of black seabream in the Western Channel.

There are also internationally coordinated trawl surveys undertaken in the North Sea, including the FMP area, which are the first and third Quarter North Sea International Bottom Trawl survey (NS-IBTS Q1 and NS-IBTS Q3) and the beam trawl surveys Q3

Eastern Channel and Southern North Sea beam trawl survey (BTS7D), covering parts of ICES division 4c. Gilthead bream is not frequently caught in UK surveys in Celtic Sea, English Channel or North Sea, which may be due to their preference for inshore habitats or the use of scientific gears that are not designed to catch this species.

The University of Plymouth is leading the Fish Intel Network (FIN) research programme using acoustic receivers to understand fish migratory and reproductive behaviour. As part of the European Regional Development Fund, the university is partnering with Sussex IFCA and Sussex Wildlife Trust, with advice from Natural England, to track the movement of black seabream in the area and inform management decisions. Collaborative cross-Channel and cross-organisational research programmes are invaluable steps towards filling the evidence gaps associated with seabream in the FMP area.

The University of Plymouth also led Angling for Sustainability, a project funded by Defra's Fisheries in Science Partnership scheme and delivered in partnership with the Angling Trust (AT), the Professional Boatman's Association, Natural England and Southern IFCA.

Researchers tagged black seabream to better understand their movements, habitat preferences and nesting behaviours, with the evidence already being used to inform ongoing MCZ management.

Sussex IFCA also gathers annual data on black seabream and recreational fisheries in Kingmere MCZ from April to June during patrols.

Where relevant, the FMP will look towards these existing practices and initiatives to establish a national approach to gathering data and monitoring trends of seabream populations across English waters.

Environmental considerations

FMPs are subject to legal and environmental obligations arising from legislation such as Habitats Regulations and UK Marine Strategy (UKMS) part one, part two and part three. They are also subject to the UK Marine Policy Statement, the Environment Act 2021, the Marine and Coastal Access Act 2009, and the Environmental Principles Policy Statement. These policies and legislation are aimed at ensuring the health of our seas for future generations, and our ambitions to restore biodiversity and address climate change.

Defra commissioned the Statutory Nature Conservation Bodies (SNCBs) to provide advice on the:

- potential risks posed by seabream fisheries to the designated features of MPAs and UKMS descriptors
- extent to which these risks might affect our ability to contribute to the UK achieving GES

The evidence and advice that has been provided by SNCBs underpins the suggested measures put forward in the following sections.

Marine Protected Area impacts

Management of fisheries activity occurring within marine protected areas (MPAs) is addressed through separate work undertaken by the MMO and the IFCAs (Managing fishing in marine protected areas) as advised by Statutory Nature Conservation Bodies (SNCBs) (for example, Natural England and the Joint Nature Conservation Committee (JNCC).

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

Gilthead bream is not currently a designated feature of any MPAs within English waters. However, black seabream is a designated feature of Kingmere MCZ in the Sussex IFCA district, and Purbeck Coast, Poole Rocks and Southbourne Rough in the Southern IFCA district. Each MCZ places particular emphasis on safeguarding the spawning habitats of black seabream. Only Kingmere MCZ has a management plan in place, including spatial and temporal measures to protect black seabream and two marine habitats it relies on (moderate energy infralittoral rock, and thin mixed sediment and subtidal chalk).

Kingmere MCZ management falls within the remit of the Sussex IFCA through powers granted by sections 155 and 156 of the Marine and Coastal Access Act (2009) to create the Marine Protected Areas Byelaw 2017. The management measures for the MCZ are separated by zoning areas along with temporal closures, that coincide with known breeding season for black seabream, for gear types including towed gear, nets, pots, line and angling. The other three MCZs within the Southern IFCA district are consulting on management for these sites. The general prohibition of bottom towed gear in some MPAs affords an additional layer of protection to black seabream, as well as all relevant MPA features.

Fisheries associated with this FMP have the potential to impact MPAs through the bycatch of other designated features, direct (targeted) and indirect (bycatch) removal of key prey species of designated features, and damage to the seafloor from bottom contacting fishing gear. The impact of various gear types associated with this FMP are explored in more detail in the ‘Environmental Considerations’ section and the supporting environmental report.

