



MarinTrust Standard V2

Whole fish Fishery Assessment Report Template

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: Denmark		Zip:	
Tel. No.		Fax. No.	
Email address:		Applicant Code	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor Name	CB Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval
Conor Donnelly	Geraldine Criquet	3	Surveillance 2
Assessment Period	July 2021		
Scope Details			
Management Authority (Country/State)		EU, Denmark	
Main Species		Central Baltic herring <i>Clupea harengus</i> Baltic sprat <i>Sprattus sprattus</i>	
Fishery Location		Baltic Sea (ICES subdivisions 25-29 and 32)	
Gear Type(s)		Pelagic trawl	
Outcome of Assessment			
Overall Outcome		Pass	
Clauses Failed		None	
CB Peer Review Evaluation		Agree with the assessor's determination	
Fishery Assessment Peer Review Group Evaluation		Approved – see Appendix B	

Recommendation	Approval
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Table 2. Assessment Determination

Assessment Determination
<p>This fishery targets Central Baltic herring using pelagic trawls in ICES subdivisions 25-29 and 32. Baltic sprat make up a significant by-catch (>5%) so it is also assessed as a Category A stock.</p> <p>In relation to management of the central Baltic herring and Baltic sprat fisheries, both the management framework and the surveillance, control and enforcement system meet minimum requirements set by the MARINTRUST Standard.</p> <p>With regards the target stocks, sufficient data is collected to determine fishery removals and stock status and a stock assessment is in place which provides an estimate of the status of the biological stock relative to reference points. The stock assessment shows the sprat stock is above target reference points. The central Baltic herring stock is below its target reference point but above its limit reference point and there is evidence that a fall below the limit reference point would result in fishery closure. The harvest strategy restricts total fishing mortality and removals do not regularly exceed the level indicated in the stock assessment.</p> <p>The fishery targets homogenous shoals of herring and sprat with no catches of non-target species identified.</p> <p>In relation to further impacts of the fishery in other areas, the assessment considers interactions with ETP species. In this fishery these species include the marine mammals, harbour porpoise, harbour, grey and ringed seals and also seabirds and seaducks. Some of these are in a poor state including the Kalmarsund population of harbour seal and both populations of harbour porpoise, in particular the Baltic proper population which is considered critically endangered. Interactions of ETP with pelagic trawls are recorded and are considered infrequent but it is noted observer coverage is low and monitoring of interactions is an area that requires improvement. However, it is concluded that there is no substantial evidence that the fishery has a significant negative effect on ETP species, clause F.1 is passed. In relation to impacts on habitats, pelagic trawl gears are not designed to make contact with the seabed, such contact is likely to be minimal and consequently this gear is considered to have marginal impact on benthic habitats and bottom structures. There is no substantial evidence that the fishery has a significant negative impact on physical habitats and clause F.2 is passed. In relation to ecosystem effects of the fishery, clause F3 is also passed. However, whilst sprat stocks in the Baltic proper are considered healthy there is evidence of a spatial separation in the southern Baltic between the clupeid stocks and the eastern Baltic cod stock which is in poor status and for which the clupeid stocks are key prey species. There is some uncertainty arising from this including whether fishery removals may exacerbate the problem.</p> <p>Herring and sprat are assessed as of least concern on the IUCN Red List and are not on the current list of CITES endangered species.</p> <p>Central Baltic herring and Baltic sprat are approved by the assessment team for the production of fishmeal and fish oil under the IFFO-RS v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified the two stocks in conformity with the Species categorisation requirements. The fishery is managed by the European Union and the Danish national system for fisheries management. There is a monitoring, surveillance and control system in place.</p> <p>Data are collected and stocks are assessed. In the most recent stock assessment, the central Baltic herring stock is below $MSY B_{trigger}$ but above the limit reference point and the Baltic Sea sprat stock is above $MSY B_{trigger}$. There is a harvest strategy in place to ensure that stocks are fished at sustainable levels. The main mechanism to</p>

restrict total fishing mortality is the Baltic Sea MAP (Regulation (EU) No 2016/1139 as amended). The MAP specifies that the target fishing mortality should be maintained in line with the ranges of F_{MSY} specified in the plan, informed by advice on the state of the stock which is assessed annually by ICES. It requires that fishing opportunities (the TAC) for the stock should be established within the lower range of F_{MSY} available at that time for the stock. The harvest strategy has been largely effective in maintaining central Baltic herring and Baltic sprat SSB above $MSY B_{trigger}$. TACs and catches are largely in line with ICES advice.

