MarinTrust Standard V2

Whole fish Fishery Assessment

WF31 – Sprat in ICES Division 3a and Subarea 4

MarinTrust Programme
Unit C, Printworks
22 Amelia Street
London
SE17 3BZ
E: standards@marin-trust.com
T: +44 2039 780 819

Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name(s): TripleNine Thyboron; FF Skagen A/S			
Country: Denmark			
Email address:		**Applicant Code**	
Certification Body Details			
Name of Certification Body:		Global Trust	
Assessor Name	**CB Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**
Sam Peacock	Léa Lebechnech	4	Initial
Assessment Period	May 2023 – August 2024 *Variation request granted 29/052024 to extend to August 2024 to align with ICES stock advice dates.*		
Scope Details			
Management Authority (Country/State)	EU (Denmark)		
Main Species	Sprat Herring		
Fishery Location	ICES Division 3a and Subarea 4		
Gear Type(s)	Small-meshed pelagic trawl		
Outcome of Assessment			
Overall Outcome	PASS		
Clauses Failed	NONE		
CB Peer Review Evaluation	Agree with assessor's evaluation		
Fishery Assessment Peer Review Group Evaluation	Approve see Annex B		
Recommendation	Approve		

Table 2. Assessment Determination

Assessment Determination
Several sources of catch composition data were used to determine the "usual" proportions of bycatch in the Danish sprat fishery. This led to the conclusion that in the large majority of years, sprat and herring represent more than 95% of the catch and are therefore the only Type 1 species. Sprat in ICES Subarea 4 and Division 3a has been managed as a single stock unit since 2018. Herring exists as several different stocks in the region relevant to this MT assessment; however, it was determined that the only stock from which bycatch is taken by the sprat fishery in significant numbers is the North Sea Autumn-Spawning (NSAS) herring stock. Both sprat and NSAS herring are managed relative to established reference points under annual stock assessments, and were assessed under Category A. Two other species regularly appear as bycatch in the sprat fishery in quantities representing more than 0.1% of the catch: mackerel and whiting. Mackerel is managed as a single stock across the whole of the Northeast Atlantic and adjacent waters, and was assessed under Category C. Whiting exists as two stocks within the assessment area, but only whiting from the Subarea 4 stock appears as bycatch in any significant quantity, and so this stock was also assessed under Category C. All four of these species has been categorised by the IUCN as Least Concern, and none appear in the CITES appendices. The annual sprat stock assessment is informed by a large amount of supporting information, including commercial catch data and multiple survey indices. The most recent stock assessment was conducted in 2023 and concluded that SSB is currently more than double the limit reference point, and substantially about the target reference point. International quotas are agreed between the main participating states (EU, UK and Norway), and have not substantially exceeded the advice in recent years. The annual herring assessment is similarly supported by adequate scientific information. The most recent was conducted in 2022 and concluded that SSB was very close to but slightly above the target reference point, and that fishing mortality was below the target and limit reference points. International quotas are set via negotiations between the main participating states (EU, UK and Norway). While catches have historically exceeded the ICES advice, this has not occurred since 2019 and has generally been less than 10% more than the recommended level. Additionally, the quantity of herring caught in the sprat fishery is very small compared to the quantity taken by the directed herring fishery. Both whiting and mackerel are subjected to annual stock assessments which take into account the quantities taken as bycatch in the sprat fishery. Additionally, both were estimated by the most recent stock assessments to have SSB substantially larger than the limit reference point. The management framework within which the fishery operates primarily falls under the CFP, with a solid legal basis, participatory and transparent approach, and with effective regulations, monitoring, control and enforcement. There is no evidence of any significant interactions between the fishery and ETP species, and due to the gear used it is very unlikely that the fishery interacts significantly with seabed habitats. Both sprat and herring are known to play an important role within the marine ecosystem, and this is considered throughout the management process. Additional precaution is taken in the recommendation of appropriate catch levels to recognise the role of both species as prey. Overall, the fishery meets the MT requirements and should be approved as a source of raw material for the manufacture of MT-certified marine ingredients.
Fishery Assessment Peer Review Comments

Overall recommendation: approve

There is a statement about herring "*While catches have historically exceeded the ICES advice, this has not occurred since 2019 and has generally been less than 10% more than the recommended level*.", which is bit confusing since the reason for that is not well explained. In a modern, well-monitored fishery such as this one, the catches should not exceed the TAC.

CAB RESPONSE: There are two main factors at play: firstly, the TAC has often been set above the ICES advice. Secondly, up to 10% of quota can be transferred between years. This means that catches are sometimes above the recommended level. As per the MT requirements, catches up to 10% greater than the recommended level are permissible if the stock biomass is above the target reference point. Further explanation has been added to the report to make these aspects of the fishery clear.

More specifically, this time in the case of sprat, it is noted that "Preliminary catch data for 2022 (which will ultimately include catches up to 30 June 2023) suggest that the advice will be exceeded. At the present time, the preliminary total catch (70,142t) is less than 10% greater than the ICES advice (68,690t). Stock biomass is currently above the limit reference point, and therefore the current level of excess catch is acceptable". It is discussable that because the catches are just 10% above the ICES recommendation, and because the population is above the reference limits, then the excess is acceptable. There is no doubt that there are reasons to explain that, but the differences are not well supported. This aspect could be improved in a next review. In the same document is mentioned that "at the present time there is no evidence that quota flex is causing sprat catches to substantially exceed the advice". That evidence needs to be provided.

CAB RESPONSE: The statement that the excess catch level is "acceptable" is based on the MT requirement, rather than a value judgement by the assessor or an external source of evidence. The report has been updated to make this clear.

Notes for On-site Auditor

Table 3 General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	PASS
M2 - Surveillance, Control and Enforcement	PASS
F1 - Impacts on ETP Species	PASS
F2 - Impacts on Habitats	PASS
F3 - Ecosystem Impacts	PASS

Table 4 Species- Specific Results

List all Category A and B species. List approximate total percentage (%) of landings which are Category C and D species; these do not need to be individually named here

Category	Species	% landings	Outcome (Pass/Fail)	
Category A	Sprat	84-97%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
	Herring	2-7%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B	No Category B Species			
Category C	Mackerel	<1%	PASS	
	Whiting	<1.5%	PASS	
Category D	No Category D Species			

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category[1]	% of landings	Management	Category
Sprat	*Sprattus sprattus*	Sprat in ICES Division 3a and Subarea 4	Least Concern[2]	84 – 97%	Yes	A
Herring	*Clupea harengus*	NSAS herring	Least Concern[3]	2 – 7%	Yes	A
Mackerel	*Scomber scombrus*	Mackerel in the Northeast Atlantic and adjacent waters	Least Concern[4]	<1%	Yes	C
Whiting	*Merlangius merlangus*	Whiting in Subarea 4 and Division 7d	Least Concern[5]	<1.5%	Yes	C

Species categorisation rationale

Catch composition data for the Danish sprat fishery is provided in the annual report of the Herring Assessment Working Group (HAWG) for the Area South of 62° N, the most recent of which was published in November 2022[6]. For the period 2017-2021, the proportion of each species in the catch can be summarised as follows:

Species	Catch ICES 4	Catch ICES 3a
Sprat	84 – 97%	64-91%
Herring	2-7%	5-22%
Horse mackerel	0-0.1%	0-0.1%
Whiting	0.4 – 1.4%	1.5 – 11%
Haddock	0-0.4%	0-0.2%
Mackerel	0.2-1%	0.1-1.2%
Cod	0%	0-0.1%
Sandeel	0-0.4%	0%

The large majority of catch is taken in ICES Subarea 4, meaning that sprat and herring combined represent more than 95% of landings by weight in most years. However, herring caught as bycatch in the sprat fishery belongs to two stocks: North Sea Autumn Spawners (NSAS herring) and Western Baltic Spring-Spawners (WBSS herring). Herring bycatch in the sprat fishery in the North Sea (ICES Subarea 4) is thought to be exclusively NSAS herring, whereas bycatch in ICES Division 3a is a mixture of NSAS and WBSS herring[7].

Absolute quantities of each species in landings in 2022 were provided by the applicant, allowing analysis of the likely proportions of each of the two herring stocks in the total sprat fishery removals in 2022. In the table below, the landing quantities of all species except for herring and whiting have been combined into a single total for the entire sprat fishery. Herring bycatch is separated into Subarea 4 bycatch (exclusively NSAS) and Division 3a bycatch (mixture of NSAS and WBSS). Whiting in the area covered by this

[1] https://www.iucnredlist.org/

[2] https://www.iucnredlist.org/species/198583/45077260

[3] https://www.iucnredlist.org/species/155123/45074983

[4] https://www.iucnredlist.org/species/170354/18207463

[5] https://www.iucnredlist.org/species/198585/45097610

[6] https://ices-library.figshare.com/articles/report/Herring_Assessment_Working_Group_for_the_Area_South_of_62_N_HAWG_/19249010?file=38181435

[7] ICES (2022). Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.3a47d, https://doi.org/10.17895/ices.advice.19447985

assessment is divided into two stocks: Whiting in Subarea 4 and Division 7d; and whiting in Division 3a. The quantity of whiting bycatch in Division 3a is very small and so has not been included. Other stocks representing a very small proportion of the catch have similarly been excluded.

Species	Quantity landed	Proportion of total catch
Sprat	77,808t	94.7%
Herring in Subarea 4 (NSAS)	3,206t	3.8%
Herring in Division 3a (NSAS & WBSS)	27t	0.03%
Whiting in Subarea 4	484t	0.6%
Haddock	115t	0.1%
Mackerel	388t	0.5%
Dab	44t	0.05%
Gurnard	56t	0.07%

Taking both the average catches in recent years and the 2022 landings data into account, the following conclusions can be reached:

- Sprat represents the large majority of the catch every year, and should be assessed as Type 1.
- Although sprat represented around 95% of the catch in 2022, this is not always the case and therefore herring should also be assessed as Type 1. Of the two herring stocks, NSAS herring represents a substantial proportion of the catch (nearly 4% in 2022 but up to 7% in some years) and should be assessed as Type 1.
- These two stocks combined reliably represent more than 95% of total landings, and therefore all other species in the assessment should be considered Type 2.
- Whiting and mackerel consistently represent more than 0.1% of total landings, and therefore should be assessed as Type 2.
- Haddock sometimes represents more than 0.1% of the total landings, but in most years is not present in the catch at all. Therefore it is not included in this assessment.
- Dab and gurnard reliably represent less than 0.1% of landings, and are not included in this assessment.
- Finally, WBSS herring represented, at most, 0.03% of the total catch in 2022. In previous years the quantity of herring bycatch in Division 3a has sometimes represented slightly more than 0.1% of landings; however, the ICES catch advice for WBSS herring indicates the ratio of NSAS:WBSS herring in Division 3a bycatch is around 3:1[8], meaning the proportion of 3a herring in the total catch would have to exceed 0.4% before the proportion of WBSS herring exceeded 0.1%. Therefore, it can be concluded that WBSS herring rarely, if ever, represents more than 0.1% of the total landings, and can be excluded from this assessment.

Sprat and NSAS herring undergo annual stock assessment and are managed relative to established reference points, and therefore were both assessed under Category A.

Whiting and mackerel are similarly managed relative to reference points using regular stock assessments, and were assessed under Category C.

[8] ICES (2022). Herring (*Clupea harengus*) in subdivisions 20-24, spring spawners (Skagerrak, Kattegat, and western Baltic). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.20-24, https://doi.org/10.17895/ices.advice.19447964

MANAGEMENT

The two clauses in this section (M1, M2) relate to the general management regime applied to the fishery under assessment. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. A fishery must meet all the minimum requirements in every clause before it can be recommended for approval.

M1	Management Framework – Minimum Requirements		
	M1.1	There is an organisation responsible for managing the fishery.	PASS
	M1.2	There is an organisation responsible for collecting data and assessing the fishery.	PASS
	M1.3	Fishery management organisations are publicly committed to sustainability.	PASS
	M1.4	Fishery management organisations are legally empowered to take management actions.	PASS
	M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making.	PASS
	M1.6	The decision-making process is transparent, with processes and results publicly available.	PASS
		Clause outcome:	PASS

M1.1 There is an organisation responsible for managing the fishery.

Around 80-85% of sprat taken in Subarea 4 and Division 3a is caught by Danish vessels, with smaller amounts taken by Norway and Sweden, and generally very small quantities taken by the UK, Germany, the Netherlands and others (ICES 2022).

Fisheries in Denmark and other EU countries are managed according to the Common Fisheries Policy (CFP), which was most recently updated through Regulation (EU) No. 1380/2013. Individual member states generally incorporate the requirements of the CFP into their national legislation, and are individually responsible for its implementation. The CFP therefore sets out the policies and procedures by which member states manage their fisheries (EC 2018).

