



Department
for Environment
Food & Rural Affairs



Proposed fisheries management plan for North Sea and Channel sprat

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Abbreviations

The Act – the Fisheries Act 2020

Cefas – Centre for Environment, Fisheries and Aquaculture Science

CHR – constant harvest rate

eNGO – environmental non-governmental organisation

FMP – fisheries management plan

GES – Good Environmental Status

ICES – International Council for the Exploration of the Sea

JFS – Joint Fisheries Statement

JNCC – Joint Nature Conservation Committee

MMO – Marine Management Organisation

MSY – Maximum Sustainable Yield

PELTIC – pelagic ecosystem survey in the Western Channel and Celtic Sea

PMFs – Scottish priority marine features

SNCB – statutory nature conservation bodies

TAC – total allowable catch

Executive summary

The North Sea and Channel sprat (*sprattus sprattus*, hereby referred to as 'sprat') fisheries management plan (FMP) is one of 43 FMPs set out in the [Joint Fisheries Statement \(JFS\)](#). Defra and the Scottish Government set out a commitment in the JFS to publish this plan in English and Scottish waters in 2024. The FMP has been developed by the Centre for Environment Fisheries and Aquaculture Science (Cefas) in collaboration with UK scientists, regulators, statutory nature conservation bodies (SNCBs) and stakeholders. The FMP sets out the direction of travel to continue the sustainable management of sprat fisheries within UK waters in International Council for the Exploration of the Seas (ICES) subarea 4 and divisions 7d and 7e, in line with the objectives of the Fisheries Act 2020 (the 'Act') and as required by the JFS.

This FMP covers 2 sprat stocks which are shared with Coastal State partners. Fishing opportunities for sprat are managed by total allowable catches (TACs). These, and other joint management measures, are set through international negotiations guided by the best available scientific advice, balancing environmental, social, and economic factors. There is sufficient available scientific evidence for ICES to make annual maximum sustainable yield (MSY) assessments.

Sprat stocks relevant to this FMP are currently being fished within an MSY approach. Therefore, this FMP describes a vision with goals and proposed actions which set out how management can continue to maintain an MSY approach for North Sea and Channel sprat fisheries, and highlights research areas particularly around science and economics that could lead to refinements to management approaches in the future.

What is an FMP?

An FMP is an evidence-based action plan that supports delivery of sustainable fisheries for current and future generations. The FMP is a long-term plan that must be reviewed and, if necessary, revised at least once every six years. It sets out both a longer-term vision and goals for the fishery (or fisheries), together with the policies and management interventions necessary to achieve these goals in the shorter term.

To remain effective, plans will be regularly reviewed and updated to ensure they respond to new evidence and practical experience.

Why an FMP for sprat?

Sprat are a small-bodied species that are fished as a commercial resource within UK waters and form an important part of the marine food web. As such, managing human activities to ensure sustainable stocks, fisheries and ecosystems is important.

There is sufficient available scientific evidence for ICES to make annual MSY assessments of both sprat stocks covered by this FMP in English and Scottish waters. Therefore, this FMP sets out how to continue to maintain the stock at sustainable levels, while also highlighting research areas which can be considered for future management to further support long term sustainability.

Stakeholder engagement

The FMP has been informed by a range of stakeholder engagement initiatives. A 'sprat FMP working group' led by the delivery partner of the FMP, Cefas, was created that included fishery representatives and fishery managers. The purpose of this working group was to co-design and co-develop the FMP with input from the working group members and wider stakeholders and seek feedback on emerging management proposals. Wider stakeholder engagement was used to identify current measures used to manage sprat fisheries, issues affecting the fisheries and opportunities to improve the science and data underpinning sprat fisheries management.

To facilitate engagement, a series of workshops, coastal visits, and direct contact with individual fishers were held. Further engagement was achieved through the Regional Fisheries Groups, organised by the Marine Management Organisation (MMO), and the Fisheries Research Education Programme of Fishing into the Future. In addition to representation from fishery and management bodies, environmental non-governmental organisations (eNGOs) were present at some stakeholder events. These opportunities are described in the FMP engagement report.

Vision

The vision for this is FMP is that sprat fisheries in the UK waters of the North Sea and Channel will continue to be managed sustainably, ensuring that stocks are maintained above levels capable of producing MSY.

The goals set out in this FMP suggest how this could be achieved. This includes ongoing adaptive management, in conjunction with delivery partners and wider stakeholders which:

- takes account of sprat fisheries in the wider ecosystem
- seeks to improve the science underpinning management
- supports sustainable fishing

Goals

To ensure effective management of sprat fisheries in the North Sea and Channel within English and Scottish waters, the FMP identifies 5 goals focused on domestic management priorities. These goals are subject to the consideration of the consultation and will be prioritised appropriately to ensure realistic and measurable outputs. For each goal the plan sets out:

- a rationale
- short-term actions (1 to 2 years)
- medium to long-term actions (2 years and onwards)

Performance indicators for the FMP are addressed towards the end of this document.

The five goals of this FMP are to:

1. Harvest sprat stocks sustainably, with biomasses maintained above the level capable of producing MSY.
2. Identify and address evidence gaps required for improved stock assessments.
3. Identify ecosystem-based fisheries management approaches appropriate to sprat fisheries.
4. Deliver a framework to support the role of the FMP in realising sustainable marine economies.
5. Develop strategies to adapt to the impact of climate change on sprat fisheries.

Scope and purpose

This FMP outlines proposals to continue and, where appropriate, refine the management of sprat fisheries in the North Sea and English Channel waters to ensure long-term sustainability. The FMP also identifies research areas for North Sea and English Channel sprat.

This FMP has been prepared to comply with [requirements in the JFS](#), section 6 of the [Fisheries Act 2020](#) (the Act), and the [Environmental Assessment of Plans and Programmes Regulations 2004 \(the SEA regulations\)](#).

The Act requires the relevant authority or authorities to prepare and publish FMPs in accordance with the list and timetable included in the JFS. The North Sea and Channel sprat FMP is a jointly managed FMP. The relevant authorities for this FMP are Defra and the Scottish Government.

This FMP only applies to fishing activity within UK waters of ICES subarea 4 and divisions 7d and 7e. The stock units, described by ICES which fall within the remit of the North Sea and Channel sprat FMP, consist of sprat in the North Sea, Skagerrak, and Kattegat (spr.27.3a4) and sprat in the English Channel (spr.27.7de). Fisheries on these stocks are not limited to UK waters, extending into waters managed by the EU and Norway, which fall outside the scope of the FMP.

Background

Stocks in the Northeast Atlantic

In the Northeast Atlantic, sprat is distributed from Western Norwegian fjords, southwards to the English Channel and eastwards into the Baltic Sea (Figure 1).