Currently, the targeted commercial fishing of seabream in inshore English waters is relatively small. Whilst these fisheries do not have significant bycatch, the use of demersal drift and static nets used to catch seabream, as well as other fish, do pose certain risks.

Natural England and the JNCC have assessed static nets as posing a high bycatch risk to marine mammals, seabirds, and fish. Drift nets have been assessed as a high risk to

seabird and fish species, and a moderate risk to marine mammals. Due to their highly selective nature, there is a low risk of marine mammals, birds and fish bycatch that are designated features of MPAs in rod and line fisheries. However, these assessments have considered the risk of gear types as a whole, rather than those few that specifically target seabream.

Coastal gillnet fisheries frequently result in seabird bycatch, particularly when nets are deployed near the surface, close to bird colonies, and in shallow waters. There is limited information on the risks to MPA designated seabird and fish from drift nets, as the Bycatch Monitoring Programme (BMP) primarily provides mortality estimates for marine mammals. However, the variety of net configurations and mesh sizes used in drift net fisheries likely increases the risk of unwanted bycatch. Consequently, a precautionary approach has been adopted, categorising drift nets similarly to static nets for seabirds and fish.

Natural England and the JNCC have expanded their scope to include a wider variety of gear types, in view of landings as bycatch in fishing operations outside this FMP. Read further details on this, as well as the framework used to provide the indicative risk ratings of fishing gear, in the environmental report.

Wider sea evidence: beyond MPAs

The SNCBs focused their advice on the UKMS descriptors where GES is most likely at risk due to commercial and recreational fisheries. These descriptors are D1 biological diversity, D3 commercially exploited fish, D4 food webs, D6 seafloor integrity and D10 marine litter. UKMS D3 (commercially exploited fish) focuses on achieving MSY for commercially exploited stocks. Following the precautionary and sustainability principles outlined in the Act, significant progress should be made toward meeting or maintaining GES for this indicator. However, it is noted that achieving D3 targets alone may not fully support GES for associated descriptors, like D1 (biodiversity) and D4 (food webs), and therefore an ecosystem-based approach should be considered.

Gillnet vessels targeting black and gilthead bream have a relatively small spatial footprint in English waters. Consequently, the SNCB assessment of the risk static nets pose to UK MS descriptors encompasses all UK static net fisheries, rather than specifically those targeting seabream. The SNCBs state that static nets pose a high bycatch risk to cetaceans and seabirds, and a moderate risk to seals. With regards to cetaceans, these risks are exacerbated by their long lifespans and slow reproductive rates. The risk to seabirds is particularly high in shallower waters where nets are closer to the surface.

Drift nets pose a high bycatch risk to seabirds, and a moderate risk to cetaceans and seals. Due to their varied configurations and mesh sizes, drift nets pose a high bycatch risk to UK seabird species. This precautionary categorisation aligns drift nets with the risks associated with static nets for seabirds, highlighting their potential for significant bycatch. The BMP's coverage limitations introduce significant uncertainty in both cetacean and seal estimates.

Static nets pose a moderate risk of contributing to marine litter. The greatest harm comes from entanglement and ghost fishing, necessitating better recording, mapping, and technical measures to minimise these risks. With regards to rod and line gear, the risks are low to all UK MS descriptors. Overall, specific monitoring of seabream fisheries will be necessary to assess their specific impact on the UK MS descriptors.

Details on the evidence evaluated and assessment framework used to provide the indicative risk ratings of fishing gear can be found in the supporting environmental report. Additional consideration of screened-out descriptors may be required in the future as the status of many of the current indicators is currently uncertain or unassessed. As the evidence base develops, or the suite of indicators associated with a specific descriptor evolves, the advice pertinent to those descriptors may need to be updated.

Climate change

Future climate change modelling scenarios predict that seawater temperature and salinity are set to alter, which are key determinants of fish habitat suitability. Such changes can result in shifts in the distribution of marine species. Beyond the impacts on fish, climate change has the potential to affect fisheries and the wider ecosystem, through increased storminess, sea level rise, and storm surges.