Fisheries management in Norway is the responsibility of the Directorate of Fisheries under the Ministry of Trade, Industry and Fisheries. The Directorate is responsible for most day-to-day aspects of fisheries management, including tackling IUU fishing, regulating and licensing fishing activity, and negotiating quotas and other international agreements (Government.no 2023).

Within the UK, fisheries management is a devolved issue. The body with over-arching responsibility for fisheries management policy is the Department for Environment and Rural Affairs (DEFRA), but the four individual nations also have their own management structures. In England, the Marine Management Organisation (MMO) has responsibility; in Scotland, Marine Scotland; in Northern Ireland, the Department for Agriculture, Environment and Rural Affairs; and in Wales the Welsh Government (APPG 2020).

There are organisations responsible for managing the fishery, and M1.1 is met.

M1.2 There is an organisation responsible for collecting data and assessing the fishery.

The primary organisation responsible for coordinating and analysing the data relevant to the management of the sprat fishery is the International Council for the Exploration of the Sea (ICES). ICES is an intergovernmental marine science organisation which provides frequent analytical and advisory services for the management of fisheries, primarily in the Atlantic but also in the Arctic, Mediterranean, Black Sea and North Pacific (ICES 2023a).

ICES carries out annual stock assessments of the sprat and herring stocks which are Type 1 species within this MT assessment, along with periodic benchmarking exercises to ensure the stock assessment processes and their underpinning assumptions remain appropriate. As a key output of the stock assessment process, ICES produces a recommendation for the appropriate level of fishery removals in the coming fishing season.

Within Norwegian waters, the Norwegian Institute of Marine Research (IMR) is also relevant. The IMR is affiliated with the Ministry of Trade, Industry and Fisheries and works closely with many of the ICES Working Groups (IMR 2023).

There are organisations responsible for collecting data and assessing the fishery. Requirement M1.2 is met.

M1.3 Fishery management organisations are publicly committed to sustainability.

Objective 1 of the CFP, as set out in Regulation (EU) No. 1380/2013 is to "ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies".

The Norwegian Directorate of Fisheries states that its main objective is to "promote profitable economic activity through sustainable and user-oriented management of marine resources and the marine environment" (DoF 2019). The UK Fisheries Act 2020 sets out 8 objectives for fisheries management in the UK. The first of these is the "sustainability objective", which seeks to ensure that "fish and aquaculture activities are (i) environmentally sustainable in the long term, and (ii) managed so as to achieve economic, social and employment benefits and contribute to the availability of food supplies", and also that "the fishing capacity of fleets is such that fleets are economically viable but do not overexploit marine stocks".

Fishery management organisations are publicly committed to sustainability and M1.3 is met.

M1.4 Fishery management organisations are legally empowered to take management actions.

In EU member states fisheries management is generally carried out under the national legislation arising from the implementation and/or transposing of EU regulations, in particular but not limited to Regulation (EU) No 1380/2013. In Denmark the key legislation implementing the CFP and guiding fisheries management is the Fisheries Act (No. 978 of 2008, as amended). The primary legal instrument empowering fisheries management in Norway is the Marine Resources Act of 6 June 2008 (no. 37). In the UK the primary fisheries legislation is the Fisheries Act 2020; but also the Marine and Coastal Access Act 2009, and the regulations put in place by the devolved administrations.

Fishery management organisations are legally empowered to take management actions, and M1.4 is met.

M1.5 There is a consultation process through which fishery stakeholders are engaged in decision-making.

The main mechanism for the consultation of stakeholders within the EU is the North Sea Advisory Council (NSAC). The NSAC "is an interdisciplinary stakeholder-led organisation that takes a regional approach to provide the European Commission and EU countries…with recommendations…on the management of North Sea fish stocks on behalf of the fisheries sector, environmental and other stakeholders" (NSAC 2023).

Norwegian fisheries management engages with industry and other stakeholders via the Advisory Meeting for Fisheries Regulations. The Directorate of Fisheries proposes domestic regulations, and subsequently stakeholders such as fishermen's associations, industry, trade unions, local authorities, environmental organisations and the Sami parliament are consulted during one or more Advisory Meetings (FAO 2023).

There is a stakeholder consultation process in place, and M1.5 is met.

M1.6 The decision-making process is transparent, with processes and results publicly available.

All of the information used to produce this MarinTrust assessment report was freely available online. The fisheries management decision-making process is primarily guided by the ICES advice, the basis for and outcomes of which are made available via the ICES website. Decisions and outcomes at the EU level are published on the EC website and elsewhere. Information regarding Norwegian fisheries management decisions is published on the Directorate of Fisheries website (DoF 2023).

The decision-making process is transparent, and M1.6 is met.

References

APPG (2020). Who's who in UK fisheries management. https://www.fisheriesappg.org/blog/2020/8/11/whos-who-in-uk-fisheries-management

Danish Fisheries Act, 2008, amended to 2017. https://faolex.fao.org/docs/pdf/den134943original.pdf

Directorate of Fisheries (2015). The Marine Resources Act, English translation. https://www.fiskeridir.no/English/Fisheries/Regulations/The-marine-resources-act

Directorate of Fisheries (2019). Vision, objective, roles and areas of operation. https://www.fiskeridir.no/English/About-the-directorate/Objective-and-roles

Directorate of Fisheries (2023). Website root page. https://www.fiskeridir.no/English/Fisheries

EC (2018). Common Fisheries Policy. https://ec.europa.eu/oceans-and-fisheries/policy/common-fisheries-policy-cfp_en

FAO 2023. Fishery and Aquaculture Country Profiles. Norway. Country Profile Fact Sheets. Fisheries and Aquaculture Division. https://www.fao.org/fishery/en/facp/162?lang=en

Fisheries Act (2020). https://www.legislation.gov.uk/ukpga/2020/22/contents/enacted

Government.no (2023). "Department for Fisheries" summary page, https://www.regjeringen.no/en/dep/nfd/organisation/Departments/department-of-fisheries-and-aquaculture-/id706781/

ICES (2022). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

ICES (2023a). Who we are. https://www.ices.dk/about-ICES/who-we-are/Pages/Who-we-are.aspx

ICES (2023b). Latest Advice. https://www.ices.dk/advice/Pages/Latest-Advice.aspx

Marine and Coastal Access Act (2009). https://www.legislation.gov.uk/ukpga/2009/23/contents

NSAC (2023). North Sea Advisory Council, "What We Do". https://www.nsrac.org/what-we-do/

Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. https://www.legislation.gov.uk/eur/2013/1380/contents#

Links	
MarinTrust Standard clause	1.3.1.1, 1.3.1.2
FAO CCRF	7.2, 7.3.1, 7.4.4, 12.3
GSSI	D.1.01, D.4.01, D2.01, D1.07, D1.04,

M2	**Surveillance, Control and Enforcement - Minimum Requirements**		
	M2.1	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	PASS
	M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	PASS
	M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	PASS
	M2.4	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	PASS
		Clause outcome:	PASS

M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.

Monitoring and enforcement of fisheries compliance in the EU is the responsibility of the individual member states. The agency responsible in Danish waters is the Danish Fisheries Agency (FA). The FA operates a small fleet of enforcement vessels and is responsible for regulating, monitoring and inspection of Danish fishing activities.

National control and enforcement activities are supported by the European Fisheries Control Agency (EFCA). The EFCA aims to "promote the highest common standards for control, inspection and surveillance under the CFP" (EFCA 2023). The EFCA works in conjunction with the European Border and Coast Guard Agency and the European Maritime Safety Agency to support the various national agencies carrying out coastguard functions.

There are organisations established with responsibility for monitoring compliance, and M2.1 is met.

M2.2 There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.

A framework of sanctions is in place as set out in the CFP legislation and transposed into Danish national law. Sanctions potentially include suspension of fishing licence, fines, confiscation of catch and/or equipment, and imprisonment. These are set out in Chapter 23 of the Fisheries Act 2008, as amended. Additionally, as noted in M2.3 below, the CFP establishes a points-based system for serious breaches of fishery regulations, which can ultimately lead to the disqualification of individuals from eligibility for subsidies and may affect licence conditions.

There is a framework of sanctions set out in the key fisheries legislation, and M2.2 is met.

M2.3 There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.

The most recent summary from the Danish Fisheries Agency covering control and enforcement, published in 2022 (FA 2022), reports that in 2021, 2,342 inspections were carried out on vessels or landings at ports, and 427 inspections were conducted on vessels at sea. This represented a return to relatively normal inspection rates after reduced coverage in 2020 due to Covid.

EU regulations state that serious violations of the CFP should lead to the accumulation of 'points' which, when collected in sufficient quantities, render the individual responsible unable to claim subsidies and may affect the terms of their fishing licence. The EU Commission has previously criticised Denmark for failing to apply the points rules correctly, in response to which the FA prepared a new administrative basis for the correct administration of the system. In 2021 a total of 427 cases were evaluated to determine whether points should be awarded, and in 15 of those cases this was found to be the appropriate course of action (FA 2022).

Throughout the compilation of this MT assessment report, no evidence was encountered suggesting widespread non-compliance in the fishery, and available evidence suggests a robust and focussed control and enforcement regime is in place. M2.3 is met.

M2.4 Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.

Compliance with laws and regulations is monitored through the use of at-sea and portside inspections, e-logbooks, landings certificates, sales notes, VMS, designated ports, and inspections throughout the supply chain. Control efforts are targeted using a risk-based model, which ensures that inspections and other enforcement activity is focussed in areas where low levels of compliance have been detected in the past. Control targets are set each year, expressed as a degree of regulatory compliance, and thus control is primarily considered a means to encourage fishers to change behaviour rather than an end in itself (FA 2022).

Compliance is actively monitored through a wide range of measures, and M2.4 is met.

References

Danish Fisheries Act, 2008, amended to 2017. https://faolex.fao.org/docs/pdf/den134943original.pdf

EFCA (2023). Mission and Strategy. https://www.efca.europa.eu/en/content/objectives-and-strategy

FA (2022). Om Fiskeristyrelsen Årsrapport (Danish Fisheries Agency annual report) 2021. https://fiskeristyrelsen.dk/fileadmin/user_upload/Fiskeristyrelsen/Erhvervsfiskeri/Kontrol/AArsrapport/AArsrapport_2021.pdf

FA (2023). Control. https://fiskeristyrelsen.dk/erhvervsfiskeri/kontrol

Links	
MarinTrust Standard clause	1.3.1.3
FAO CCRF	7.7.2
GSSI	D1.09

CATEGORY A SPECIES

The four clauses in this section apply to Category A species. Clauses A1 - A4 should be completed for **each** Category A species. If there are no Category A species in the fishery under assessment, this section can be deleted. A Category A species must meet the minimum requirements of all four clauses before it can be recommended for approval. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. The species must achieve a pass rating against all requirements to be awarded a pass overall. **If the species fails any of these clauses it should be re-assessed as a Category B species.**

Species Name	**Sprat in Division 4 and Subarea 3a**	
A1	**Data Collection - Minimum Requirements**	
A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
	Clause outcome:	PASS

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

Catch data are available for sprat by area and country of landing. In 2022, 100% of the catch was taken by industrial trawlers and none by purse seiners (ICES 2023). The majority of catch is consistently taken in Division 4b, with smaller amounts taken in 4c and 3a, and very little catch in 4a. Catch data prior to 1996 are considered unreliable due to the uncertainty of herring bycatch rates; however since that time catch sampling has improved significantly and the proportion of herring bycatch is well understood, at the fishery-wide level but also by month and square (ICES 2022). The majority of sprat in Division 4 and Subarea 3a (80-85%) is caught by Denmark (ICES 2022).

Landings data are collected and fishery-wide removals of sprat are known, therefore A1.1 is met.