ICES provides annual advice on the status of two stock (assessment) units which are covered by the FMP and a further two units outside the FMP area across the geographic distribution of sprat.

Stocks covered by the FMP:

- sprat in the North Sea, Skagerrak, and Kattegat (spr.27.3a4)
- sprat in the English Channel (spr.27.7de)

Stocks outside the FMP area:

- sprat in the southern Celtic Seas and west of Scotland (spr.27.67a–cf–k)
- sprat in the Baltic Sea (spr.27.22–32)

Additionally, ICES recognises that sprat caught in Norwegian fjords belong to a different stock to the four which are named above¹. Except for the Baltic and fjordic populations, there is currently no clear genetic differentiation of sprat into distinct populations. ICES notes that the relationship between sprat in the southern Celtic Sea/West of Scotland and sprat in the English Channel is unknown, implying that there is some uncertainty over stock boundaries².

The assessments and advice framework are described later in this section.

¹ ICES. 2023. Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea). In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, spr.27.3a4. <https://doi.org/10.17895/ices.advice.21975365>

² ICES. 2023. Workshop to develop a research roadmap for channel and celtic seas sprat (WKRRCCSS). ICES Scientific Reports. 5:79. 65 pp. <https://doi.org/10.17895/ices.pub.23790900>

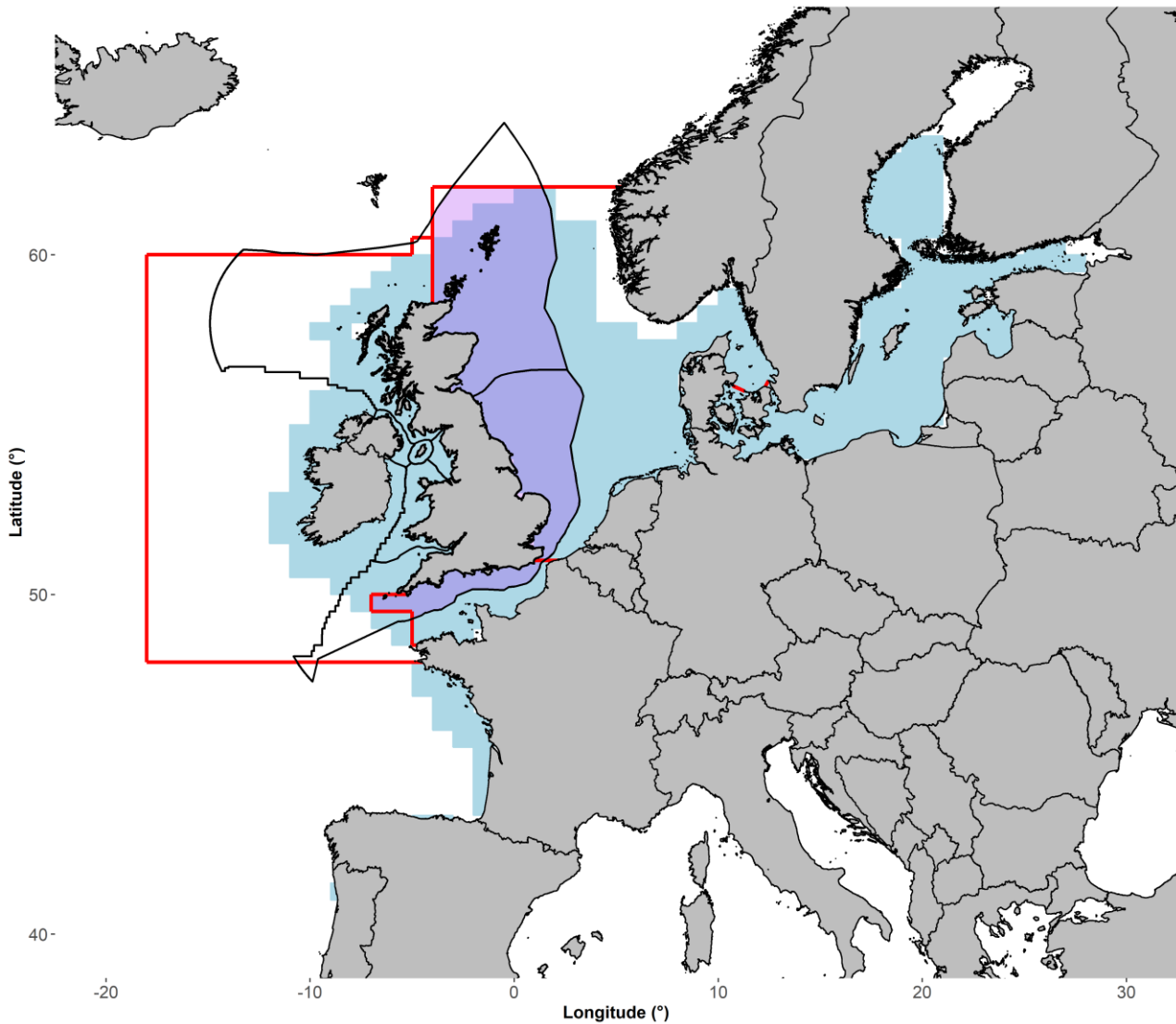


Figure 1. Recorded distribution of sprat (blue area) in the Northeast Atlantic, based on bottom trawl data supplied by [ICES Database of Trawl Surveys \(DATRAS\)](#), for the period 1966–2022 and acoustic survey data supplied by [ICES Acoustic survey portal](#) for the period 2005–2022.

Figure 1 shows the recorded distribution of sprat within the FMP area. It compares this with the boundaries of the UK’s exclusive economic zone, and Devolved Administration boundaries. The ICES assessment areas are also shown in red. The figure demonstrates that the distribution of spray covers the majority of the FMP area and extends into the Baltic and Celtic seas.

Fisheries

The sprat fisheries within the FMP area mostly operate between September and January although some directed fishing for sprat may occur all year round. In the North Sea and

English Channel, pelagic trawl catches make up over 93% of landings. Sprat may also be caught using driftnets and fixed nets.

Vessels that are pelagic trawling in small mesh industrial fisheries may be limited by bycatches of herring, which is unavoidable except in years with high sprat abundance or low herring recruitment³. However, there appears to be limited geographical overlap between the pelagic trawl fleet targeting herring in the North Sea and the North Sea sprat fishery.