Given the type of gear, there is no evidence that the fishery impacts significantly habitats. There is no evidence that the fishery has significant negative impacts on ETP species and the ecosystem.

Therefore, central Baltic herring and Baltic Sea sprat stocks should be awarded continued approval for the production of fishmeal and fish oil under the IFFO-RS v 2.0 standard.

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	Central Baltic herring <i>Clupea harengus</i> and Baltic sprat <i>Sprattus sprattus</i>	100%	A1	Pass
			A2	Pass
			A3	Pass
			A4	Pass
Category B				
Category C				
Category D				

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category ¹	% of landings	Management	Category
Herring	<i>Clupea harengus</i>	ICES subdivisions 25-29 and 32 (excl. Gulf of Riga. Central Baltic herring.	Least concern	26%	EU	A
Sprat	<i>Sprattus sprattus</i>	ICES subdivisions 22-32 (Baltic Sea)	Least concern	74%	EU	A

Species categorisation rationale

Information on the Danish fishery for this assessment was sourced from STECF Fishery Dependant Information (year: 2019, the latest year available; gear type: OTM, PTM; target assemblage: SPF; sub-divisions: 25, 26, 27, 28.2, 29 which were all the areas fished by Danish midwater trawl vessels within 25-29 & 32 excluding 28.1). The data shows sprat and herring make up 100% of catches.

STECF, FDI: <https://stecf.jrc.ec.europa.eu/dd/fdi>

¹ <https://www.iucnredlist.org/>

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.	Yes
	M1.2	There is an organisation responsible for collecting data and assessing the fishery.	Yes
	M1.3	Fishery management organisations are publicly committed to sustainability.	Yes
	M1.4	Fishery management organisations are legally empowered to take management actions.	Yes
	M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making.	Yes
	M1.6	The decision-making process is transparent, with processes and results publicly available.	Yes
Clause outcome:			Pass
<p>M1.1 There is an organisation responsible for managing the fishery.</p> <p>The fishery is managed within the context of the EU Common Fisheries Policy (CFP) and the Danish national system for fisheries management. At regional level, management of the fishery is based on input from the Regional Baltic Sea Fisheries Forum (BALTFISH) and the Baltic Sea Advisory Council (BSAC). Scientific advice is provided by the International Council for the Exploration of the Sea (ICES) and the European Commission’s Scientific, Technical and Economic Committee for Fisheries (STECF). In 2016, the EU adopted a multiannual management plan for cod, herring and sprat in the Baltic Sea which was updated in 2019. The plan specifies targets and harvest control rules (HCRs) for these stocks and includes management measures to ensure that the stocks of plaice, flounder, turbot, and brill caught as a bycatch in the cod, herring, and sprat fisheries are managed in accordance with CFP objectives.</p> <p>At EU level, the main management body is the EU Commission’s Director-General (DG) for Maritime Affairs and Fisheries (DG Mare) and the main regulatory basis the 2013 CFP Basic Regulation.</p> <p>In Denmark, the Ministry of Food, Agriculture and Fisheries is responsible for the administration and regulation of EU fisheries policy, rule-making, control, structural policy, angling, support for business promotion and for environmentally friendly fishing. The Danish Fisheries Agency (Fiskeristyrelsen) implements the government's fisheries policy and conducts, among other things, rules and policy preparation, control, regulatory preparedness, case management and participation in international cooperation.</p> <p>At the international level, a binding agreement has been in place since 2009 between the EU and Russia regarding fisheries management in the Baltic Sea.</p> <p>There is an organisation responsible for managing the fishery. Sub-clause M1.1 is met.</p> <p>M1.2 There is an organisation responsible for collecting data and assessing the fishery.</p> <p>The primary provider of scientific information and advice at the national level within Denmark is the National Institute of Aquatic Resources at the Technical University of Denmark (DTU Aqua). DTU Aqua’s stated mission is to conduct research, provide advice, educate at university level and contribute to innovation in sustainable exploitation and management of</p>			

aquatic resources. DTU Aqua directly advises the Danish Ministry of Food, Agriculture and Fisheries and other public authorities.