Black seabream stocks could present increased opportunities in the future as the species' distributional limit is moving northwards with increasing temperatures. A Cefas study '[Climate change projections of commercial fish distribution and suitable habitat around north western Europe]' by Townhill B L and others, published in 2023, listed black seabream as a "winner of climate change". It noted that the species will gain more suitable habitats in north-western Europe. While only a few fishers currently rely on black seabream commercially across England, more are considering exploring this market, recognising its potential value. Additionally, gilthead bream is also increasing in prevalence, particularly around estuaries, which serve as their preferred nursery grounds. More gilthead bream is being caught and sold at higher values, with catch records indicating that their distribution is also increasing in an eastward trend along the south coast.

Other Southwest stakeholders have observed more Couch's bream *(Pagrus pagrus)* and pandora bream *(Pagellus erythrinus)* suggesting new fishing opportunities may become available. Further research on the impact of climate change will be necessary, and the FMP must be flexible in considering the inclusion of more seabream species as their distribution changes.

The FMP will look to support the economic benefits that may arise. The Climate Change Act 2008 establishes the target to reach net zero by 2050 and the UK seafood sector will need to consider how to reduce emissions to contribute to this target. The Act's climate change objective also requires that future FMP iterations adapt to the impacts of climate change on the UK fishing industry.

FMP vision

The vision of this FMP is to increase or maintain seabream stocks in English waters and ensure long-term social and economic viability of the fisheries. It will also contribute to achieving the Good Environmental Status (GES) of the marine environment.

The first iteration of this FMP will prioritise addressing the significant evidence gaps in these data-poor fisheries, to support the development of stock assessments at MSY, meanwhile appropriate management approaches will be explored in parallel.

FMP policy goals

Section 6.3 of the Act and 5.2.4 of the JFS mandate that specific policies are set out within FMPs to maintain or restore (or contribute to maintaining or restoring) stocks to sustainable levels, develop MSY (or a suitable proxy) assessments for those stocks that are not currently assessed, or give reasoning for not pursuing MSY assessments. The FMP introduces policies aimed at addressing key issues and opportunities as identified through stakeholder engagement, analysis of evidence, and legislative requirements. These policies and actions also contribute to achieving GES and enhancing social and economic benefits to coastal communities.

Each of these goals will make contributions towards the 8 objectives within the Fisheries Act.

The following section outlines the goals and actions that are being proposed for this first iteration of the FMP. These are given from the point of FMP publication moving into the implementation phase of FMP delivery. Actions in support of these goals may be developed further.

Policy goal 1: Increase or maintain stocks of seabream within English waters

Rationale

The prime focus of all FMPs is achieving the viable, long-term harvesting of the stocks within them, as outlined in section 5.2.6 of the JFS and section 6.3 of the Act. This policy goal and the actions within it acknowledge the management measures currently in existence for black seabream and gilthead bream but seek to build on these to ensure the long-term viability of both the stocks and their fisheries. These actions have also been developed with consideration of the international range of the stocks, and awareness of the need to identify and protect their spawning grounds to facilitate their maintenance or restoration.

Actions within the next 2 years

The actions to help achieve this policy goal are:

- use the best available scientific advice to inform management actions for black seabream and gilthead bream fisheries
- consider how to engage with industry and recreational sector to benefit the long-term sustainability of the fishery and improve its management
- introduce commercial and recreational fishery handling guidelines for seabream, aimed at increasing post-release survival, for example the use of circle hooks and upgrading
- monitor the voluntary code of conduct already in place for Kingmere MCZ to assess its impact on seabream stocks
- explore working with Coastal State partners and sharing data, with the aim of achieving sustainable harvesting of the stock informed by the best available scientific evidence
- consider the steps necessary to include black seabream and gilthead bream in existing biological data collection programs

Actions over the next 2 years or more

The actions to help achieve this policy goal are:

- explore conducting further research on post-release survival of seabream caught by various fishing methods and in differing environments
- on a fishery-by-fishery basis, consider a review of current and potential technical measures (for example MCRS and bag limits), as appropriate management options for black seabream
- on a fishery-by-fishery basis, consider a review of potential technical measures (for example MCRS and bag limits), as appropriate management options for gilthead bream
- evaluate stock-conservation benefits of management measures and identify environmental predictors for spawning, including the identification of important habitat areas relevant for conservation
- ensure management of black seabream and gilthead bream fisheries will be guided by the best available scientific advice, should MSY based advice not be available