Information regarding bycatches of endangered and threatened species is sparse but indicates relatively few interactions of such species with the main fishing gears. Sprat fisheries may overlap with Marine Protected Areas (MPAs). Much of the fishing activity has little or no contact with the seabed but, with some gear types, there is the potential for sprat fisheries to generate impacts in MPAs designated for highly mobile species or water column features. Any such interactions inside sites are assessed and managed by the MMO and the Inshore Fisheries and Conservation Authorities (IFCAs). Sprat fisheries may also interact with highly mobile species which are the designated features of MPAs, outside MPA boundaries.

While catches by EU vessels have maintained, there has been a significant decline in UK vessels targeting sprat in recent years. Industry stakeholders have raised this as a concern, as a once profitable and historic fishery for many coastal communities. The reasons for decline in activity are considered in the sections below covering the two separate fisheries within the FMP area, one in the Western English Channel, and one in the North Sea. The fishery data summarised in this section has been provided by the MMO⁴ and only relates to the remit area of the FMP⁵.

³ ICES. 2023. Herring Assessment Working Group for the Area South of 62° N (HAWG). 837 pp. ICES Scientific Reports. 5:23. <https://doi.org/10.17895/ices.pub.22182034>

⁴ Activity data is reported, via logbooks, by the skippers to MMO, as part of the existing monitoring and control of fishing activity framework, and hosted at the iFISH database (Integrated Fisheries System Holding). iFISH is an integrated database system for UK fisheries authorities which contains UK fishing vessel activity at sea, landings and sales of fish.

⁵ All of the fisheries data included within this FMP are considered to be accurate at the time of compilation, and represents the best available data at the time of drafting. Assumptions have been made (for example, even distribution of landings across ICES rectangles) in order to apportion the data to the FMP area resulting in uncertainty in the absolute landings figures. In addition, fluctuations between years may need to be interpreted with caution due to the uncertainties in the data sets.

English Channel fishery

MMO data suggests that the fishery in the Channel covered by this FMP has undergone a substantial contraction over the past 11 years with virtually no landings since 2021 (Figure 2). Stakeholder feedback received during the development of this FMP suggests that the reason for this sudden decrease in landings is due to a lack of market for the smaller sizes of sprat which are currently dominating the catches.

Landings from EU vessels in the Channel have been a minor contributor to overall landings (6.4%, 2012 to 2021), the number of EU vessels involved is unknown. Landings for the UK fleet have been almost exclusively from vessels landing more than 10 tonnes per year (99.9%, 2012 to 2022). Over this period, two to six vessels within this category were responsible for the largest proportion of landings (Figure 3). These vessels are predominantly 10 metres and over in length. Several vessels (2 to 14) also land sprat in small quantities, but these only make up 0.1% of the UK landings from the area and are typically under 10 metres in length.

As the tonnage landed by UK vessels has decreased, so too has the value of the fishery, falling from close to £1 million in 2012 (£939,727) to just £1,311 in 2022⁶.

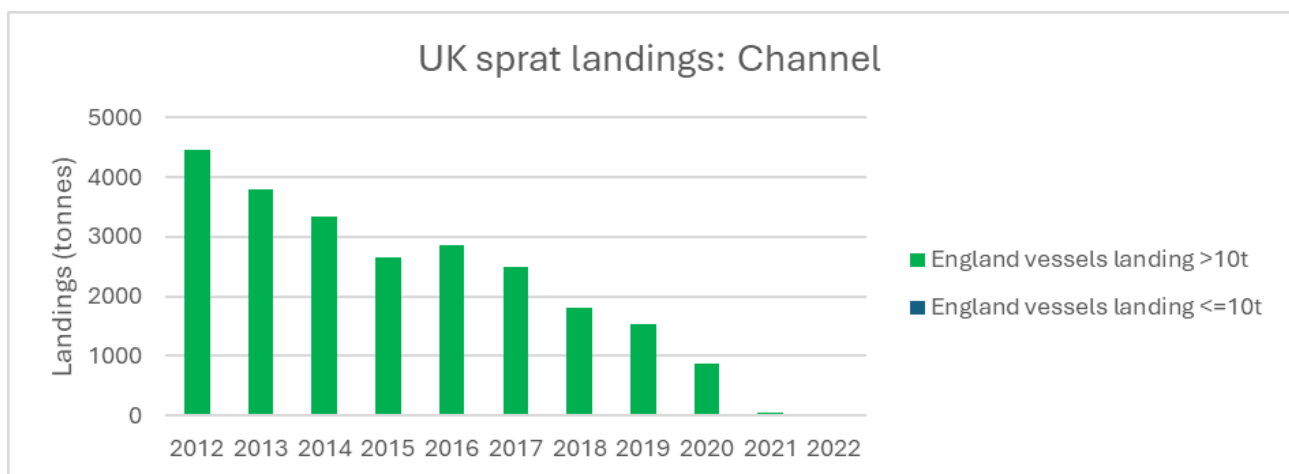


Figure 2. Annual landings by UK vessels from the FMP area within the Channel. Categories shown by different colours indicate whether vessels have landed more than 10 tonnes per year.

⁶ Data extracted from the iFISH database ([Fishing data collection, coverage, processing and revisions](#)).

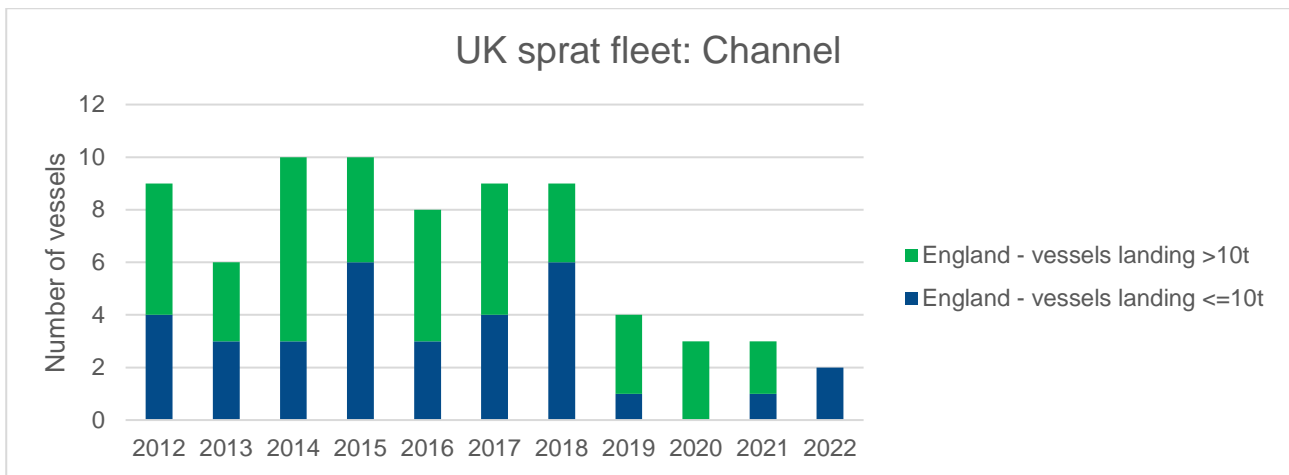


Figure 3. Annual numbers of UK vessels landing sprat from the FMP area within the Channel. Categories shown by different colours indicate whether those vessels have landed more than 10 tonnes per year.