Science-based fishery management advice is provided by the International Council for the Exploration of the Sea (ICES). ICES is a network of nearly 6,000 scientists from over 700 marine institutes (including DTU Aqua) in 20 member countries and beyond, linked by an intergovernmental agreement (the ICES Convention) to add value to national research efforts. Scientists working through ICES gather information about the marine ecosystem. Besides filling gaps in existing knowledge, this information is developed into unbiased, non-political fishery management advice.

ICES provides annual stock assessment and management advice in relation to the central Baltic herring and Baltic sprat fisheries via its Baltic Fisheries Assessment Working Group (WGBFAS). ICES Stock Annex Reports provide a great deal of integrated advice at ecosystem level, in support of their shift towards a more holistic approach to managing Europe's seas.

There are organizations responsible for collecting data and assessing the fishery. **Sub-clause M1.2 is met.**

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

The CFP is the primary instrument for sustainable fisheries management. As such it looks to address impacts of fishing on target stocks as well as impacts on other ecosystem components. Implementing an ecosystem approach to fisheries management has been set as one of the objectives of the CFP:

"...to ensure that negative impacts of fishing activities on the marine ecosystem are minimized and that aquaculture and fisheries activities avoid degradation of the marine environment." (Article 2.3 CFP Reform).

The CFP contributes to the protection of the marine environment, to the sustainable management of all commercially exploited species, and in particular to the achievement of good environmental status by 2020, as set out in Regulation (EU) No 1380/2013.

Objectives of the CFP are, *inter alia*, to ensure that fishing and aquaculture are environmentally sustainable in the long term and to apply the precautionary approach to fisheries management.

Similarly the objectives of the Baltic Sea Multiannual Plan (MAP) as set out in Article 3, refers to the achievement of the objectives of the CFP, *"in particular by applying the precautionary approach to fisheries management and shall aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce MSY"*. It further notes that, *"the plan shall implement the ecosystem-based approach to fisheries management in order to ensure that negative impacts of fishing activities on the marine ecosystem are minimized"*.

Denmark is a Member State of the European Union, and therefore in Community waters implements the CFP and the central Baltic herring and Baltic sprat fishery is operated under the Baltic Sea MAP.

Fishery management organisations are publicly committed to sustainability. **Sub-clause M1.3 is met**

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

Denmark is a Member State of the European Union, and therefore in Community waters is subject to and implements the CFP.

Total allowable catches (TACs) are set for most commercial fish stocks by the EU for member states following consultation with Council and Parliament. The EU prepares regulations, based on scientific advice from the advisory bodies ICES and STECF.

TACs are then set annually by the European Council. Some multi-annual plans (as in the case of the Baltic MAP for central Baltic herring and Baltic sprat) contain rules for the setting of TACs which are then shared between EU countries in the form of national quotas. For each stock a different allocation percentage per EU country is applied for the sharing out of the quotas. This fixed percentage is known as the relative stability key.

EU countries have to use transparent and objective criteria when they distribute the national quota among their fishermen. They are responsible for ensuring that the quotas are not overfished. When all the available quota of a species is fished, by national law the EU country has to close the fishery.

In Denmark, the legislative basis for fishery management is set out in the Fisheries and Aquaculture Act 2017 (Miljø-og Fødevareministeriet 2017). The Act's provisions cover fisheries control including giving powers to fisheries enforcement agencies to implement EU and domestic legislation, also provisions relating to managing impacts on the marine environment, addressing disputes between fishermen, and procedures for prosecuting fishing offences.