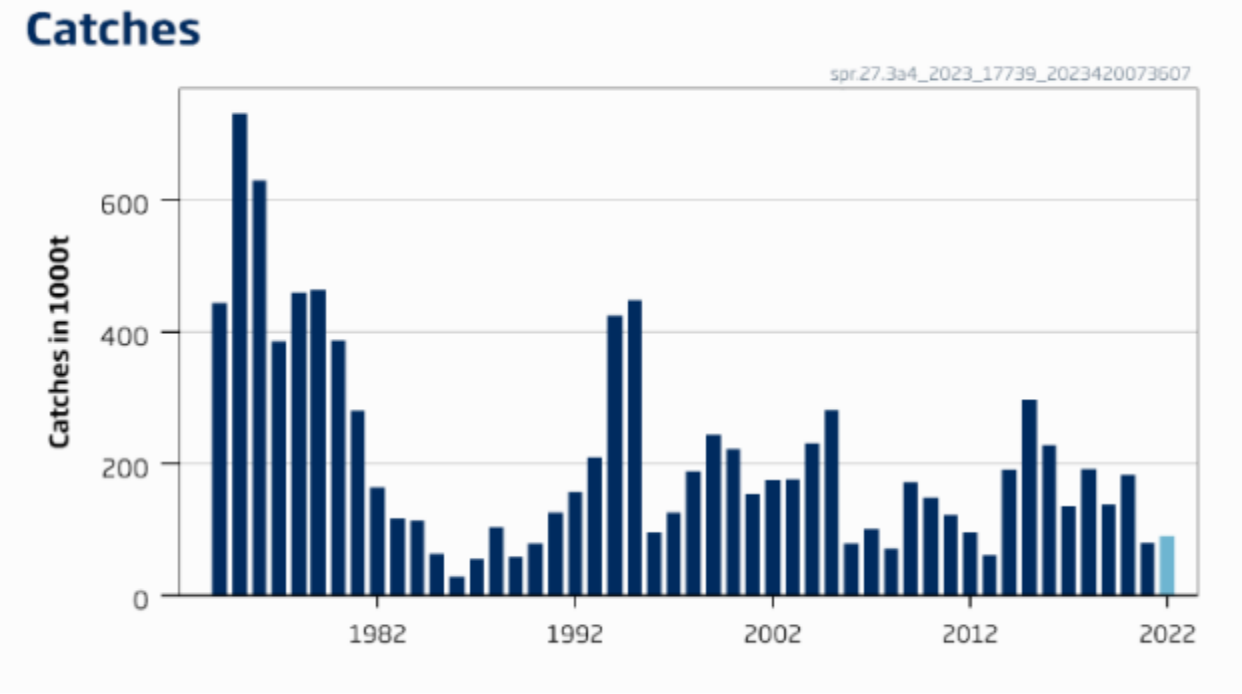


Figure 1 – Sprat in Subarea 4 and Division 3a. Total international catch by year (ICES 2023)

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

A substantial quantity of supporting information is collected and informs the sprat stock assessment. As described in the 2022 HAWG report (ICES 2022), this includes:

- Data from catch sampling, including species composition; length and age-length sampling; and the genetic analyses and otolith sampling which led to the merging of the advice for the two sprat management units in 2018.
- International Bottom Trawl Surveys (IBTS) in Quarter 1 (Q1) and Q3. The IBTS Q1 data for 1975-present and IBTS Q3 data for 1991-present provide, amongst other information, and indication of sprat recruitment rates, and are included in the stock assessment process.
- The North Sea Herring and Pelagic Ecosystem Survey (HERAS) is a hydroacoustic survey producing abundance indices for age-1, age-2 and age-3 sprat, and HERAS data for 2003-present is incorporated into the stock assessment.
- Weight-at-age and maturity-at-age data is also generated by the surveys.

The ICES documentation does not include any indication that gaps in information are the cause of significant uncertainty, and A1.2 is met.

References

ICES (2022). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

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

Links

MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	**Stock Assessment - Minimum Requirements**		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
	A2.4	The assessment is subject to internal or external peer review.	PASS
	A2.5	The assessment is made publicly available.	PASS
		Clause outcome:	PASS

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

A stock assessment is conducted annually by the ICES Herring Assessment Working Group for the Area South of 62°N (HAWG). The most recent assessment was conducted in 2023, and produced catch advice which was published in April 2023 (ICES 2023). The stock assessment was an age-based analytical assessment with quarterly time-steps. The input data for the model included commercial catch data, age and length frequencies from catch sampling, three survey indices (see A1.2), maturity estimated from one of the surveys, and natural mortalities from the multispecies model which accounts for the role of sprat as an important prey species (ICES 2023). During the 2018 benchmark analysis of the stock assessment process, it was decided to merge what had previously been two stocks (i.e. North Sea and Skagerrak-Kattegat) into a single assessment and management unit. This reflected the available evidence at that time, including survey results, genetic studies, catch data, otolith shape analysis, and environmental drivers (ICES 2018).

A stock assessment which incorporates all landings data and takes into account sprat biology and ecology is conducted annually, and A2.1 is met.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

Biomass-based target and limit reference points have been established for the stock, and an indication of the size of the sprat population relative to these reference points is provided in the ICES catch advice. The reference points are shown in the table below; the target reference points MSY $B_{escapement}$ and B_{pa} are set at 125,000t, and the limit reference point B_{lim} is set at 94,000t.

Table 1 – Sprat in Subarea 4 and Division 3a. Reference points, values, and their technical basis. All weights in tonnes (ICES 2023).

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{escapement}$	125 000	B_{pa}	ICES (2018a)
	F_{cap}*	0.69	F_{cap} is the upper limit on exploitation rates when biomass is greater than MSY $B_{escapement}$ that has a less than 5% risk of causing the stock to decline below B_{lim} in the long term	ICES (2019)
	MSY $B_{trigger}$	Not defined		
	F_{MSY}	Not defined		
Precautionary approach	B_{lim}	94 000	The breakpoint of the hockey-stick relationship	ICES (2018a)
	B_{pa}	125 000	$B_{pa} = B_{lim} * e^{(\sigma * 1.645)}$, where $\sigma = 0.173$ is estimated from assessment uncertainty in the terminal year	ICES (2018a)
	F_{lim}	Not defined		
	F_{pa}	Not defined		
Management plan	SSB_{MGT}			
	F_{MGT}			

* Not used as a reference point but used in ICES MSY approach for stocks of short-lived species.

The 2023 stock assessment projected SSB in 2023 to be 206,581t, more than double the limit reference point. The 2023 catch advice states "spawning stock size is above MSY $B_{escapement}$, B_{pa}, and B_{lim}" (ICES 2023).

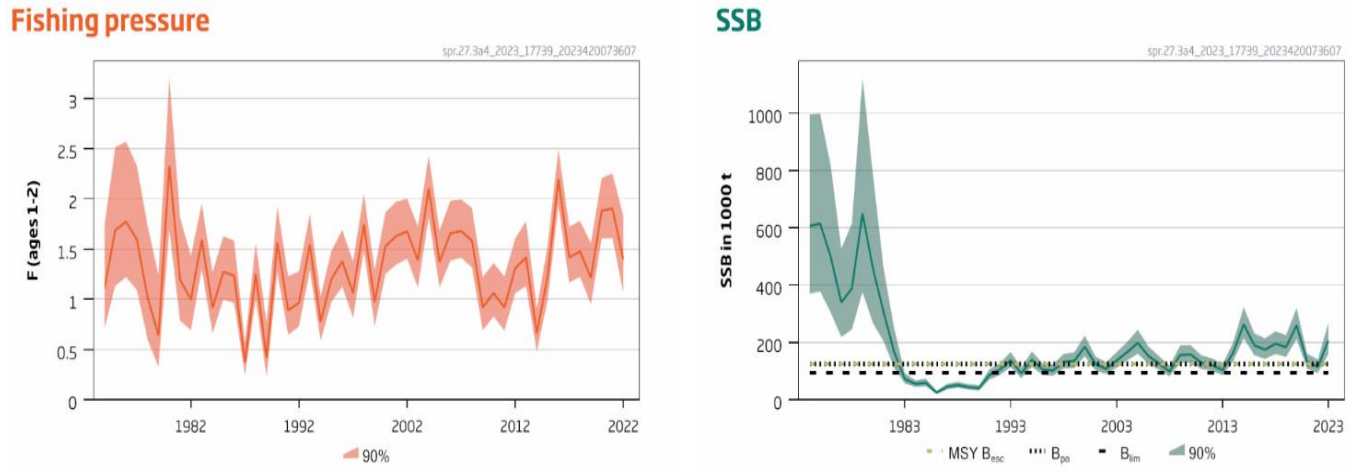


Figure 2 – Sprat in Subarea 4 and Division 3a. Estimated fishing mortality (left) and estimated SSB (right). SSB is show relative to current reference points; there are currently no fishing mortality reference points established for the stock (ICES 2023).

The annual stock assessment produces an estimate of the current status of the stock relative to established target and limit reference points, and A2.2 is met.

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

The annual stock assessment produces a recommendation for the maximum appropriate quantity of fishery removals each year, as published in the catch advice. The 2023 catch advice states that "ICES advises that when the MSY approach is applied, catches

in the period from 1 July 2023 to 30 June 2024 should be no more than 143,598t" (ICES 2023). The catch advice also provides a summary of alternative potential catch scenarios and their likely outcomes, as shown in the table below.

Table 2 – Sprat in Subarea 4 and Division 3a, annual catch scenarios. All weights are in tonnes (ICES 2023).

Basis	Total catch (July 2023–June 2024)	F_{total} (July 2023–June 2024)	SSB (2024)	% SSB change*	% TAC change**	% advice change
ICES advice basis						
$SSB_{2024} \geq MSY\ B_{escapement}$ with F_{cap}	143 598	0.69	250 950	21	109	109
Other scenarios						
F = 0	0	0.00	332 077	61	−100	−100
F = 0.4	91 533	0.40	279 954	36	33	33
F = 0.8	160 881	0.80	241 448	17	134	134
F = 1.0	189 376	1.00	225 938	9	176	176
$SSB_{2024} = B_{pa}$	394 098	4.143	125 000	-39	474	474

* SSB in July 2024 relative to SSB in July 2023.
** The advice value (July 2023–June 2024) relative to the sum of the TACs (68 690 tonnes) for July 2022–June 2023 in Subarea 4 and Division 3.a.

The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status, and A2.3 is met.

A2.4 The assessment is subject to internal or external peer review.

ICES advice is produced according to ten Advice Principles. Principle 7 is that "To ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice, all analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests through one-off reviews" (ICES 2023a). In practice, this means that individual ICES documents are subjected to peer review, but also that recurrent advice, such as the stock assessments and catch recommendations for sprat, are subjected to periodic benchmarking to ensure the methodologies underpinning them remain appropriate. The stock assessment for sprat was most recently benchmarked in 2018 (ICES 2018).

Stock assessments are subject to peer review, and A2.4 is met.

A2.5 The assessment is made publicly available.

The stock assessment process and outcomes are made publicly available on the ICES website, including input data, Working Group meeting reports, and the results of the analyses. All of the information required to complete this assessment was freely available online, with the exception of the 2022 catch composition data provided by the applicant which would have been available from the Danish Fisheries Agency upon request.

Key sources of information on the sprat stock assessment process include the sprat benchmarking workshop report (ICES 2018), the Herring Assessment Working Group report (ICES 2022), and the sprat stock annex (ICES 2019). Additionally, stock assessment graphs and raw data can be obtained in database format from the ICES data portal (ICES 2023b).

Stock assessments and their input data and results are made publicly available, and A2.5 is met.

References

ICES (2018). Benchmark Workshop on Sprat (WKSPRAT 2018). ICES WKSPRAT Report 2018, 5–9 November 2018. ICES HQ, Copenhagen, Denmark. ICES CM 2018/ACOM:35. 60 pp. https://doi.org/10.17895/ices.pub.19291145

ICES (2019). Stock Annex: Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18623360.v1

ICES (2022). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

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

ICES (2023a). Guide to ICES advisory framework and principles. In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, section 1.1. https://doi.org/10.17895/ices.advice.22116890 ICES (2023b). Stock assessment graphs & data. http://standardgraphs.ices.dk/stockList.aspx
Links

MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	**Harvest Strategy - Minimum Requirements**		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	PASS
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	PASS
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	PASS
		Clause outcome:	PASS

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

Fishing mortality of sprat is restricted through the use of separate TACs for Subarea 4 and Division 3a. Based on a historical approach, the ICES-recommended total TAC is divided between the two regions by apportioning 18.3% to Division 3a and the remainder to Subarea 4. The final TACs are agreed during an international consultation between the UK, EU and Norway prior to the start of the sprat fishing season. The most recent of these occurred on the 16th May 2023 (Scottish Government 2023), as a result of which the 2023 combined TAC was set in line with ICES advice at 143,598t.

As evidenced by the table in A3.2, the TAC system is generally effective at restricting total fishery removals of sprat to the level recommended by ICES. A3.1 is met.

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

Catch advice for sprat in Subarea 4 and Division 3a has been provided for a single stock since 2019. Separate TACs are set for sprat in Subarea 4 and sprat in Division 3a; however, since 2020 the total of the two TACs has been in line with the ICES advice for the combined stock. Catches in 2019 – 2021 were lower than the ICES advice. Preliminary catch data for 2022 (which will ultimately include catches up to 30 June 2023) suggest that the advice will be exceeded. At the present time, the preliminary total catch (70,142t) is less than 10% greater than the ICES advice (68,690t). Stock biomass is currently above the limit reference point, and therefore the current level of excess catch is acceptable as per the MT whole fish assessment guidance.