North Sea fishery

MMO data suggests that landings of sprat from the North Sea part of the FMP area are predominantly by EU vessels which comprise 97.2% of total landings (2013 to 2021)⁷. The number of EU vessels involved is unknown.

UK landings from the FMP area in the North Sea have been quite sporadic and generally lower than observed in the Channel (Figure 4). Between 2013 and 2018 average UK landings were 39 tonnes per year while 2021 saw 1,032 tonnes. In years where UK landings were more than 30 tonnes, these came predominantly from a few (2 to 5) vessels landings more than 10 tonnes per year (95.9%, 2012 to 2022). These vessels are a mix of both under and over 10 metres in length.

The remainder of UK landings (4.1%, 2012 to 2022) were generated by around 10 vessels (range 3 to 17) landing less than 10 tonnes of sprat per year (Figure 5).

The value of the UK fishery has fluctuated considerably, ranging from £2,959 to £342,485 between 2013 and 2021. In comparison the EU fishery has varied from £433,705 to £2.3 million over the same period.

Stakeholder feedback collected during the development of this FMP suggests that a traditional winter fishery for sprat in the North Sea had historically been profitable, however a combination of the introduction of mesh-size limits to netting and economic factors are considered to have contributed to the decline of this fishery.

⁷ Data extracted from the iFISH database ([Fishing data collection, coverage, processing and revisions](#)).

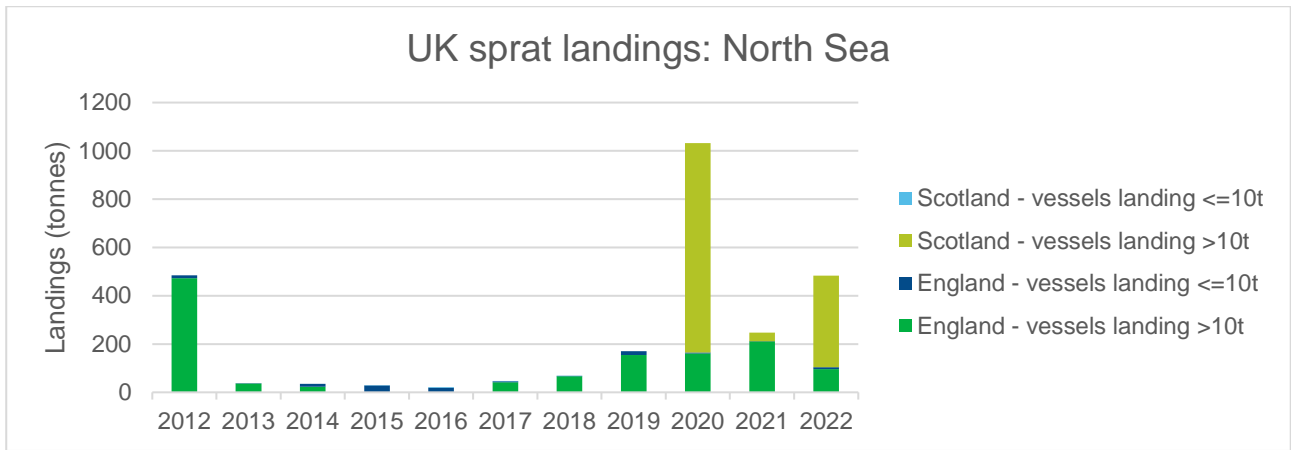


Figure 4. Annual landings of sprat by UK vessels from the FMP area within the North Sea. Categories shown by different colours indicate whether vessels have landed more than 10 tonnes per year.

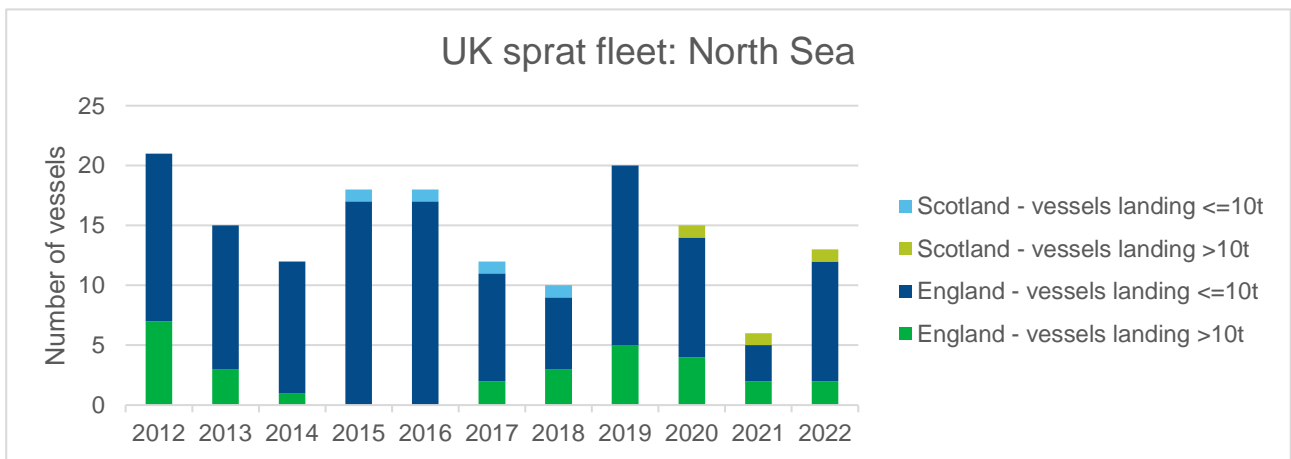


Figure 5: Annual numbers of UK vessels landing sprat from the FMP area within the North Sea. Categories shown by different colours indicate whether those vessels have landed more than 10 tonnes per year.

Stock assessment and maximum sustainable yield

The available scientific evidence is considered sufficient to enable the relevant authority or authorities to assess the stocks and provide advice in relation to MSY principles for the sprat stocks considered in this FMP.

[ICES defines MSY](#) for a stock as “the largest average catch or yield that can continuously be taken from a stock under existing environmental conditions”. ICES provides advice for sprat stocks in the North Sea, Skagerrak, and Kattegat (ICES subarea 4 and division 3a) and in the English Channel (ICES divisions 7d and 7e) based on its [MSY approach](#).