Fishery management organisations are legally empowered to take management actions. **Sub-clause M1.4 is met.**

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

The EU receives scientific advice on EU fisheries from its Scientific, Technical and Economic Committee for Fisheries (STECF). STECF is composed of independent scientists and experts representing a broad range of opinion and is systematically consulted before any proposals are drafted. On biological issues, STECF depends to a great extent on advice from ICES for areas including the Baltic.

Advice provided by ICES includes stock assessments and deeper analysis on which the Commission bases both its annual recommendations for setting TACs and quotas, and more long-term proposals on how fisheries in European waters can be managed sustainably. Increasingly ICES also provides a great deal of integrated advice at ecosystem level, in support of the shift towards a more holistic approach to managing Europe's seas.

The BSAC is a stakeholder-led organization, established in 2006, which provides advice on the management of Baltic fisheries to the European Commission and member states and consists of organisations representing fisheries and other interest groups affected by the CFP (e.g. environmental, organisations, and sports and recreational fisheries organisations). Following CFP reform, a new regulation was adopted at the end of 2013 in which the role and function of Advisory Councils has been included - Advisory Councils are consulted in the context of regionalisation and should also contribute to data for fisheries management and conservation measures. There is evidence of this, in the form of consultation responses and advice provided to the European Commission and others, on the BSAC website.

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

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

ICES provide annual stock assessment and management advice in relation to central Baltic herring and Baltic sprat via its Baltic Fisheries Assessment Working Group (WGBFAS). The advice is published annually on the ICES website. Quotas for the EU fleet in the assessment area are set annually through the AGRIFISH Council meeting of EU Fisheries Ministers and are published annually in the Baltic Sea Fishing Opportunities Regulation. Following the EU Ombudsman issuing a formal recommendation (October, 2019) to the EU Council to release more information on fishing quota negotiations between governments, the EC

has committed to increasing transparency of the negotiation process for the EU's annual fishing opportunities. In the future, all elements of the commission's documents complementing proposals on total allowable catches (TACs) and quotas will be made public when they are transmitted to the Council.

Whilst some issues have been identified in the transparency of decision making around quota-setting, improvements have been identified and, on balance, taking into account the transparency of other parts of the process, the assessment team consider **sub-clause M1.6 is met**.

References

Advisory Councils

<https://ec.europa.eu/fisheries/partners/advisory-councils/>

Baltic Sea Advisory Council

<http://www.bsac.dk/>

BSAC statements and recommendations

<http://www.bsac.dk/BSAC-Resources/BSAC-Statements-and-recommendations>

Baltic Sea Multi-annual Plan (MAP)

https://ec.europa.eu/fisheries/cfp/fishing_rules/multi_annual_plans_en

Commission Delegated Regulation (EU) 2017/1575 of 23 June 2017 amending Delegated Regulation (EU) 2015/242 laying down detailed rules on the functioning of the Advisory Councils under the common fisheries policy https://eur-lex.europa.eu/eli/reg_del/2017/1575/oj

DTU Aqua, "Mission, vision and tasks"

http://www.aqua.dtu.dk/english/About/Mission_vision

Danish Fisheries Agency

<https://fiskeristyrelsen.dk>

Danish Ministry of Food, Agriculture and Fisheries

<https://fvm.dk/fiskeri/>

EU's annual fisheries quota decision to be made more transparent

<https://www.seafoodsource.com/news/environment-sustainability/eu-s-annual-fisheries-quota-decision-making-to-be-made-more-transparent>

EU Common Fisheries Policy (CFP) overview

<https://ec.europa.eu/fisheries/cfp/>

Reform of the Common Fisheries Policy

<https://ec.europa.eu/fisheries/reform/>

Fisheries control authorities in the Baltic Sea area

https://ec.europa.eu/fisheries/cfp/control/who_does_what/baltic_sea_authorities_en