Quota can be transferred between years, and although this does not appear to have resulted in excess catch frequently, it may be the reason for 2022 catches exceeding the ICES advice. In other fisheries (e.g. sandeel) this “quota flex” has sometimes been the cause of catches substantially exceeding the ICES advice, and surveillance assessments of this fishery should ensure this is not repeated with sprat. However, at the present time there is no evidence that quota flex is causing sprat catches to substantially exceed the advice.

Table 3 – Sprat in Subarea 4 and Division 3a, ICES advice, TAC, and catches for each fishing season. Prior to 2019 sprat in this area was managed as two separate stocks. Note that Official Catches are for the calendar year, whereas the ICES Advice, Agreed TAC, and ICES Catches are for the period 1 July – 30 June; therefore it is most appropriate to compare these three values when considering whether the advice has been followed (ICES 2023).

Year	ICES advice	Predicted catch corresponding to advice*	Agreed TAC*	Official catches^	ICES catches*
2019	MSY approach, F_{cap} (catch)	≤ 138 726	151 940***	151 492	134 931
2020	MSY approach, F_{cap} (catch)	≤ 207 807	207 807	183 401	162 123
2021	MSY approach, F_{cap} (catch)	≤ 106 715	106 715	82 134**	80 104
2022	MSY approach, F_{cap} (catch)	≤ 68 690	68 690	90 038**	70 142^^
2023	MSY approach, F_{cap} (catch)	≤ 143 598			

* For 1 July to 30 June. Catches in coastal areas of Norway are excluded.
** Catches are preliminary.
*** The sum of the TACs for July 2019–June 2020 in Subarea 4 and from January 2019 to June 2020 in Division 3.a.
^ Calendar year.
^^ Catches are preliminary and include data until 1 March 2023.

Since the merging of sprat in Subarea 4 and Division 3a into a single stock, total catches have only exceeded the ICES advice in one year (2022), and then by less than 10%. As SSB is currently estimated to be above the limit reference point, A3.2 is met.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

Sprat biomass has not been estimated to be below the limit reference point for at least 10 years (see graph in A2.2), and certainly not since the merging of the stocks in 2018. Catch reflects the ICES advice, which itself is the result of applying the MSY approach. Therefore, the advice (and therefore catches) are reduced when SSB is lower. In other fisheries where SSB is not projected to remain above the limit reference point should any fishing occur, ICES has recommended that fishery removals be reduced to zero (e.g. Sandeel in Divisions 4b-c, Sandeel Area 1r, in 2022 (ICES 2022)). There is no evidence to suggest this would not also occur in the sprat fishery, and further there is no evidence to suggest the TAC would not continue to be set in line with the advice. Therefore A3.3 is met.

References

ICES (2022). Sandeel (*Ammodytes spp*.) in divisions 4.b and 4.c, Sandeel Area 1r (central and southern North Sea, Dogger Bank). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, san.sa.1r, https://doi.org/10.17895/ices.advice.10000

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

Scottish Government (2023). United Kingdom, European Union and Norway – North Sea sprat fisheries consultations: agreed record for 2023. https://www.gov.scot/publications/united-kingdom-european-union-and-norway-north-sea-sprat-fisheries-consultations-agreed-record-for-2023/

Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	PASS

Clause outcome:	PASS

A4.1 The stock is at or above the target reference point, OR IF NOT:

The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:

The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

As noted in A2.3, in the most recent stock assessment, conducted in 2023, sprat SSB was estimated to be substantially above the target and limit reference points (ICES 2023). Therefore the stock meets the first of the three potential requirements of this clause, and A4.1 is met.

References

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

Links	
MarinTrust Standard clause	**1.3.2.1.4**
FAO CCRF	**7.2.1, 7.2.2 (e)**
GSSI	**D6 01**

Species Name	Herring in Subarea 4 and Divisions 3a and 7d, Autumn Spawners (NSAS herring)

A1	Data Collection - Minimum Requirements		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
		Clause outcome:	PASS

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

Landings data are available for herring caught throughout the ICES area. Management of NSAS herring is complicated by the number of different fisheries in which it is caught, and also by the coexistence of several other partially overlapping herring stocks. Most significant of these is the Western Baltic Spring-Spawning (WBSS) herring stock. During the NSAS stock assessment, the Herring Assessment Working Group (HAWG) simultaneously considers four fleets across the NSAS distribution (ICES 2022):

- Fleet A: The directed herring fishery for human consumption in the Subarea 4 and Division 7d, plus herring bycatch in the Norwegian reduction fishery. This fleet almost exclusively catches NSAS herring, but takes some WBSS herring as bycatch in the eastern part of Subarea 4.
- Fleet B: Herring bycatch by the industrial reduction fleet operating in Subarea 4. This bycatch is assumed to be exclusively NSAS herring. This fleet represents part of the fishery covered by this MT assessment.
- Fleet C: The directed herring fishery for human consumption in Division 3a, including the small meshed Swedish fishery. The catch by Fleet C is a mixture of NSAS and WBSS herring.
- Fleet D: Bycatch of herring in the Danish small-meshed fisheries targeting sprat, Norway pout, and sandeel. The catch by Fleet D is a mixture of NSAS and WBSS herring, in a ratio of roughly 3:1 NSAS to WBSS (ICES 2022a).

The table below shows the estimated proportion of NSAS herring catch taken by each of these Fleets in 2021. Bycatch in the sprat, Norway pout and sandeel fisheries represented around 2.4% of the total NSAS landings, and therefore while the quantity of herring taken in the sprat fishery is significant relative to the amount of sprat taken, it is quite small compared to the scale of the targeted herring fishery.

Table 4 – NSAS herring, catch distribution by fleet and area in 2021 as estimated by ICES (ICES 2022)

Area where NSAS are caught	Fleet	Fishery	NSAS 2021 catches (tonnes)
North Sea fisheries (Subarea 4, Division 7.d)	A	Directed herring fisheries	352 320
	B	Bycatches of herring	8788
Division 3.a	C	Directed herring fisheries	4140
	D	Bycatches of herring	103

Herring catches throughout Subarea 4 and Divisions 3a and 7d are summarised by fleet, area and stock in a table dubbed the "Wonderful Table", which is published in the ICES catch advice (ICES 2022). The HAWG report states that "annual misreporting and unallocation of catches are regarded as a minor issue in the [NSAS] herring fishery. In 2021, no unallocated catches were reported" (ICES 2022b).

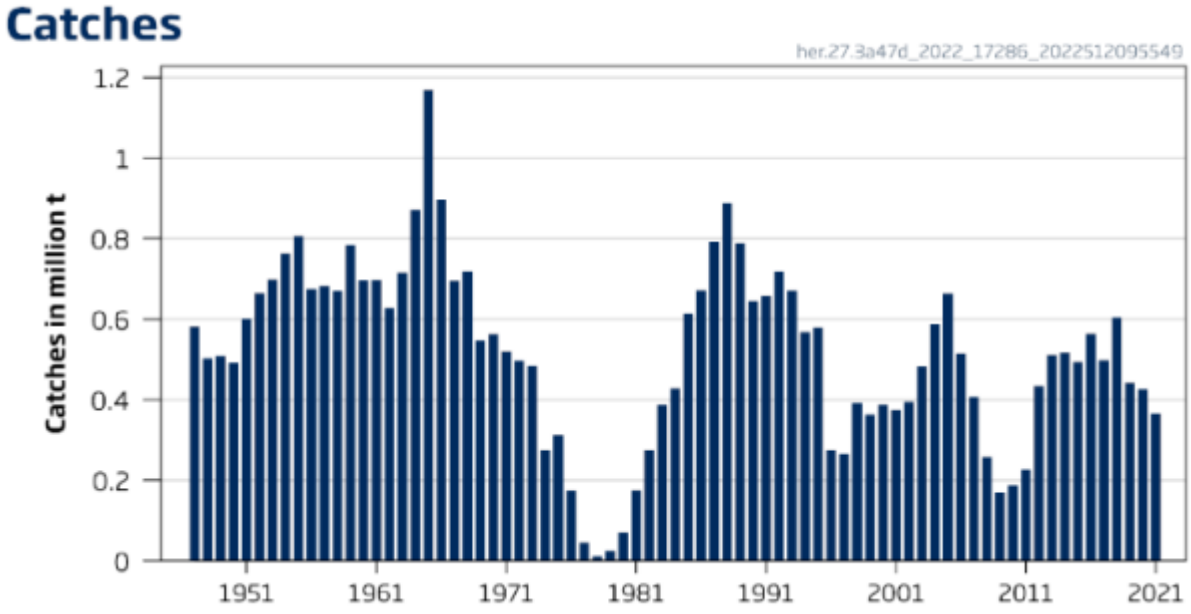


Figure 3 – NSAS herring, total annual catches (ICES 2022)

Landings data are collected such that fishery-wide removals of the species are known, and A1.1 is met.

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

The stock assessment process is supported by the collection and analysis of a range of additional information, as detailed in the HAWG report (ICES 2022b). This includes:

- Data from commercial catch sampling, including numbers, weight and catch at age, and relative age composition, by area and by quarter. Catch sampling covers 81% of the total catch, and 31 of the 108 reported métiers.
- Results from two acoustic surveys: the North Sea Herring and Pelagic Ecosystem Survey (HERAS) and the MSHAS survey in the West of Scotland and the Malin Shelf. The results of these surveys provide spatial distributions of herring, abundance by number and biomass-at-age by strata, and distributions of mean weigh- and proportion mature-at-age.
- Results of the International Herring Larvae Surveys in the North Sea (IHLS), which monitor larval abundance and distribution in key regions. The 2021 inter-benchmarking resulted in the direct incorporation of the Larvae Abundance Index (LAI) produced by these surveys into the stock assessment model.
- The International Bottom Trawl Survey in Quarter 1 (IBTS-Q1), which provides abundance estimates for herring larvae and also a time series for adult herring abundance in the North Sea.

There does not appear to be any indication in the ICES documentation to suggest that information gaps are the cause of any significant uncertainty in assessment outcomes. Sufficient additional information is collected to support an estimation of stock status, and A1.2 is met.

References

ICES (2022). Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.3a47d, https://doi.org/10.17895/ices.advice.19447985

ICES (2022a). Herring (*Clupea harengus*) in subdivisions 20-24, spring spawners (Skagerrak, Kattegat, and western Baltic). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.20-24, https://doi.org/10.17895/ices.advice.19447964

ICES (2022b). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

Links

MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2

FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	**Stock Assessment - Minimum Requirements**		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	PASS
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
	A2.4	The assessment is subject to internal or external peer review.	PASS
	A2.5	The assessment is made publicly available.	PASS
		Clause outcome:	PASS

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

A stock assessment is conducted annually by the ICES HAWG, most recently in 2022 (ICES 2022). The HAWG uses an age-based analytical assessment which incorporates catch data in the model and forecast. The input for the model included commercial catches disaggregated by fleets and split between NSAS herring and WBSS herring, as discussed elsewhere in this MT assessment. The stock assessment also incorporated five survey indices, annual maturity data from the HERAS survey (described in A1.2), and natural mortality estimates from the North Sea Stochastic Multi-Species (SMS) model. The stock assessment was inter-benchmarked in 2021, at which time the reference points were updated.

A stock assessment is conducted every year, and takes into account all fishery removals and the characteristics of the species, and A2.1 is met.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

Biomass- and fishing mortality-based reference points have been established for the stock, and were updated in 2021 (ICES 2021). Two sets of reference points have been established: target reference points based on the MSY approach, and target and limit reference points based on the precautionary approach. ICES catch advice is provided based on the MSY approach. A table summarising the reference points is provided below.

Table 5 – NSAS herring, reference points and their technical bases. Weights in tonnes (ICES 2022).

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	1 232 828	50th percentile of biomass at F_{MSY}	ICES, 2021a
	F_{MSY}	0.31	Stochastic simulations (EqSim) with a segmented regression stock–recruitment curve fitted to data from the low productivity period (2002–2020) assuming a break-point at B_{lim}	ICES, 2021a
Precautionary approach	B_{lim}	874 198	Breakpoint in the segmented regression of the stock–recruitment time-series (1947–2016, excluding the recovery period 1979–1990)	ICES, 2021a
	B_{pa}	956 483	$B_{pa} = B_{lim} \times \exp(1.645 \times \sigma)$ with $\sigma \approx 0.06$, based on the σ from the terminal assessment year	ICES, 2021a
	F_{lim}	0.40	The F that on average leads to B_{lim}	ICES, 2021a
	F_{pa}	0.31	The maximum F that provides a 95% probability for SSB to be above B_{lim} (F_{P05} with advice rule [AR])	ICES, 2021a

The 2022 catch advice included an estimation of SSB in 2022, at 1,240,164t. Fishing mortality (F) in 2022 was estimated to be 0.27. This places SSB above the target reference point, and F below the target reference point. The graphs below show the

current and historical fishing mortality and stock biomass; however, the reference points marked on these graphs are those established in 2021.