ICES conducts assessments of sprat stocks on a yearly basis. To match the sprat life cycle and the fishing season, the catch advice corresponds to the period between the months of 1 July to 30 June.

A short summary of the assessment and advice for the two stocks is given below. Additional information regarding the assessment, input data, and other available information is provided in the [annual reports from ICES Herring Assessment Working Group \(HAWG\)](#).

Sprat in the English Channel

ICES assesses sprat in the English Channel as a category three, data limited, stock ([see ICES for details on category definitions](#)). This is informed by the evidence base; an annual acoustic survey, the PELTIC (Pelagic ecosystem survey in the Western Channel and Celtic Sea) survey, in English waters of ICES subdivision 7e, conducted by Cefas, which generates an estimate of the abundance of sprat and other pelagic species in the survey area. ICES considers the majority of this sprat stock to be covered by the PELTIC survey and is therefore an appropriate primary data source for the assessment of sprat in the English Channel. The assessment takes the PELTIC survey results as an index of biomass and generates advice using their Constant Harvest Rate (CHR) rule.

While the Channel stock is assessed as data limited, this framework falls within ICES MSY approach and is aligned with the MSY principle of high long-term yield. There is, however, no direct estimation of MSY or the fishing rate that would achieve MSY. Instead, ICES uses a reference biomass level termed I-trigger in place of MSY B-trigger (an MSY reference point below which the stock is at risk of being overfished).

The latest [ICES advice](#), available at the time of the writing, is indicative of a relatively steady biomass index since 2017. Small pelagic species commonly experience interannual fluctuations in abundance⁸. An unusual observation of a peak in biomass in 2021 was driven by a strong recruitment event in the previous year; however, the biomass index from the PELTIC survey is not suggestive of an [overall decline](#). The causes for these events are, however, unclear. In addition, ICES considers that the low catches in recent years are related to reduced fishing activity.

Sprat in the North Sea

ICES assesses sprat in the North Sea, Skagerrak, and Kattegat using an age-based fully quantitative analytical approach (qualifying it as a category one stock), and the subsequent advice is based on the MSY approach using an escapement strategy. The escapement strategy framework is used for several other short-lived species (for example sandeels, and Norway pout in the North Sea) and aims to ensure that the stock biomass does not drop below a set level after any fishing takes place.

⁸ ICES. 2023. <https://doi.org/10.17895/ices.pub.22182034>

Management strategy evaluations (MSE) for this stock were conducted in December 2018.

Sprat in the North Sea is dominated by younger age classes⁹. Interannual fluctuations in recruitment events are known to result in changes in year-on-year biomass. The biomass of the sprat stock in the North Sea has been above the limit reference point for spawning stock biomass (B-lim) since 1991¹⁰.

Overview of stock biology

Sprat is a small-bodied, pelagic schooling fish which is prey for many large predators, including demersal fish, seabirds, and marine mammals¹¹. It rarely lives beyond five years old and generally grows to less than 16cm standard length (standard length refers to the distance from the tip of the snout to the end of the body excluding caudal fins)¹². Sprat is an indeterminate batch spawner, releasing up to 10 batches of pelagic eggs per year over a prolonged annual spawning period in the North Sea. Within the English Channel and North Sea, spawning occurs offshore, in open waters, between March and August, peaking in May and June¹³. Generally, spawning begins earlier in the English Channel, the timing of spawning then progresses eastwards, with the latest spawning timing in the southern North Sea. Adult sprat typically form large schools just above the seabed, while juvenile sprat typically form smaller schools higher in the water column.

Sprat is considered an important forage fish species. In 2023 [ICES released advice](#) on ecosystem considerations in the provision of single-stock advice for forage fish species, which was considered during the development of this FMP. The FMP goals, listed in section 4, set out actions for maintaining a sustainable approach and to consider ecosystem effects of sprat stocks covered by this FMP.

⁹ ICES. 2023. <https://doi.org/10.17895/ices.pub.22182034>

¹⁰ ICES. 2023. Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea). <https://doi.org/10.17895/ices.advice.21975365>

¹¹ ICES. 2023. Workshop to develop a research roadmap for Channel and Celtic Seas sprat (WKRRCCSS). <https://doi.org/10.17895/ices.pub.22182034>

¹² Peck, M.A., Baumann, H., Bernreuther, M., Clemmesen, C., Herrmann, J.P., Haslob, H., Huwer, B., Kanstinger, P., Köster, F.W., Petereit, C., Temming, A., Voss, R. 2012. The ecophysiology of *sprattus sprattus* in the Baltic and North Seas. [Progress in Oceanography. 103, 42–57.](#)

¹³ Baumann, H., Malzahn, A.M., Voss, R., Temming, A. 2009. The German Bight (North Sea) is a nursery area for both locally and externally produced sprat juveniles. [Journal of Sea Research. 61, 234–243.](#)

Sprat in the English Channel

There are relatively few studies on life-history traits of sprat in the English Channel. However, Walker and others (2023)¹⁴ found that maximum total length was, on average, 14.9cm and growth rate was 0.454cm per year.

Sprat in the North Sea

Survival is largely determined by the availability of crustacean larvae and adult copepods as prey^{15,16}. Larval survival of sprat in the Southern North Sea is over 80%¹⁷ somewhat higher than that in the Northern North Sea which likely contributes to higher abundance in the Southern North Sea.

Sprat larvae prefer offshore frontal areas where currents meet, as these are typically areas of high plankton production¹⁷. They are less associated with either more coastal, well-mixed waters or strongly layered waters (for example, where warm water lies over cold water). The German Bight is an important nursery area for juvenile sprat. However, larvae also drift inshore into estuaries, such as the Thames, which also become key nursery areas^{16,18}. Larval and juvenile growth rates vary substantially depending on sea temperature, with late-spawned individuals exposed to warmer temperatures growing faster than early spawned sprat exposed to cooler temperatures¹⁶. Sprat in the North Sea mature around two years old, with length-at-maturity ranging between 6.5 and 9.5cm Total Length¹⁹. Growth rates of sprat have declined over the last decade resulting in decreased mean total length by 1 to 2cm²².

¹⁴ Walker, N.D., Ouréns, R., Ball, J.E., Van Der Kooij, J., Uriarte, A., White, J., Carpi, P., Schuchert, P., Nash, R.D.M. 2023. Defining sustainable and precautionary harvest rates for data-limited short-lived stocks: a case study of sprat (*sprattus sprattus*) in the English Channel. [ICES Journal of Marine Science](#).