Relevant Fisheries Act 2020 objectives

The relevant objectives are:

- sustainability
- scientific evidence
- bycatch
- ecosystem
- climate change

Policy goal 2: Further our understanding of fisheries for seabream in English waters

Rationale

This policy outlines actions to obtain the scientific evidence required to assess black seabream and gilthead bream stocks at MSY, or a suitable proxy, in line with section 6.3 of the Act. The actions outline the evidence gaps to be filled and the actionable steps to take towards undertaking a stock assessment. They also reflect the strong consensus from commercial and recreational stakeholders that these are growing fisheries, meaning improved evidence is required to generate robust assessment of the stocks.

Actions within the next 2 years

The actions to help achieve this policy goal are:

- use the evidence statement to prioritise where to improve the understanding of the black seabream and gilthead bream fishery in English waters
- consider development of a research plan to fill evidence gaps required for stock assessments, including improved understanding of stock structure and boundaries of black seabream and gilthead bream populations in English waters
- develop identification guides to support species-specific landings data for all seabream species in scope of the FMP
- review, and where required, improve internal data processing methods to support species specific analysis of SBX aggregated landings
- analyse species composition, discard survival data and differences of CPUE between gear types to help inform seabream abundance
- support participation in fishery-science partnership schemes to address evidence and knowledge gaps

Actions over the next 2 years or more

The actions to help achieve this policy goal are:

- consider benefits of discussing stock assessments at an international level
- consider the steps to assess the status of black seabream and gilthead bream in English waters in relation to MSY principles

Relevant Fisheries Act 2020 objectives

The relevant objectives are:

- sustainability
- scientific evidence
- bycatch

- ecosystem

Policy goal 3: Identify ecosystem-based fisheries management approaches to mitigate wider ecological and environmental impacts

Rationale

The sustainability, ecosystem and bycatch objectives of the Act (sections 1.2, 1.4 and 1.6) mandate that fisheries activities are environmentally friendly in the long term, use an ecosystem-based approach, and reduce bycatch of undersized and sensitive species. There is currently limited information on seabream ecology and the impact of seabream fisheries within English waters, therefore the actions identified in this policy goal look to fill these evidence gaps whilst simultaneously seeking to promote opportunities to positively impact the wider ecosystem.

Actions within the next 2 years

The actions to help achieve this policy goal are:

- consider bringing together existing information into a report on the ecosystem role of seabreams
- support participation in fishery-science partnership schemes to address evidence and knowledge gaps
- consider data collection and trials through the continuation and expansion of existing bycatch mitigation programmes and initiatives (such as the UK Bycatch Mitigation Initiative, Bycatch Monitoring Programme and Clean Catch UK)
- consider how best to maintain collaboration and involvement across stakeholders in initiatives to reduce environmental impacts of seabream fisheries (including CO_2 emissions)

Actions over the next 2 years or more

The actions to help achieve this policy goal are:

- consider how to improve monitoring distribution and abundance in light of climate change and predicted impacts and risks
- explore the potential for using remote electronic monitoring (REM) to improve estimates of bycatch within seabream fisheries, either as part of the Defra REM programme or as a standalone research project
- consider how to undertake additional targeted evidence and collection (including self-reporting and the potential for remote electronic monitoring (REM) programmes) to improve estimates of bycatch of marine mammals, seabirds and designated fish for gear types used to target FMP species
- consider the development of policy seeking to minimise or eliminate the impact of seabream fisheries on the designated features of MPAs to contribute towards the achievement of GES

- consider identifying the impacts that fisheries for black seabream and gilthead bream have on the marine environment (including CO_2 emissions) through collaborative studies
- consider research into how an ecosystem-based approach could inform future iterations of the seabream FMP

Relevant Fisheries Act 2020 objectives

The relevant objectives are:

- sustainability
- ecosystem
- bycatch
- scientific evidence
- climate change

Policy goal 4: Deliver a framework to support the role of the FMP in realising the social and economic benefits of seabream to coastal communities

Rationale

FMPs aim to balance viable management of fish stocks while also supporting the livelihoods of those dependent on them. An ecosystem-based approach to fisheries necessitates the consideration of social and economic concerns as outlined by the JFS in section 5.2.6. This policy and its actions look to understand the social and economic importance of seabream fisheries and how they may evolve in the future, with a view to supporting stakeholders in maximising the value of these stocks in the long term.