Fishing Opportunities Regulations

https://ec.europa.eu/fisheries/cfp/fishing_rules/tacs_en

<p>ICES – who we are https://www.ices.dk/about-ICES/who-we-are/Pages/Who-we-are.aspx</p> <p>ICES latest advice on Baltic sprat https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2021/2021/spr.27.22-32.pdf</p> <p>ICES latest advice on central Baltic herring https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2021/2021/her.27.25-2932.pdf</p> <p>STECF home page https://stecf.jrc.ec.europa.eu/</p>	
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.	Yes
M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	Yes
M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	Yes
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.	Yes
Clause outcome:		Pass
<p>M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.</p> <p>Each Member State maintains an official website on fishery related control and reporting issues which are of benefit to the Commission, other Member States and the masters of fishing vessels.</p> <p>National websites contain <i>inter alia</i> information on:</p> <ul style="list-style-type: none"> • Description of control services and the resources available; • National control action programmes; • Fishing effort limitation schemes; • Contact details for the submission of logbooks and landing declarations when landing in that Member State • Lists of designated ports for landing of certain species and addresses for fulfilling notification requirements <p>Member States must apply effective, proportionate and dissuasive sanctions against natural or legal persons engaged in IUU or other illegal activities.</p> <p>The Danish Fishery Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules.</p>		

The European Fisheries Control Agency (EFCA) mission is to promote the highest common standards for control, inspection and surveillance under the CFP. Its primary role is to organise coordination and cooperation between national control and inspection activities so that the rules of the CFP are respected and applied effectively.

Joint Deployment Plans (JDP's) are established for fisheries/areas considered a priority by the Commission and the Member States concerned. They can refer either to European Union waters for which a Specific Control and Inspection Programme (SCIP) has been adopted or to International waters under the competence of a Regional Fisheries Management Organisation (RFMO), where EFCA is requested to coordinate the implementation of the European obligations under an International Control and Inspection Scheme.

The most recent JDP report for the Baltic Sea (Subdivisions 22-32) covers the period January – December 2020. It involved the participation of inspection services and assets from competent authorities in Germany, Denmark, Estonia, Finland, Latvia, Lithuania, Poland and Sweden.

There is an organisation responsible for monitoring compliance with fishery laws and regulations. **Sub-clause 2.1 is met.**

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

To ensure that fishing rules are applied in the same way in all member countries, and to harmonise the way infringements are sanctioned, the EU has established a list of serious infringements of the rules of the common fisheries policy. EU countries must include in their legislation effective, proportionate and dissuasive sanctions, and ensure that the rules are respected. A maximum sanction of at least five times the value of fishery products obtained is provided for with regard to the committing of the said infringement.

Since 2012, EU countries have been required to have a point system for serious infringements. Under the scheme, National Authorities are obliged to:

- Assess alleged infringements involving vessels registered under its flag, using standard EU definitions.
- Impose a pre-set number of penalty points on vessels involved in serious infringements (points are recorded in the national registry of fisheries offences).
- Suspend the vessel's license for 2, 4, 8 or 12 months when a pre-set number of points have been accumulated in a 3-year period.

The Danish Fishery Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules.

There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken. **Sub-clause 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.

Joint Deployment Plans (JDP's) undertaken in 2020 in the Baltic involved competent authorities for fisheries control and protection vessels from Germany, Denmark, Estonia, Finland, Latvia, Lithuania, Poland and Sweden. The Report (January -

December 2020) noted that a total of 4881 inspections (aerial sightings, inspections at sea, on land, in transport and 'other' e.g. traps) were undertaken.

A total of 422 inspections were made at sea with 4 suspected infringements detected representing an apparent infringement rate of 0.95%. 1153 tonnes of herring were controlled during inspections at sea.

A total of 2816 inspections were made ashore with 58 suspected infringements detected representing an apparent infringement rate of 2.06%. 21789 tonnes of herring were controlled during these inspections.

The main type of suspected infringement detected by far related to 'not fulfilling of obligations to record and report catch or catch related data, including data to be transmitted by satellite vessel monitoring system', accounting for 70% of all infringements detected. No IUU-related infringements were detected.

There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing. **Sub-clause 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.