¹⁵ Daewel, U., Peck, M.A., Kühn, W., St. John, M.A., Alekseeva, I., Schrum, C. 2008. Coupling ecosystem and individual-based models to simulate the influence of environmental variability on potential growth and survival of larval sprat (*sprattus sprattus* L.) in the [North Sea. Fisheries Oceanography. 17, 333–351](#).

¹⁶ Voss, R., Dickmann, M., Schmidt, J. O. 2009. Feeding ecology of sprat (*sprattus sprattus* L.) and sardine (*sardina pilchardus* W.) larvae in the German Bight, North Sea. *Oceanologia*. 51, 117–138.

¹⁷ Kanstinger, P., Peck, M.A. 2009. Co-occurrence of European sardine (*sardina pilchardus*), anchovy (*Eugraulis encrasicolus*) and sprat (*sprattus sprattus*) larvae in southern North Sea habitats: Abundance, distribution and biochemical-based condition. [Scientia Marina. 73, 141–152](#).

¹⁸ Power, M., Attrill, M.J., Thomas, R.M. 2000. Temporal abundance patterns and growth of juvenile herring and sprat from the Thames estuary 1977-1992. [Journal of Fish Biology. 56, 1408–1426](#).

¹⁹ Hunter, A., Speirs, D.C., Heath, M.R. 2019. Population density and temperature correlate with long-term trends in somatic growth rates and maturation schedules of herring and sprat. [PLoS ONE 14](#).

Fisheries management

Harvest strategy

Sprat fisheries within the UK are currently being fished sustainably within MSY limits. In line with the vision of this FMP, the following management approach details the existing management, which is achieving this, forming the basis of the FMP management strategy.

The stocks covered by this FMP are managed by TACs which determine fishing opportunities. North Sea and English Channel sprat are shared with other coastal states and the TACs are negotiated in international forums with the relevant coastal states (between the UK, EU and Norway for North Sea sprat, between the UK and EU for English Channel sprat). Through international fisheries negotiations, the UK seeks to agree outcomes which reflect the objectives of the Act relating to sustainable TAC setting, where possible within the negotiating forum.

In line with the Act, provisions set out in this FMP are based on principles laid out in Section 4.2.1 ('Fishing Opportunities') of the JFS. One of these principles is that the UK Government will seek to increase the overall number of stocks fished at MSY, consistent with the best available scientific advice and taking into account best available evidence on the effects of fishing activity. Other principles include references to the UK's wider international obligations for the conservation and sustainable use of the marine environment, and the need to apply an ecosystem-based approach.

Further considerations should be made on a stock-by-stock basis to consider opportunities to minimise the negative impacts of fishing on non-target species. For instance, where sprat is a bycatch in a fishery for another species, management decisions for the target species may have significant impacts on sprat catches. Likewise, management decisions on target fisheries for sprat may significantly impact other species which are bycatch.

Fishing opportunities are set under Section 23 of the Act for the purpose of complying with the UK's international obligations to determine the UK's fishing opportunities, including under the United Nations Convention on the Law of the Sea.

In line with the Act, sustainable fishing means taking into consideration environmental, social and economic factors, and ensuring these are appropriately balanced along with the best available scientific advice when setting TAC levels.

Fishery management measures

The two TACs for sprat covered by this FMP and shared with Coastal State partners are:

- sprat in the North Sea (SPR/2AC4-C) – UK and EU waters of ICES subarea 4 and UK waters of division 2a

- sprat in the English Channel (SPR/7DE) – UK and EU waters of ICES divisions 7d and 7e

Interannual transfer quotas may occur within the TACs for both sprat stocks.

Sprat in the North Sea

The TAC for North Sea sprat is set for a 12-month period running from 1 July to 30 June. It is agreed in annual trilateral negotiations between the UK, EU and Norway after the publication of ICES advice in April.

The TAC area partially maps to the Skagerrak and Kattegat stock. Fish in that area are landed under a separate TAC that lies wholly outside the FMP area (SPR/03a). The North Sea TAC also includes UK waters of division 2a, which lie to the north of the assessment area, but this lies beyond the known extent of sprat distribution (Figure 1).

Up to 2% of the quota may consist of bycatches of whiting (*merlangius merlangus*). Bycatches of whiting counted against the quota pursuant to this provision and bycatches of species counted against the quota pursuant to Article 15(8) of Regulation (EU) No 1380/2013 shall, together, not exceed 9% of the quota. This is only applicable to the EU quota share but still applies to EU vessels fishing in the FMP area.

In 2017, ICES evaluated the effectiveness of a closed area (the sprat box) which aimed to ensure the reduction of bycatch of herring in the sprat fishery along the Danish west coast. Following this evaluation the sprat box was subsequently removed however reinstatement of the box may result in effort displacement which could increase effort levels within the FMP area. If this reinstatement is agreed internationally, the FMP will require updating to reflect any associated impact.

Sprat in the English Channel

The TAC for the English Channel is set for a 12-month period running 1 July to 30 June in annual negotiations between the UK and EU.

Current UK technical measures

There is [statutory guidance on the technical conservation and landing obligation \(discard ban\) regulations](#), including how the rules apply, selling undersize fish, reporting requirements and quota management.

Technical regulations which impact sprat fisheries are listed in the tables below.

Direct impact

Regulation	Gear type	Area	Restrictions
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Assimilated law Regulation (EU) 2019/1241, Annex V Part C, 4	Towed	4b	Prohibited to fish with cod-end that has a mesh size of less than 32mm during specified periods and within specified areas.
Assimilated law Regulation (EU) 2019/1241, Annex V Part C, 4	Towed	4b	Prohibited to fish with static gear that has a mesh size of less than 30mm during specified periods and within specified areas.

Indirect impact

Regulation	Gear type	Area	Restrictions
Assimilated law Regulation (EU) 2019/1241, Annex V Part B, 2	Static or drift	4	A minimum mesh size of 50mm is required to fish for species not covered by species-specific restrictions.
Assimilated law Regulation (EU) 2019/1241, Annex V Part B, 1	Towed	4	A minimum mesh size of 16mm is required to fish for species not covered by species-specific restrictions.
Assimilated law Regulation (EU) 2019/1241, Annex VI Part B, 1	Towed	7d & 7e	A minimum mesh size of 16mm is required to fish for species not covered by species-specific restrictions.
Assimilated law Regulation (EU) 2019/1241, Annex VI Part B, 2	Static or Drift	7d & 7e	A minimum mesh size of 50mm is required to fish for species not covered by species-specific restrictions.

Landing obligation

The landing obligation applies to all fishing vessels. It stipulates that all quota species (of all sizes) must be landed and counted against quotas unless exemptions apply. Sprat are subject to catch limits in the subarea 4 and divisions 7.d and 7.e and therefore the landing obligation applies.