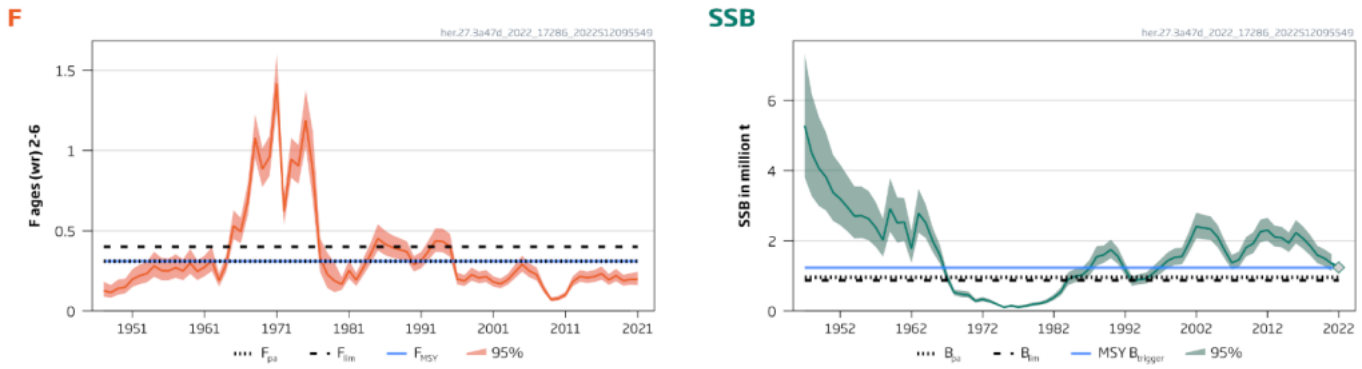


Figure 4 – NSAS herring, fishing mortality and SSB relative to current reference points. The grey diamond in the SSB graph is the projected SSB at spawning time 2022 (ICES 2022).

The stock assessment provides an indication of the status of the stock relative to target and limit reference points, and A2.2 is met.

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

ICES produces annual catch advice for the NSAS stock which is based on the results of the stock assessment. The most recent advice was published in June 2022 (ICES 2022). The headline recommendation of the advice was for catches in 2023 to be no more than 414,886t, in line with the MSY approach. This recommendation included a breakdown of the anticipated share of the catch between the four fleets described in A1.1. Additionally, the ICES catch advice provides a range of other potential catch scenarios and their likely impacts on stock biomass should they be implemented. The range of scenarios, including the final recommendation, is provided in the table below.

Table 5 – NSAS herring, annual catch scenarios. All weights in tonnes (ICES 2022)

Basis	F values by fleet and total						NSAS catches by fleet				Total stock catch	Biomass*				% Advice change ^
	A-fleet $F_{ages\,(wr)\,2-6}$	B-fleet $F_{ages\,(wr)\,0-1}$###	C-fleet $F_{ages\,(wr)\,1-3}$	D-fleet $F_{ages\,(wr)\,0-1}$	Total $F_{ages\,(wr)\,2-6}$	Total $F_{ages\,(wr)\,0-1}$	A-fleet	B-fleet	C-fleet#	D-fleet#		SSB 2023	SSB 2024**	%SSB change ***	A-fleet **** %TAC change	
ICES advice basis																
MSY approach (F_{MSY} * SSB_{2023}/MSY $B_{trigger}$)	0.28	0.05	0	0	0.28	0.05	403 813	11 073	0	0	414 886	1 117 094	1 005 280	−9.9	−5.6	−22
Other scenarios																
$F = F_{MSY}$	0.31	0.06	0	0	0.31	0.06	438 848	12 175	0	0	451 023	1 094 001	964 099	−12	2.60	−15
F = 0	0	0	0	0	0	0	0	0	0	0	0	1 372 327	1 548 998	11	−100	−100
No change in TAC^^	0.30	0.05	0.01	0.00	0.31	0.07	427 628	11 821	8 885	330	448 664	1 096 000	962 258	−12	0	−16
$F = F_{2022}$	0.27	0.05	0	0	0.27	0.05	391 016	10 677	0	0	401 693	1 125 489	1 020 557	−9.2	−8.6	−25
F_{pa}	0.31	0.06	0	0	0.31	0.06	438 848	12 175	0	0	451 023	1 094 001	964 099	−12	2.60	−15
F_{lim}	0.40	0.07	0	0	0.40	0.08	540 487	15 533	0	0	556 020	1 026 066	849 918	−17	26	4.50
$SSB_{2023} = B_{pa}$	0.50	0.09	0	0	0.50	0.09	642 407	19 170	0	0	661 577	956 483	743 240	−23	50	24
$SSB_{2023} = B_{lim}$	0.63	0.11	0	0	0.63	0.12	760 120	23 763	0	0	783 883	874 198	629 634	−30	78	47
SSB_{2023} = MSY $B_{trigger}$	0.15	0.03	0	0	0.15	0.03	224 496	5 817	0	0	230 313	1 232 828	1 230 894	−0.6	−48	−57
MSY approach^^ with $F_{ages\,0-1}$ = 0.05 target ##	0.28	0.05	0	0	0.28	0.05	403 880	10 443	0	0	414 323	1 117 093	1 005 463	−9.9	−5.6	−22
MSY approach with C-fleet catches and C- and D-fleet TAC transfer	0.29	0.07	0.00	0	0.29	0.07	419 564 ^^^	14 160	403	0	434 127	1 106 309	984 896	−11	−1.9	−18
MSY approach with C- and D-fleet catches and no C- and D-fleet TAC transfer	0.27	0.05	0.01	0.00	0.28	0.06	395 645	10 821	8 885	330	415 681	1 117 074	999 916	−9.9	−7.5	−22

* For autumn-spawning stocks, the SSB is determined at spawning time and is influenced by fisheries and natural mortality between 1 January and spawning.
** Assuming same catch scenario in 2024 as in 2023.
*** SSB (2023) relative to SSB (2022).
**** A-fleet catches (2023) relative to TAC 2022 for the A-fleet (427 628 tonnes).
^ Advice value 2023 relative to advice value 2022, using catches for all fleets (532 183 tonnes).
^^ Based on the agreed TACs for A-, C-, and D-fleets in 2022, the average proportion in 2019–2021 of NSAS herring in the catch (for A-, C-, and D-fleets), no C- and D- fleet TAC transfer to the North Sea, and the average uptake in 2019–2021 of the bycatch quota (for B- and D-fleets).
^^^ Includes a C-fleet transfer of 23 885 t
# The catch for C- and D-fleets are set to zero because of the zero catch advice given for 2023 for the western Baltic spring-spawning herring stock.
B-fleet fishing pressure set independently on change in the A-fleet fishing pressure (ICES, 2022)
Fishing pressure inclusive of catches induced by D- fleet transfer.

ICES provides a clear indication of the maximum level of fishery removals appropriate for the current and projected future stock status, and A2.3 is met.

A2.4 The assessment is subject to internal or external peer review.

ICES advice is produced according to ten Advice Principles. Principle 7 is that "To ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice, all analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests through one-off reviews" (ICES 2023). In practice, this means that individual ICES documents are subjected to peer review, but also that recurrent advice, such as the stock assessments and catch recommendations for NSAS herring, are subjected to periodic benchmarking to ensure the methodologies underpinning them remain appropriate. The stock assessment for NSAS herring was most recently inter-benchmarked in 2021 (ICES 2021).

Stock assessments are subject to peer review, and A2.4 is met.

A2.5 The assessment is made publicly available.

The stock assessment process and outcomes are made publicly available on the ICES website, including input data, Working Group meeting reports, and the results of the analyses. All of the information required to complete this assessment was freely available online, with the exception of the 2022 catch composition data provided by the applicant which would have been available from the Danish Fisheries Agency upon request.

Key sources of information on the NSAS herring stock assessment process include the North Sea herring inter-benchmarking report (ICES 2021), the Herring Assessment Working Group report (ICES 2022a), and the NSAS herring stock annex (ICES 2017). Additionally, stock assessment graphs and raw data can be obtained in database format from the ICES data portal (ICES 2023a).

Stock assessments and their input data and results are made publicly available, and A2.5 is met.

References

ICES (2017). Stock Annex: Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18622589.v2

ICES (2021). Inter-Benchmark Protocol of North Sea Herring (IBPNSHerring). ICES Scientific Reports. 3:98. http://doi.org/10.17895/ices.pub.8398

ICES (2022). Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.3a47d, https://doi.org/10.17895/ices.advice.19447985

ICES (2022a). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

ICES (2023). Guide to ICES advisory framework and principles. In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, section 1.1. https://doi.org/10.17895/ices.advice.22116890

ICES (2023a). Stock assessment graphs & data. http://standardgraphs.ices.dk/stockList.aspx

Links	
MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	**Harvest Strategy - Minimum Requirements**		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	PASS
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	PASS
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	PASS
		Clause outcome:	PASS

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

Total fishing mortality of NSAS herring is restricted through the use of a series of quotas. These include separate TACs for Divisions 4a-b; Divisions 4c & 7d; and Division 3a. Additionally, there is a limit on the total allowable quantity of bycatch in the small-meshed fisheries, which includes the Danish sprat-targeting fishery which is the subject of this MT assessment (ICES 2022). The international TACs are discussed and agreed between the EU, UK and Norway during fisheries consultations, the most recent of which occurred in late 2022. At these consultations, it was agreed that the 2023 TAC for the A-fleet would be 396,556t, and for the B-Fleet 7,716t (Scottish Government 2022). The TACs for C-Fleet and D-Fleet are negotiated and agreed via bilateral consultation between Norway and the EU (EC 2023), and led to quotas of 23,250t and 6,659t for the C and D Fleets respectively (Scottish Government 2022).

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

The ICES catch advice includes a summary of quotas recommendations, quotas, and actual catches of NSAS herring since 1987. Since 2020, catches have not exceeded TACs. Prior to 2020, catches tended to exceed the advice, in some years by a substantial amount (i.e. more than 10%) (ICES 2022). The catch advice for 2023 was to limit removals to a maximum of 414,886t; as listed in A3.1, the international TACs agreed for 2023 for all four fleets totalled 434,191t. This exceeds the recommendation, but by less than 10%.

The reason behind catch sometimes exceeding TAC is not certain. However, a TAC flexibility rule which is in place allows EU and Norway fleets to transfer up to 10% of their unused quota from one year to the next, and also to 'borrow' up to 10% of the TAC of the following year. It is possible this is the source of the excess catch in some years.

In summary, catches have only exceeded the advice by more than 10% in one of the last ten years, and while the 2023 TAC exceeds the advice, it does so by less than 10%. As SSB is currently estimated to be above the limit reference point, these catches fall within the range allowed by A3.2. As a final note, it is also relevant to clarify that the sprat-targeting fishery which is the subject of this MT assessment, is responsible for a relatively small proportion of the total NSAS herring catch.

Overall, fishery removals do not regularly exceed the advice by more than 10%, and stock biomass is estimated to be above the target reference point. A3.2 is met.

Table 6 – NSAS herring, ICES advice, TACs, official landings, and ICES catch estimates. All weights are in tonnes. Note that the values to compare when considering whether catches were in line with the ICES advice are "Predicted catch corresponding to advice" and "ICES catch of autumn spawners in 3a, 4, 7d" (ICES 2022)

Year	ICES advice	Predicted catch corresponding to advice	Agreed TAC *	B-fleet ###	ICES landings in 4, 7.d #	ICES catch in 4, 7.d ##	ICES catch of autumn spawners in 3.a, 4, 7.d
2015	2008 management plan	See scenarios	445 000	16 000	480 000	482 000	494 000
2016	2014 management strategy	555 086	518 000	13 000	559 700	559 900	563 600
2017	2014 management strategy	458 926	481 608	11 375	491 693	491 693	498 662
2018	2014 management strategy	517 891	600 588	9669	602 328	602 328	603 536
2019	ICES MSY approach	311 572	385 008	13 190	444 001	445 631	442 886
2020	ICES MSY approach	431 062	385 008	8954	424 799	427 321	426 928
2021	ICES MSY approach	365 792	356 357	7750	364 453	364 616	365 351
2022	ICES MSY approach	532 183	427 628	8174			
2023	ICES MSY approach	414 886					

* Catch in directed fishery in Subarea 4 and Division 7.d (A-fleet).
** Revision of advice given in 1995.
*** Revised in June 1996, down from 263 000 tonnes.
# Landings are provided by ICES and do not in all cases correspond to official statistics.
ICES catch includes unallocated and misreported landings, discards, and slipping. Includes catches for WBSS in the North Sea.
Bycatch ceiling up to 2012 and TAC from 2013.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

NSAS biomass has not been estimated to be below the limit reference point for over 20 years. Catch reflects the ICES advice, which itself is the result of applying the MSY approach. Therefore, the advice (and therefore catches) are reduced when SSB is lower. In other fisheries where SSB is not projected to remain above the limit reference point should any fishing occur, ICES has recommended that fishery removals be reduced to zero (e.g. Sandeel in Divisions 4b-c, Sandeel Area 1r, in 2022 (ICES 2022a)). There is no evidence to suggest this would not also occur in the NSAS herring fishery, and further there is no evidence to suggest the TAC would not continue to be set in line with the advice. Therefore A3.3 is met.