In practice, CFP control as carried out by the Member States' control authorities can be broken down into three broad areas: conservation, structures, and markets:

- Conservation measures cover issues such as quota management or the implementation of technical measures (e.g. mesh sizes). Inspections are used to ensure that the fishing gear on board vessels meets official norms and that the information entered in logbooks.
- Structural policy plays a key role in the search for a balance between the fishing capacity of Member States, the fishing effort actually deployed, and the available fish resources. Checks are therefore necessary to establish that allocated days-at-sea have not been exceeded.
- Finally, national inspections are not limited to the catching sector, but also include all operations from landing and marketing to storage and transportation. Operators must, at all times, be in possession of proper documentation detailing the origin, nature, quantity and quality of fish involved in transactions, so that it can be cross-checked with data in log-books and from other sources, such as fish auctions.

As with the application of sanctions, bodies responsible for control and enforcement are set up by individual EU states.

The Danish Fishery Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules. These organisations work with colleagues from other EU Member States to implement the Baltic Sea Joint Deployment Plan.

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

References

Danish Fisheries Agency
<https://fiskeristyrelsen.dk>

<p>European Fisheries Control Agency https://www.efca.europa.eu/en/content/objectives-and-strategy</p> <p>EFCA Joint Deployment Plan Baltic Sea January-December 2020. https://www.efca.europa.eu/en/content/reports-2020</p> <p>EU's Fisheries Control System https://ec.europa.eu/fisheries/cfp/control/</p> <p>Fisheries control authorities in the Baltic Sea area https://ec.europa.eu/fisheries/cfp/control/who_does_what/baltic_sea_authorities/</p> <p>MSC Sustainable Fisheries Certification. Denmark, Estonia, Germany, Sweden Baltic Sea herring and sprat. Public Certification Report. Lloyd's Register, November 2020. https://fisheries.msc.org/en/fisheries/denmark-estonia-germany-sweden-baltic-herring-and-sprat/@@view</p>	
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		Central Baltic herring <i>Clupea harengus</i>	
A1	Data Collection - Minimum Requirements		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	Yes
Clause outcome:			Pass
<p>A1.1 Landings data are collected such that the fishery-wide removals of this species are known.</p> <p>The EU Fisheries Control System, through the Fisheries Control Regulation (EC Regulation No 1224/2009) requires that data on catches (target species and bycatch) are recorded in logbooks by vessel captains and transmitted to the competent authority of each member state who then provide it to the Commission. These landings data are used in the stock assessment undertaken by ICES and published in their advice (e.g. ICES, 2021a).</p> <p>Landings data are collected such that the fishery-wide removals of this species are known. Sub-clause A1.1 is met.</p>			
<p>A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.</p> <p>In addition to catch data (international landings, age distributions from catch sampling), stock abundance estimates are made from the Baltic International Acoustic October Survey (BIAS) and natural mortalities calculated from the SMS multispecies model until 2018, 2019 = 2018, 2020 from regression with eastern Baltic cod biomass of individuals ≥ 20 cm (ICES, 2021a).</p> <p>Mixing also occurs with sprat stocks, which varies on a spatial scale. According to logbooks and sales slips, this mixing can vary between < 5% and 40%, although these percentages are not quantifiable at this stage (ICES, 2020a).</p> <p>Sufficient additional information is collected to enable an indication of stock status to be estimated. Sub-clause A1.2 is met.</p>			
References			
<p>Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006.</p> <p>https://eur-lex.europa.eu/eli/reg/2009/1224/oj/eng</p> <p>ICES. 2021a. Herring (<i>Clupea harengus</i>) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, her.27.25-2932. https://doi.org/10.17895/ices.advice.7767</p>			

ICES. 2020a. Baltic Sea ecoregion – Fisheries overview. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, section 4.2. <https://doi.org/10.17895/ices.advice.7607>