Actions within the next 2 years

The actions to help achieve this policy goal are:

- support industry to explore options promoting the value, consumption and long-term sustainability of seabream fisheries
- consider engagement with the angling community to inform on the social and economic importance of the species to local communities

Actions over the next 2 years or more

The actions to help achieve this policy goal are:

- consider engagement with the commercial sector and wider seafood industry stakeholders to identify any barriers to the realisation of economic viability to the coastal communities within the FMP area

- support and encourage industry participation in initiatives to reduce CO_2 emissions and adaptation to the impacts of climate change
- consider assessing the impact of potential modifications to existing technical measures both for seabream species and the communities relying on the fishery
- consider how to adapt the FMP to reflect relevant findings from an economic assessment and when new or improved measures are developed as appropriate

Relevant Fisheries Act 2020 objectives

The relevant objectives are:

- national benefit
- sustainability
- ecosystem
- equal access
- climate change

Implementation, monitoring and review

This FMP sets out a vision to achieve the long-term sustainable management of FMP species in English waters, in line with the objectives of the Act. The 'FMP policy goals' section sets out the key actions that should be taken. Under section 11 of the Act, policies contained in the FMP must be assessed for their implementation and their effect on the levels of stocks of sea fish, and the results must be reported at least every three years as part of the JFS report. The FMP must also be reviewed and, if necessary, revised at least once every six years.

The implementation of FMP actions could include voluntary measures, licence conditions, national and regional byelaws, and statutory instruments and will build on the existing evidence base. Actions and options will be discussed with stakeholders, reviewed and taken forward by Defra and the MMO once the FMP is published. A holistic, joined-up approach across FMPs will enhance the effectiveness of their actions, stakeholder participation, and resource utilisation.

The Seabream FMP is subject to a statutory review process at a maximum of 6 years after publication to provide evidence for what has been achieved through implementation. This review will include monitoring the potential environmental effects to establish whether any changes are needed in the management of the seabream fisheries.

Indicators for monitoring the effectiveness of the plan

This first version of the FMP sets out the initial steps and longer-term vision necessary for sustainable management of this fishery. These plans allow an adaptive approach and will be reviewed and improved as we collect more evidence and collaborate with the fishing sector and wider interests on the sustainable management of these fisheries.

There is insufficient evidence to determine MSY or a proxy for MSY for black seabream and gilthead bream. An increase in the available evidence to define and measure stock status will be one indicator of the effectiveness of this plan for these stocks.

Other indicators to measure the effectiveness of the policies for restoring, or maintaining these stocks at sustainable levels are:

- a baseline of black seabream and gilthead bream data used to identify evidence gaps and support future assessment of stocks
- increased available evidence to improve understanding of the ecological and biological aspects of FMP seabream species
- identification guides produced for all FMP species to aid species-specific reporting in English waters
- an introduction of commercial and recreational fishery guidelines for seabream to increase post-release survival
- precautionary management implemented if necessary for FMP species
- increased available evidence on the social and economic importance of black seabream to both the commercial and recreational sector, as well as coastal communities within the FMP area
- increased evidence that black seabream and gilthead bream fisheries do not impede the achievement of GES for UKMS descriptors
- management of black seabream and gilthead bream do not interfere with the conservation objectives of the features designated of MPAs with which they interact

Evaluation and review process for indicators

A formal review at least every 6 years will assess how the FMP has performed in meeting the objectives of the Act. The findings of these reviews will inform the development of subsequent versions of the FMP and could be carried out sooner if relevant evidence, international obligations or wider events require a change in the FMP policies.

Progress implementing the policies will be assessed as part a 3-yearly report on the JFS, which will include the extent to which policies contained in a relevant fisheries management plan have been implemented and have affected the levels of stocks of sea fish.

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