References

EC (2023). Fisheries: EU and Norway conclude bilateral consultations on fishing opportunities in the Skagerrak, reciprocal access to waters and exchanges of quotas. https://oceans-and-fisheries.ec.europa.eu/news/fisheries-eu-and-norway-conclude-bilateral-consultations-fishing-opportunities-skagerrak-reciprocal-2023-03-17_en

ICES (2022). Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.3a47d, https://doi.org/10.17895/ices.advice.19447985

Scottish Government (2022). European Union, Norway and the United Kingdom - fisheries consultations: agreed records 2023: Herring. https://www.gov.scot/publications/european-union-norway-and-the-united-kingdom-fisheries-consultations-agreed-records-2023/pages/herring/

Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	PASS
		Clause outcome:	PASS

A4.1 The stock is at or above the target reference point, OR IF NOT:

The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:

The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

SSB in 2022 was estimated in the most recent stock assessment to be 1,240,164t, which is slightly larger than the MSY-based target reference point (MSY $B_{trigger}$, 1,232,828t) and the precautionary approach-based target reference point (B_{pa}, 956,483t). Additionally, the 2022 catch advice states that "fishing pressure on the stock is below F_{MSY} and the spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES 2022). Therefore the stock is slightly above the target reference point, and the first requirement of this clause is met.

References

ICES (2022). Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, her.27.3a47d, https://doi.org/10.17895/ices.advice.19447985

Links	
MarinTrust Standard clause	**1.3.2.1.4**
FAO CCRF	**7.2.1, 7.2.2 (e)**
GSSI	**D6 01**

CATEGORY B SPECIES

Category B species are those which make up greater than 5% of landings in the applicant raw material, but which are not subject to a species-specific research and management regime sufficient to pass all Category A clauses. If there are no Category B species in the fishery under assessment, this section can be deleted.

Category B species are assessed using a risk-based approach. The following process should be completed once for each Category B species.

If there are estimates of biomass (B), fishing mortality (F), and reference points

It is possible for a Category B species to have some biomass and fishing mortality data available. When sufficient information is present, the assessment team should use the following risk matrix to determine whether the species should be recommended for approval.

TABLE B(A) - F, B AND REFERENCE POINTS ARE AVAILABLE

Biomass is above MSY / target reference point	Pass	Pass	Pass	Fail	Fail
Biomass is below MSY / target reference point, but above limit reference point	Pass, but re-assess when fishery removals resume	Pass	Fail	Fail	Fail
Biomass is below limit reference point (stock is overfished)	Pass, but re-assess when fishery removals resume	Fail	Fail	Fail	Fail
Biomass is significantly below limit reference point (Recruitment impaired)	Fail	Fail	Fail	Fail	Fail
	Fishery removals are prohibited	**Fishing mortality is below MSY or target reference point**	**Fishing mortality is around MSY or target reference point, or below the long-term average**	**Fishing mortality is above the MSY or target reference point, or around the long-term average**	**Fishing mortality is above the limit reference point or above the long-term average (Stock is subject to overfishing)**

If the biomass / fishing pressure risk assessment is not possible

Initially, the resilience of each Category B species to fishing pressure should be estimated using the American Fisheries Society procedure described in Musick, J.A. (1999). This approach is used as the resilience values for many species and stocks have been estimated by FishBase and are already available online. For details of the approach, please refer to Appendix A. Determining the resilience provides a basis for estimating the risk that fishing may pose to the long-term sustainability of the stock. Table B(b) should be used to determine whether the species should be recommended for approval.

TABLE B(B) - NO REFERENCE POINTS AVAILABLE. B = CURRENT BIOMASS; B_{AV} = LONG-TERM AVERAGE BIOMASS; F = CURRENT FISHING MORTALITY; F_{AV} = LONG-TERM AVERAGE FISHING MORTALITY.

B > B_{av} and F < F_{av}	Pass	Pass	Pass	Fail
B > B_{av} and F or F_{av} unknown	Pass	Pass	Fail	Fail
B = B_{av} and F < F_{av}	Pass	Pass	Fail	Fail
B = B_{av} and F or F_{av} unknown	Pass	Fail	Fail	Fail
B > B_{av} and F > F_{av}	Pass	Fail	Fail	Fail
B < B_{av}	Fail	Fail	Fail	Fail
B unknown	Fail	Fail	Fail	Fail
Resilience	**High**	**Medium**	**Low**	**Very Low**

Assessment Results

Species Name		n/a
B1	Species Name	
	Table used (Ba, Bb)	
	Outcome	
References		
Links		
MarinTrust Standard clause		**1.3.2.2, 4.1.4**
FAO CCRF		**7.5.1**
GSSI		**D.5.01**

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment.

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. Where a species fails this Clause, it may be assessed as a Category D species instead, EXCEPT if there is evidence that it is currently below the limit reference point.

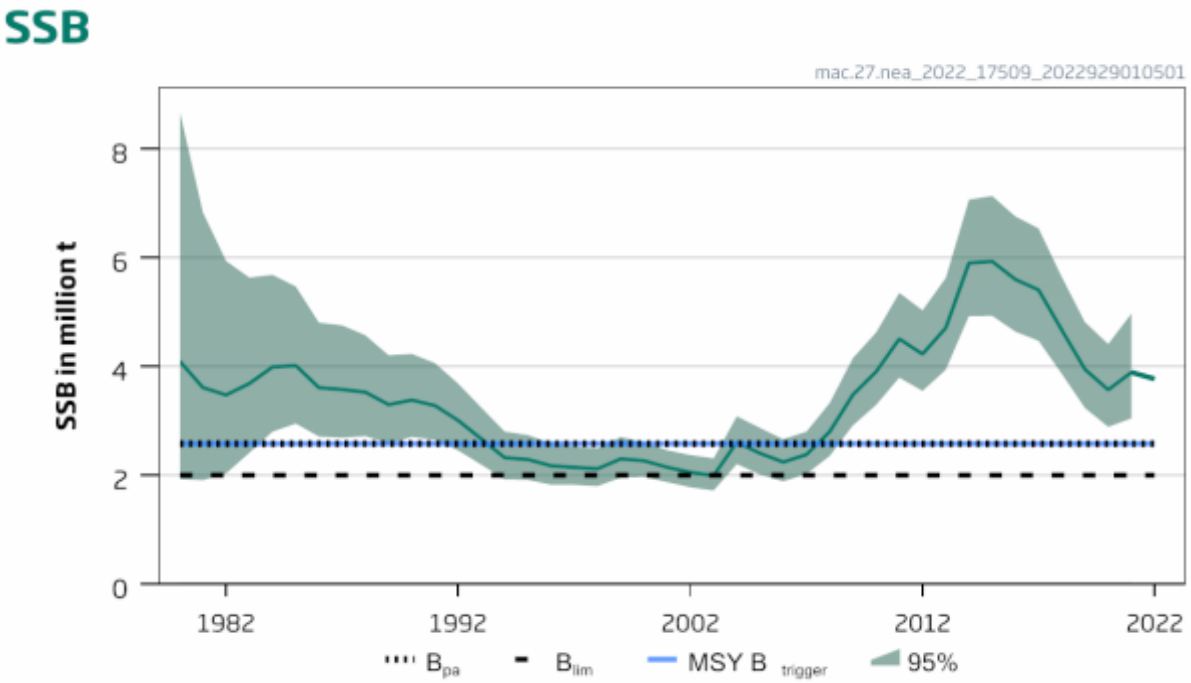
Species Name	**Mackerel in the Northeast Atlantic and Adjacent Waters**	
C1	**Category C Stock Status - Minimum Requirements**	
	C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
	Clause outcome:	PASS

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.

Mackerel in Subareas 1-8 and 14, and Division 9a (Mackerel in the Northeast Atlantic and Adjacent Waters) is subject to annual stock assessment by the ICES Working Group on Widely Distributed Stocks (WGWIDE). The most recent stock assessment was conducted in 2022 using an age-based analytical model incorporating catches in the model and forecast. Bycatch of mackerel in other fisheries, including the sprat fishery, is incorporated into the assessment process. The most recent ICES catch advice, published in September 2022 (ICES 2022), notes the existence of three spawning components within the stock, and discusses the management measures which are currently in place to protect specific components. However, while the total of international TACs is consistently higher than the level of catches recommended by ICES, there is no indication that the current stock assessment is unreliable and C1.1 is met.

C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.

The 2022 catch advice provides an indication of the current status of the stock relative to established reference points. The target reference points MSY $B_{trigger}$ and B_{pa} have been set at 2,580,000t. The limit reference point B_{lim} has been set at 2,000,000t. The catch advice included a forecast for SSB at spawning time in 2022 of 3,769,326t, substantially larger than the target and limit reference points. The advice also states that "spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES 2022). Biomass is estimated by the most recent stock assessment to be above the limit reference point, and C1.2 is met.



Mackerel in Subareas 1-8 and 14, and Division 9a. Estimated SSB relative to current reference points (ICES 2022).

References

ICES (2022). Mackerel (*Scomber scombrus*) in subareas 1-8 and 14 and division 9.a (the Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, mac.27.nea. https://ices-library.figshare.com/articles/report/Mackerel_Scomber_scombrus_in_subareas_1_8_and_14_and_in_Division_9_a_Northeast_Atlantic_and_adjacent_waters_/19772392

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

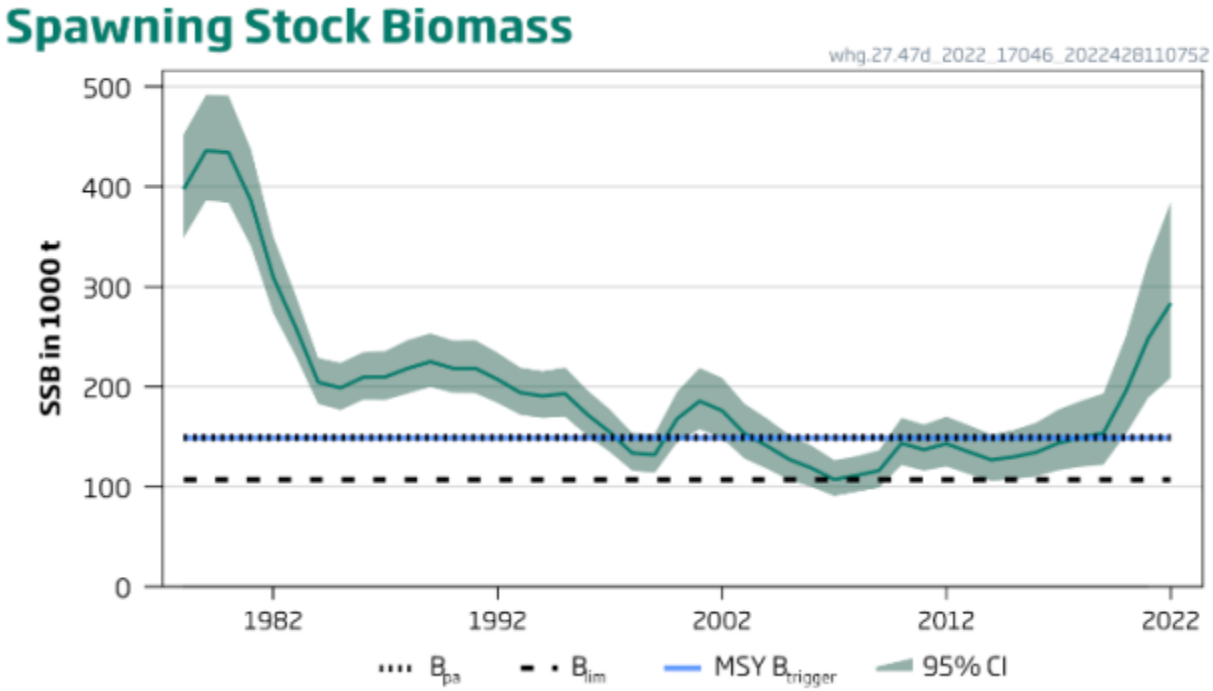
Species Name	**Whiting in Subarea 4 and Division 7d**	
C1	**Category C Stock Status - Minimum Requirements**	
C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	PASS
	Clause outcome:	PASS

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.