Regional inshore fisheries management

The IFCAs in England are responsible for producing byelaws within their districts to manage fisheries up to the 6 nautical mile limit. IFCAs have general byelaws in place outlining vessel specification restrictions for fishing within specified areas.

The current byelaws put in place by IFCAs which may manage, or contribute to the management of sprat fisheries, and their environment, within the FMP area are listed on the IFCA websites:

- [North Eastern IFCA](#)
- [Northumberland IFCA](#)
- [Eastern IFCA](#)
- [Kent and Essex IFCA](#)
- [Sussex IFCA](#)
- [Southern IFCA](#)
- [Devon & Severn IFCA](#)
- [Cornwall IFCA](#)

Current monitoring and enforcement

Control and enforcement is the responsibility of the [MMO \(England\)](#) and the [Marine Directorate \(Scotland\)](#).

The FMP has not identified any need for changes to these processes for sprat fishing as it currently operates however changes to monitoring and enforcement may be required in the future.

Environmental considerations

FMPs are subject to legal and environmental obligations arising from legislation such as Habitats Regulations, [UK Marine Strategy](#), and the [UK Marine Policy Statement](#), the Environment Act 2021, Marine and Coastal Access Act 2009, and The Marine (Scotland) Act 2010. A range of current monitoring and evidence programmes²⁰ gather data to inform about the risks of fishing activity to both MPAs and good environmental status (GES) descriptors²¹ relevant to this FMP.

²⁰ [Marine strategy part two: UK marine monitoring programmes - GOV.UK \(www.gov.uk\)](#)

²¹ [Introduction to UK Marine Strategy - Marine online assessment tool \(cefas.co.uk\)](#)

Screening advice provided by Natural England and Joint Nature Conservation Committee (JNCC) identified two key areas of risk to the marine environment associated with the North Sea and Channel sprat fisheries. These are risks related to:

- the designated features of MPAs in English waters
- UK Marine Strategy descriptors

For waters off the Scottish coast, screening advice was provided to the Marine Directorate by Nature Scot and JNCC, which also included an assessment of risks to Scottish priority marine features (PMFs). The evidence and advice that has been provided by SNCBs underpins the suggested measures put forward in the sections below.

Climate change

The changing climatic conditions have the potential to affect the fishing industry and the wider environment²². The anthropogenic emissions of CO₂ associated with fossil fuel usage drives climate change, leading to increased sea surface temperature, ocean acidification, and fluctuations within large-scale weather and climate patterns that can impact ecological baselines.

Addressing many of these challenges are beyond the scope of this FMP. However, under the climate change objective in the Act, and [Net Zero ambitions](#), the UK government is committed to reducing CO₂ emissions within the fishing fleet, and to improving resilience to climate-driven impacts across the sector. By mitigating and reducing the impacts from changing climatic conditions, this will contribute to climate change, ecosystem and national benefit objectives outlined in the Fisheries Act 2020. The delivery of mitigation strategies for climate change is not within scope of this first iteration of this FMP. The FMP does, however, contain an objective to explore options for adapting fishery management to challenges presented by the changing climatic conditions.

This FMP should be reviewed and adapted as research into climate change develops and new methods to address challenges from climate change are available.

FMP goals

Five goals have been identified to help achieve the overall vision stated for the FMP, and link to the Act objectives.

²² MCCIP (2012). Marine Climate Change Impacts on Fish, Fisheries and Aquaculture. (Eds. Frost M, Baxter JM, Buckley PJ, Cox M, Dye SR and Withers Harvey N) Summary Report, MCCIP, Lowestoft, 12pp.

As noted throughout the document, sprat fisheries covered by this FMP are currently being fished sustainably using an MSY approach. As set out in the JFS, sustainable fishing means environmental, economic, and social considerations are appropriately balanced when managing our fisheries, to benefit present and future generations. The current measures used to manage sprat fisheries are considered broadly appropriate and the FMP is not proposing any major changes to current practice. The marine ecosystem is however, a dynamic environment and future changes may be required.

The FMP goals set out actions for maintaining this sustainable approach and enhancing effective management for the long term. They have been developed with the understanding that these are jointly managed stocks and therefore that overall fishing opportunities on the associated stocks are determined through international negotiation. There is potential for short-term tension between some of the goals, and there are also various methods of delivery, from government implementation to scientific studies and industry led measures and research. Furthermore, the actions within the goals themselves will require prioritising across FMPs to ensure that appropriate effort is concentrated towards stocks that are most at risk of overexploitation.

Goal 1: Harvest sprat stocks sustainably, with biomasses maintained above the level capable of producing MSY

Rationale

The primary aim of FMPs, set out in the Act and JFS, and reflected in the vision of this FMP, is to ensure that the stocks in scope are harvested sustainably. This is to ensure the long-term viability of the stocks and the fisheries that prosecute them. The sprat stocks covered by this FMP are currently being fished sustainably with respect to MSY, therefore the actions for this goal are to maintain the current approach. The actions also reflect that this stock is managed internationally, therefore maintaining the stocks above the levels capable of producing MSY is a result of the joint management of the stock.

How to maintain this

1. Continue to determine fishing opportunities informed by the best available scientific advice.
2. Continue to work with Coastal State partners with the aim of maintaining the sustainable harvesting of the stock through international negotiations.
3. Should MSY based advice not be available, determine fishing opportunities in accordance with a precautionary approach guided by the best available scientific advice.

Relevant Fisheries Act objectives

The relevant Fisheries Act objectives are the:

- sustainability objective
- precautionary objective
- scientific objective
- ecosystem objective

Goal 2: Identify and address evidence gaps required for improved stock assessments

Rationale

While current ICES stock assessments are considered sufficiently robust to inform management decisions, improvements in the understanding of biology, ecology and stock structure will lead to more accurate assessments and advice. ICES notes that there is uncertainty around some stock boundaries. It is important to note that these ambitions will be prioritised across the whole FMP delivery package, and that these suggestions are considerations of how to enhance existing management to meet the vision of the FMP.

How this could be achieved: short term

Consider establishing which factors within current sprat stock assessments have the greatest influence on assessment outcomes and identify those factors with the greatest uncertainty.

How this could be achieved: medium to long term

- Consider development of a research plan to fill evidence or data gaps required for improved stock assessments, including improved understanding of stock structure and boundaries of sprat populations in English and Scottish waters, for example the potential linkages between stocks in and outside scope of this FMP.
- Consider exploration of options to move away from single-species models, including extending and where necessary developing multispecies/ecosystem models to incorporate sprat and sprat fisheries.

Relevant Fisheries Act objectives

The relevant Fisheries Act objectives are the:

- sustainability objective
- precautionary objective
- scientific objective
- ecosystem objective

Goal 3: Identify ecosystem-based fisheries management approaches appropriate to sprat fisheries

Rationale

A thriving fishing industry is underpinned by healthy and productive seas. As set out in the JFS and the Act, the UK and Scottish governments are committed to an ecosystem-based approach to fisheries management that will account for, and seek to minimise, impacts on non-commercial species and the marine environment. This also links to existing initiatives such as the Bycatch Mitigation Initiative and Clean Catch UK.

How this could be achieved: short term

- Consider bringing together existing information into a report on the ecosystem role of sprat.
- Support participation in fishery-science partnership schemes to address evidence and knowledge gaps utilising the experience held within the fisheries.

How this could be achieved: medium to long term

- Consider how to undertake additional targeted evidence 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 sprat.
- Consider research into how an ecosystem-based approach could be incorporated into future iterations of the North Sea and Channel sprat FMP and where these might align with comparable approaches for other species.
- Consider development of policy aiming to minimise or eliminate any impact of the fishery in relation to the designated features of MPAs and wider seas to progress contribution towards achieving GES in the North Sea and English Channel, compatible with targets set by the UK Marine Strategy (UKMS).

Relevant Fisheries Act objectives

The relevant Fisheries Act objectives are the:

- sustainability objective
- scientific objective
- ecosystem objective
- bycatch objective

Goal 4: Deliver a framework to support the role of the FMP in realising sustainable marine economies

Rationale

As set out in the JFS and the Act, the UK and Scottish governments hold an ambition to support a modern, resilient, and environmentally responsible fishing industry. This includes managing our fisheries sustainably by balancing environmental, economic, and social considerations, and so that the capacity of fleets is such that they are economically viable, but do not overexploit marine stocks. The JFS notes that the scope of an FMP may be extended as appropriate, to consider wider fisheries management issues covering environmental, social, and economic concerns.

Stakeholder engagement has highlighted two areas of concern that are currently impacting the economic viability of the fishery:

1. The Channel sprat fishery is not currently active due to market availability and therefore potential economic benefits of the resource are not being realised.
2. Changes to minimum mesh size regulations (move to 50mm; see above current technical measures) have impacted the traditional drift-net winter fishery for sprat in the North Sea.

How could this be achieved: short term

- Consider if an economic assessment of the fisheries may help to identify any barriers to the realisation of economic viability to the coastal communities within the FMP area.
- Consider a review of current technical measures affecting sprat fisheries, to include a consideration of the impact of potential modifications to these measures both for sprat and other species.

How could this be achieved: medium to long term

- 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 objectives

The relevant Fisheries Act objectives are the:

- sustainability objective
- ecosystem objective
- national benefit objective
- equal access objective

Goal 5: Develop strategies to adapt to the impact of climate change on sprat fisheries

Rationale

The climate change objective of the Act requires that adverse effects of fisheries on climate change are minimised and that fishery activities should adapt to climate change. As stated in the climate change section of this FMP, climate change is likely to impact sprat stocks with a potential to affect factors such as production, distribution, and predation. The nature and extent of any possible changes and the ability for intervention is unknown. The development of adaptive management strategies will require the filling of evidence gaps therefore this goal considers what evidence might support adaptation.

How could this be achieved: short term

- Ensure that sprat is considered within wider research to identify the likely impacts of climate change on fisheries, their links within the wider ecosystem.
- Consider how best to maintain collaboration and involvement across government, industry, and academic sectors in initiatives to reduce environmental impacts of sprat fisheries (including CO2 emissions).

How could this be achieved: medium to long term

- Consider identifying the impacts that sprat fisheries have on the marine environment (including CO2 emissions) through collaborative studies.
- Consider how ecosystem-based fisheries management approaches can be used for managing sprat fishing that are robust to the effects of climate variability.

Relevant Fisheries Act objectives

The relevant Fisheries Act objectives are the:

- sustainability objective
- climate change objective

Implementation, monitoring and review

This FMP sets out a vision and goals for this fishery, together with the policies and management interventions necessary to achieve these goals. This FMP proposes new measures but does not implement them. The actions and measures contained within this FMP will be followed by an implementation phase where delivery options will be further identified. Delivery options can include voluntary measures, licence conditions, national and regional byelaws, and statutory instruments. This implementation phase will build on

the existing evidence base, any action taken throughout the FMP's development and the options discussed with stakeholders.

Subsequent implementation roadmaps will be monitored and reviewed regularly to ensure progress. This FMP is subject to a statutory review process at a maximum of 6 years after publication. After this point it will be necessary to evidence what has been achieved through the implementation of those actions and measures. This review process will also build in monitoring for potential environmental effects, to help establish whether any changes are needed in the management of sprat fisheries.

Indicators for monitoring the effectiveness of the plan

This is the first version of this FMP which sets out the first steps and longer-term vision necessary for sustainable management of this fishery. These plans will take time to develop and implement. They are intended to allow an adaptive approach. They will be reviewed and improved over time as we collect more evidence and collaborate with the fishing sector and wider interests on the sustainable management of these fisheries.

Delivery of the actions and measures for this FMP will be monitored. There is currently sufficient evidence to assess stock status and provide advice in relation to MSY approaches for both sprat stocks covered by this FMP and to assess the sustainability of these stocks. Maintaining the approach of using best available scientific evidence to guide management decisions and continuing to work effectively with Coastal State partners to ensure sustainable harvesting will indicate the effectiveness of this plan. This recognises the limitations of the UK in joint management of a stock where maintaining overall biomass may be beyond our control and reflects the potential future variation as a result of climate change.

Each year ICES produces stock assessments for both stocks covered by this FMP that are likely to be the best available evidence regarding stock status and exploitation rates. Key biological indicators are provided as reference points, informing on fishing pressure, spawning stock biomass and MSY. This advice will continue to be monitored and management approaches considered as part of annual negotiations on TAC stocks.

Further reviews may also be required if new opportunities present themselves to improve the effectiveness of the plan.

The FMP will take advantage of future social datasets to be developed as set out in section 3.2.10 of the JFS, which outlines that a range of information will be gathered, including scientific, technical, economic, and social data. The monitoring and evaluation framework for the FMP will continue to be developed and supported by the independent programme evaluation of the FMP programme, which will produce a framework for evaluation of individual FMPs.

Evaluation and review process for indicators

As set out in the Fisheries Act 2020, this FMP must be reviewed when appropriate, and at least every 6 years. This formal review will assess how the FMP has performed in terms of meeting the objectives of the Act. The findings of these reviews will inform the development of subsequent versions of the FMP. Reviews can be taken sooner, for example if one of the above indicators identifies the need for review.