Bycatch of whiting in the sprat fishery are recorded and incorporated into the regular stock assessment conducted by the ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK), most recently in 2022. The June 2022 catch advice (ICES 2022) states that the 2022 stock assessment was an age-based analytical assessment which used catches in the model and forecast. The ICES catch advice notes that management units do not currently reflect the biological stocks of whiting in this region; however, there is no indication that the stock assessment includes a significant degree of uncertainty and the assessor considers C1.1 to be met.

C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.

The 2022 ICES catch advice includes an indication of the current status of the stock relative to reference points. Target reference points MSY $B_{trigger}$, B_{pa} and MAP MSY $B_{trigger}$ have been established at 148,888t. Limit reference points B_{lim} and MAP B_{lim} have been established at 107,146t. The 2022 catch advice projected an SSB in 2023 of 294,175t, substantially above both the target and limit reference points. The advice also states that "spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES 2022). Biomass was estimated in the most recent stock assessment to be substantially larger than the limit reference point, and C1.2 is met.



Whiting in Subarea 4 and Division 7d, estimated SSB relative to current reference points (ICES 2022)

References

ICES (2022). Whiting (*Merlangius merlangus*) in Subarea 4 and Division 7.d (North Sea and eastern English Channel). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, whg.27.47d. https://doi.org/10.17895/ices.advice.19457411

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

CATEGORY D SPECIES

Category D species are those which make up less than 5% of landings and are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1	Species Name		
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)		
	Average maximum age (years)		
	Fecundity (eggs/spawning)		
	Average maximum size (cm)		
	Average size at maturity (cm)		
	Reproductive strategy		
	Mean trophic level		
		Average Productivity Score	
	Susceptibility Attribute	**Value**	**Score**
	Availability (area overlap)		
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		
	Selectivity of gear type		
	Post-capture mortality		
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
	Further justification for susceptibility scoring (where relevant) *For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision*		
References			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

D3		Average Susceptibility Score		
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4

D4	Species Name		
	Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements		
	D4.1	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.	
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.	
			Outcome:

Evidence

D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

References

Links	
MarinTrust Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01

FURTHER IMPACTS

The three clauses in this section relate to impacts the fishery may have in other areas. A fishery must meet the minimum requirements of all three clauses before it can be recommended for approval.

F1	Impacts on ETP Species - Minimum Requirements		
	F1.1	Interactions with ETP species are recorded.	PASS
	F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	PASS
	F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	PASS
		Clause outcome:	PASS

F1.1 Interactions with ETP species are recorded.

Interactions with ETP species are recorded as required by EU and UK legislation (for example EC Regulation 812/2004 and EU Regulation 2017/10042) and are submitted to the ICES Working Group on Bycatch of Protected Species (WGBYC) for analysis. The most recent WGBYC report was published in March 2022 (ICES 2022) and contains detailed information on the data sources used to inform the activities of the group. The report is not specific to the Danish sprat fishery and does not provide specific details of the data submitted by Danish vessels targeting sprat; however it provides a summary of monitoring efforts and bycatch across the Greater North Sea ecoregion (page 13); indicates that Denmark submitted data on fishing effort, monitoring effort, and bycatch events as requested in 2017-2021 (Table 3.1, page 27); and lists the number of reported mammal, bird and turtle interactions in 2021 by region and gear type (Table 3.2, page 29-43). The bycatch data are used by the WGBYC to estimate bycatch rates and overall impacts of fisheries on ETP species in the waters covered by ICES.

Interactions with ETP species are recorded, and F1.1 is met.

F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.

The NSAS herring stock annex states, in relation to the directed herring fishery, that interactions with ETP species are considered to be rare (ICES 2017), although this is not the fishery subject to this MT assessment. The sprat stock annex does not mention potential ETP impacts. An MSC Announcement Comment Draft Report (ACDR) for the "DFPO, DPPO and SPFPO North Sea, Skagerrak and Kattegat sandeel, sprat and Norway pout" fishery, published in April 2023, states that "for marine mammals and seabirds, the nature of the gear type and fishery methods means that there are rarely any direct interactions between these fisheries and these ETP species groups", but also that for "rays and skates, there is no information on how many are encountered in the gear, and when encountered and discarded (as required by regulation) how many are released alive and survive. Fishermen anecdotally report it is extremely rare to see any skates or rays in the net when fishing these industrial species" (MRAG 2023).

Of the ETP species identified in the MSC ACDR as potentially impacted by the sprat fishery, the majority do not fall within the MT definition of ETP (i.e. they do not appear in the CITES appendices nor are they categorised by the IUCN as Endangered or Critically Endangered). The exceptions to this are the common blue skate, *Dipturus batis* (Critically Endangered, IUCN 2021); and the flapper skate, *Dipturus intermedius* (Critically Endangered, IUCN 2021a). However, given the anecdotal evidence provided by fishers that skates and rays are rarely caught, plus the bycatch data provided by the applicant indicating no skates or rays are caught, and finally considering the pelagic nature of the trawl gear used, the assessor does not consider there to be substantial evidence that the fishery has a significant negative impact on these two species.

Overall, there does not appear to be substantial evidence of negative impact on ETP species, and F1.2 is met.

F1.3 If the fishery is known to interact with ETP species, measures are in place to minimise mortality.

There is no evidence to indicate the fishery regularly interacts with ETP species, and therefore no such measures are required to be in place. However, some general measures are in place across EU fisheries, such as the reporting requirements listed in F1.1 above, and a recently proposed Action Plan for further protecting ecosystems and vulnerable species (EC 2023).

References

EC (2023). Fisheries, aquaculture and marine ecosystems: transition to clean energy and ecosystem protection for more sustainability and resilience. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_828

ICES (2017). Stock Annex: Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18622589.v2

ICES (2019). Stock Annex: Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18623360.v1

ICES (2022). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports. 4:91. 265 pp. https://doi.org/10.17895/ices.pub.21602322

IUCN (2021). Common blue skate. https://www.iucnredlist.org/species/203364219/203375487

IUCN (2021a). Flapper skate. https://www.iucnredlist.org/species/18903491/68783461

MRAG (2023). Announcement Comment Draft Report. DFPO, DPPO and SPFPO North Sea, Skagerrak and Kattegat sandeel, sprat and Norway pout. https://fisheries.msc.org/en/fisheries/dfpo-dppo-and-spfpo-north-sea-skagerrak-and-kattegat-sandeel-sprat-and-norway-pout/@@assessments

Links	
MarinTrust Standard clause	1.3.3.1
FAO CCRF	7.2.2 (d)
GSSI	D4.04, D.3.08

F2	**Impacts on Habitats - Minimum Requirements**		
	F2.1	Potential habitat interactions are considered in the management decision-making process.	PASS
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	PASS
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	PASS
		Clause outcome:	PASS

F2.1 Potential habitat interactions are considered in the management decision-making process.

The MarinTrust fishery assessment guidance states that "good practice requires there to be a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types". Such a strategy is not required for the specific fishery under assessment here, as the pelagic gear type used fundamentally does not pose such a risk. However, in general terms the potential impacts of fisheries on habitats are considered throughout the management process in both the EU and Norway. F2.1 is met.

F2.2 There is no substantial evidence that the fishery has a significant negative impact on physical habitats.

The pelagic gears used in the sprat fishery under assessment here do not interact with the seabed and are therefore considered unlikely to have a significant negative impact on seabed habitats. No evidence was encountered during the completion of this assessment report to indicate that the fishery impacts physical habitats. F2.2 is met.

F2.3 If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.

The pelagic gears used in the Danish sprat fishery are considered unlikely to interact with seabed habitats. However, the protection of sensitive habitats throughout the area covered by this MT assessment is regulated through the international convention on biodiversity (OSPAR 03/17/1, Annex 9), and the corresponding national legislation (Natura2000 in Denmark, National Order No. 1048/2013). There are a series of Marine Protected Areas in the North Sea. F2.3 is met.

References

Danish Fisheries Agency, Natura 2000 and fisheries: regional processes. https://fiskeristyrelsen.dk/english/commercial-fisheries/natura-2000-and-fisheries-regional-processes/#c83659

Rice, J., K. H. Andersen, and A. Stern-Piriot,. 2017. MSC Public Certification Report for DFPO and DPPO North Sea, Skagerrak and Kattegat Sandeel, Norway Pout, and Sprat fisheries. MRAG-MSC-7a-v3. MRAG Americas, Inc. March 23, 2017. 388 pp.

Links	
MarinTrust Standard clause	1.3.3.2
FAO CCRF	6.8
GSSI	D.2.07, D.6.07, D3.09

F3	Ecosystem Impacts - Minimum Requirements		
	F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	PASS
	F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	**
	F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	PASS
		Clause outcome:	

F3.1 The broader ecosystem within which the fishery occurs is considered during the management decision-making process.

The potential ecosystem impacts of fisheries are primarily taken into account in the management process by ICES. A key component of this is the development of ecosystem overviews, the outcomes of which are incorporated into Working Group discussions and recommendations. The relevant ICES ecoregion to this fishery is the Greater North Sea (ICES 2022). Ecosystem overviews provide a summary of the key environmental indicators, ecosystem pressures, and the current state of the ecosystem. Relevant aspects of the North Sea ecoregion which are summarised in the ICES report include:

- The episodic changes in productivity of key elements of the ecosystem in the North Sea, including phytoplankton, zooplankton and demersal and pelagic fish.
- The links between these changes in productivity and temperature trends both within the North Sea and across the North Atlantic.
- The impacts of wind farms and other artificial hard substrates on biodiversity and productivity.
- The impacts of fishing on ecosystem structure, particularly the removal of many larger fish.
- A shift from pelagic to benthic production, particularly the substantial increase in the size of the plaice stock.

In addition to this over-arching consideration, the role of sprat and herring within the North Sea ecosystem is also considered by the HAWG when developing sprat and herring stock assessments and management advice. The most recent HAWG report (ICES 2022a) summarises this discussion.

Finally, a detailed explanation of the way in which the ecosystem aspects of sprat management are incorporated into ICES assessments (and therefore into management advice) is set out in the sprat and herring stock annexes (ICES 2017; ICES 2019). This includes an exploration of the bottom-up effects on sprat and herring (i.e. the way that environmental variables and plankton population affects sprat and herring stocks); top-down effects on sprat and herring (i.e. the way that predator populations affect sprat and herring stocks); and implications for ecosystem-based management.

All of these factors are considered in the development and delivery of ICES advice, which in turn underpins the management decision-making process as per the CFP. The broader ecosystem is considered in the management decision-making process, and F3.1 is met.

F3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.

Sprat and herring are important prey species within the North Sea ecosystem, and as discussed in F3.1 and F3.3, this role is considered throughout the stock assessment and catch advice process. The HAWG report states that “Sprat is an important prey species in the North Sea ecosystem. The influence of the sprat fishery on other fish species and seabirds are at present

not documented to be substantial" (ICES 2022a). No other evidence was encountered during this assessment to contradict this conclusion. In terms of the potential impact of the herring bycatch taken in the sprat fishery, it is clear that the relatively small quantities taken as bycatch compared to the directed herring fishery mean that the sprat fishery is very unlikely in itself to have a direct negative impact on the availability of herring as prey. Overall there is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem, and F3.2 is met.

F3.3 If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.

Sprat and herring are both considered by ICES to play an important role in their ecosystems. The sprat stock annex states that "sprat is an important part of the diet of numerous species, including demersal fish, seabirds and marine mammals", noting that "sprat can be very important for breeding seabirds in southern areas of the North Sea" (ICES 2019). The NSAS herring stock annex states that "Herring is a key pelagic species in the North Sea and is thus considered to have major impact as prey and predator to most other fish stocks in that area", and also that herring "are an integral and important part of the pelagic ecosystem in the North Sea. As plankton feeders they form an important part of the food chain up to higher levels" (ICES 2017).

The important role of sprat in the ecosystem is taken into account in the stock assessment process, which leads to catch recommendations, by incorporating estimates of natural mortality rates into the model. The 2018 sprat benchmarking report notes that "predation impacts are taken into account explicitly in the stock assessment for North Sea sprats by including annual estimates of natural mortality imposed by predators based on predator abundances, prey preferences and abundances of other prey stocks" (ICES 2018); this is achieved through the use of multispecies modelling, as described in brief in the HAWG report (ICES 2022a). Thus quota recommendations are made and quotas set based on the assumption of a certain quantity of sprat being taken by predators, rendering the quotas more conservative than they would otherwise be. A similar process is used to determine the appropriate herring TAC, which impacts the maximum catch in the directed herring fishery but also the quantity permitted as bycatch in the sprat fishery.

Sprat and herring are recognised as playing an important role in the marine ecosystem, and quotas are set at a level which takes this into account. F3.3 is met.

References

ICES (2017). Stock Annex: Herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18622589.v2

ICES (2018). Benchmark Workshop on Sprat (WKSPRAT 2018). ICES WKSPRAT Report 2018, 5–9 November 2018. ICES HQ, Copenhagen, Denmark. ICES CM 2018/ACOM:35. 60 pp. https://doi.org/10.17895/ices.pub.19291145

ICES (2019). Stock Annex: Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea). ICES Stock Annexes. Report. https://doi.org/10.17895/ices.pub.18623360.v1

ICES (2022). Greater North Sea ecoregion – Ecosystem overview. In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, Section 7.1, https://doi.org/10.17895/ices.advice.21731912

ICES (2022a). Herring Assessment Working Group for the Area South of 62° N (HAWG). ICES Scientific Reports. 4:16. 745 pp. http://doi.org/10.17895/ices.pub.10072

Links

MarinTrust Standard clause	1.3.3.3
FAO CCRF	7.2.2 (d)
GSSI	D.2.09, D3.10, D.6.09

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

"*The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of r_m (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of K, t_m and t_{max} and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on r_m (see below) as we are not yet confident with the reliability of the current method for estimating rm. If users have independent r_m or fecundity estimates, they can refer to Table 1 for using this information*."

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
r_{max} (1/year)	> 0.5	0.16 - 0.50	0.05 - 0.15	< 0.05
K (1/year)	> 0.3	0.16 - 0.30	0.05 - 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 - 1000	10 - 100	< 10
t_m (years)	< 1	2 - 4	5 - 10	> 10
t_{max} (years)	1 - 3	4 - 10	11 - 30	> 30

[Taken from the FishBase manual, "Estimation of Life-History Key Facts", http://www.fishbase.us/manual/English/key%20facts.htm#resilience]

Appendix B – MarinTrust Fishery Assessment Peer Review

MarinTrust Fishery Assessment Peer Review Template

This section comprises a summary of the fishery being assessed against version 2 of the MarinTrust Standard.

Fishery under assessment	Sprat in ICES Division 3a and Subarea 4
Management authority (Country/State)	EU (Denmark)
Main species	Sprat, Herring
Fishery location	ICES Division 3a and Subarea 4
Gear type(s)	Small-meshed pelagic trawl
Overall recommendation. (Approve/ Fail)	Approve

Summary: in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.
There is a statement about herring "*While catches have historically exceeded the ICES advice, this has not occurred since 2019 and has generally been less than 10% more than the recommended level*.", which is bit confusing since the reason for that is not well explained. In a modern, well-monitored fishery such as this one, the catches should not exceed the TAC. **CAB RESPONSE:** There are two main factors at play: firstly, the TAC has often been set above the ICES advice. Secondly, up to 10% of quota can be transferred between years. This means that catches are sometimes above the recommended level. As per the MT requirements, catches up to 10% greater than the recommended level are permissible if the stock biomass is above the target reference point. Further explanation has been added to the report to make these aspects of the fishery clear.
General Comments on the Draft Report provided to the peer reviewer

More specifically, this time in the case of sprat, it is noted that “Preliminary catch data for 2022 (which will ultimately include catches up to 30 June 2023) suggest that the advice will be exceeded. At the present time, the preliminary total catch (70,142t) is less than 10% greater than the ICES advice (68,690t). Stock biomass is currently above the limit reference point, and therefore the current level of excess catch is acceptable”. It is discussable that because the catches are just 10% above the ICES recommendation, and because the population is above the reference limits, then the excess is acceptable. There is no doubt that there are reasons to explain that, but the differences are not well supported. This aspect could be improved in a next review. In the same document is mentioned that “at the present time there is no evidence that quota flex is causing sprat catches to substantially exceed the advice”. That evidence needs to be provided.

CAB RESPONSE: The statement that the excess catch level is “acceptable” is based on the MT requirement, rather than a value judgement by the assessor or an external source of evidence. The report has been updated to make this clear.

Summary of Peer Review Outcomes

Peer reviewers should review the fishery assessment report with the primary objective of answering the key questions listed in the table below. Where the situation is more complicated, reviewers may instead answer "See Notes".

	YES	NO	See Notes
A – Fishery Assessment			
1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	X		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	X		
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?			
Section M - Management	X		
Category A Species	X		
Category B Species	X		
Category C Species	X		
Category D Species	X		
Section F – Further Impacts			X

Detailed Peer Review Justification

Peer reviewers should provide support for their answers in the boxes provided, by referring to specific scoring issues and any relevant documentation as appropriate.

Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).

Boxes may be extended if more space is required.

1. Is the scoring of the fishery consistent with the MarinTrust standard, and clearly based on the evidence presented in the assessment report?
Scoring agreed
Certification body response
n/a

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?
Scoring agreed
Certification body response

n/a

3. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?
Scoring agreed
Certification body response
n/a

3M. Are the scores in "Section M – Management" clearly justified?	
M1.1 There is an organisation responsible for managing the fishery.	Yes
There is an organisation responsible for collecting data and assessing the fishery.	Yes
Fishery management organisations are publicly committed to sustainability.	Yes
Fishery management organisations are legally empowered to take management actions.	Yes
There is a consultation process through which fishery stakeholders are engaged in decision-making.	Yes
The decision-making process is transparent, with processes and results publicly available.	Yes

Certification body response
n/a

3A. Are the "Category A Species" scores clearly justified?
Scoring agreed
Certification body response
n/a

3B. Are the "Category B Species" scores clearly justified?

Scoring agreed

Certification body response

n/a

3C. Are the "Category C Species" scores clearly justified?

n.a.

Certification body response

n/a

3D. Are the "Category D Species" scores clearly justified?

n.a.

Certification body response

n/a

3F. Are the scores in "Section F – Further Impacts" clearly justified?

The scores are justified but there is a contradiction since it is mentioned that there is rare or anecdotical evidence on bycatch of other species (skates, rays). To be categoric about this score, it should be possible to record those rare events. The skippers should be notified about this need since there is a system to communicate this kind of data to ICES, and also because in some cases there are Critically Endangered IUCN species in the catches.

Certification body response

Agree that fishers have an obligation to report interactions with ETP species, as outlined in Section F1.1 of the report. Within the context of the MSC certification report from which the quote on anecdotal evidence was taken, the statement is intended to indicate that the lack of information on how many skates and rays are encountered by the gear is likely to be due to the rarity of such interactions, rather than a failure of reporting.

However, future assessors should revisit the issue and ensure there is no new evidence to suggest more frequent interactions occur.

Optional: General comments on the Peer Review Draft Report
These are well reputed fisheries, scientific monitoring and management are taking into account ecosystem aspects (such as changes in natural productivity). The only aspect to improve at this stage is about “the anecdotical evidence” of by catch of other species. If a rare or unusual bycatch is observed, it should be recorded.
Certification body response
Agreed; see response above.

Annex B

MarinTrust Fishery Assessment Peer Review Template

This section comprises a summary of the fishery being assessed against version 2 of the MarinTrust Standard.

Fishery under assessment	Sprat in ICES Division 3a and Subarea 4
Management authority (Country/State)	EU (Denmark)
Main species	Sprat, Herring
Fishery location	ICES Division 3a and Subarea 4
Gear type(s)	Small-meshed pelagic trawl
Overall recommendation. (Approve/ Fail)	Approve

Summary: in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.
There is a statement about herring "*While catches have historically exceeded the ICES advice, this has not occurred since 2019 and has generally been less than 10% more than the recommended level*.", which is bit confusing since the reason for that is not well explained. In a modern, well-monitored fishery such as this one, the catches should not exceed the TAC. **CAB RESPONSE:** There are two main factors at play: firstly, the TAC has often been set above the ICES advice. Secondly, up to 10% of quota can be transferred between years. This means that catches are sometimes above the recommended level. As per the MT requirements, catches up to 10% greater than the recommended level are permissible if the stock biomass is above the target reference point. Further explanation has been added to the report to make these aspects of the fishery clear.
General Comments on the Draft Report provided to the peer reviewer
More specifically, this time in the case of sprat, it is noted that "Preliminary catch data for 2022 (which will ultimately include catches up to 30 June 2023) suggest that the advice will be exceeded. At the present time, the preliminary total catch (70,142t) is less than 10% greater than the ICES advice (68,690t). Stock biomass is currently above the limit reference point, and therefore the current level of excess catch is acceptable". It is discussable that because the catches are just 10% above the ICES recommendation, and because the population is above the reference limits, then the excess is acceptable. There is no doubt that there are reasons to explain that, but the differences are not well supported. This aspect could be improved in a next review. In the same document is mentioned that "at the present time there is no evidence that quota flex is causing sprat catches to substantially exceed the advice". That evidence needs to be provided.

CAB RESPONSE: The statement that the excess catch level is "acceptable" is based on the MT requirement, rather than a value judgement by the assessor or an external source of evidence. The report has been updated to make this clear.

Summary of Peer Review Outcomes

Peer reviewers should review the fishery assessment report with the primary objective of answering the key questions listed in the table below. Where the situation is more complicated, reviewers may instead answer "See Notes".

	YES	NO	See Notes
A – Fishery Assessment			
1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	X		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	X		
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?			
Section M - Management	X		
Category A Species	X		
Category B Species	X		
Category C Species	X		
Category D Species	X		
Section F – Further Impacts			X

Detailed Peer Review Justification

Peer reviewers should provide support for their answers in the boxes provided, by referring to specific scoring issues and any relevant documentation as appropriate.

Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).

Boxes may be extended if more space is required.

1. Is the scoring of the fishery consistent with the MarinTrust standard, and clearly based on the evidence presented in the assessment report?
Scoring agreed
Certification body response
n/a

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?
Scoring agreed
Certification body response
n/a

3. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?
Scoring agreed
Certification body response
n/a

3M. Are the scores in "Section M – Management" clearly justified?	
M1.1 There is an organisation responsible for managing the fishery.	Yes
There is an organisation responsible for collecting data and assessing the fishery.	Yes
Fishery management organisations are publicly committed to sustainability.	Yes
Fishery management organisations are legally empowered to take management actions.	Yes
There is a consultation process through which fishery stakeholders are engaged in decision-making.	Yes
The decision-making process is transparent, with processes and results publicly available.	Yes

Certification body response
n/a

3A. Are the "Category A Species" scores clearly justified?
Scoring agreed

Certification body response
n/a

3B. Are the “Category B Species” scores clearly justified?
Scoring agreed
Certification body response
n/a

3C. Are the “Category C Species” scores clearly justified?
n.a.
Certification body response
n/a

3D. Are the “Category D Species” scores clearly justified?
n.a.
Certification body response
n/a

3F. Are the scores in “Section F – Further Impacts” clearly justified?
The scores are justified but there is a contradiction since it is mentioned that there is rare or anecdotical evidence on bycatch of other species (skates, rays). To be categoric about this score, it should be possible to record those rare events. The skippers should be notified about this need since there is a system to communicate this kind of data to ICES, and also because in some cases there are Critically Endangered IUCN species in the catches.

Certification body response
Agree that fishers have an obligation to report interactions with ETP species, as outlined in Section F1.1 of the report. Within the context of the MSC certification report from which the quote on anecdotal evidence was taken, the statement is intended to indicate that the lack of information on how many skates and rays are encountered by the gear is likely to be due to the rarity of such interactions, rather than a failure of reporting. However, future assessors should revisit the issue and ensure there is no new evidence to suggest more frequent interactions occur.

Optional: General comments on the Peer Review Draft Report
These are well reputed fisheries, scientific monitoring and management are taking into account ecosystem aspects (such as changes in natural productivity). The only aspect to improve at this stage is about “the anecdotical evidence” of by catch of other species. If a rare or unusual bycatch is observed, it should be recorded.
Certification body response
Agreed; see response above.

Glossary

Non-target: Species for which the gear is not specifically set, although they may have immediate commercial value and be a desirable component of the catch. OECD (1996), Synthesis report for the study on the economic aspects of the management of marine living resources. AGR/FI(96)12

Target: In the context of fishery certification, the target catch is the catch of stock under consideration by the unit of certification – i.e. the fish that are being assessed for certification and ecolabelling. (GSSI)