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

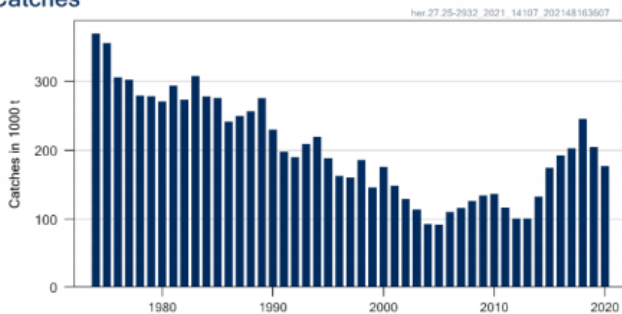
A2 Stock Assessment - Minimum Requirements		
A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	Yes
A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	Yes
A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	Yes
A2.4	The assessment is subject to internal or external peer review.	Yes
A2.5	The assessment is made publicly available.	Yes
Clause outcome:		Pass
<p>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.</p> <p>A stock assessment is conducted annually. The latest stock assessment was undertaken in May 2021 by the Working Group on Baltic Sea Fisheries (WGBFAS) (ICES, 2021a). It includes commercial catches from international landings. Discarding is considered to be negligible.</p> <p>Biological information used in the assessment includes natural mortalities (from the SMS multispecies model until 2018, 2019 = 2018, 2020 from regression with eastern Baltic cod biomass of individuals ≥ 20 cm) and stock abundance estimates from the BIAS survey (ICES, 2021a). Clause A2.1 is met.</p> <p>A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.</p> <p>Reference points have been defined for the stock under ICES MSY and precautionary approach and also under the Baltic Sea MAP. Both MSY and PA reference points were re-estimated during an Inter-Benchmark Process (IBP) on Baltic Sprat (<i>Sprattus sprattus</i>) and herring (<i>Clupea harengus</i>) (IBPBASH) in March 2020 (ICES, 2020b). The reference points are presented in the table below.</p>		

TABLE 6. HERRING IN SUBDIVISIONS 25–29 AND 32, EXCLUDING THE GULF OF RIGA. REFERENCE POINTS, VALUES, AND THEIR TECHNICAL BASIS. WEIGHTS ARE IN TONNES (SOURCE: ICES, 2021A)

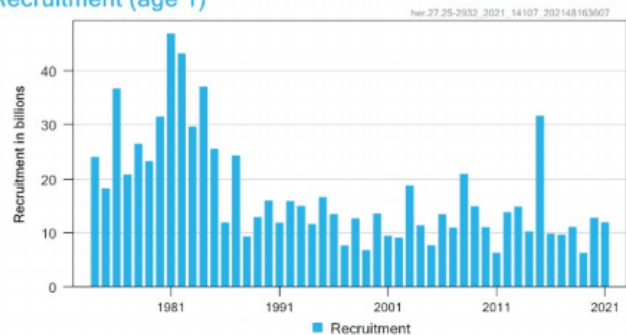
Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	460 000	B_{pa}	ICES (2020)
	F_{MSY}	0.21	Estimated by EqSim	ICES (2020)
Precautionary approach	B_{lim}	330 000	The lowest SSB that has resulted in above-average recruitment, i.e. year 2002 (the SSB in 2002 happens to correspond to B_{loss})	ICES (2020)
	B_{pa}	460 000	$1.4 \times B_{lim}$	ICES (2020)
	F_{lim}	0.59	Estimated by EqSim as the F with 50% probability of SSB being less than B_{lim}	ICES (2020)
	F_{pa}	0.32	F_{POS} . The F that leads to $SSB \geq B_{lim}$ with 95% probability	ICES (2021a)
Management plan	MAP MSY $B_{trigger}$	460 000	MSY $B_{trigger}$	ICES (2020)
	MAP B_{lim}	330 000	B_{lim}	ICES (2020)
	MAP F_{MSY}	0.21	F_{MSY}	ICES (2020)
	MAP target range $F_{lower}-F_{MSY}$	0.15–0.21	Consistent with the ranges which result in no more than a 5% reduction in long-term yield compared to MSY	ICES (2020)
	MAP target range $F_{MSY}-F_{upper}$	0.21–0.26	Consistent with the ranges which result in no more than a 5% reduction in long-term yield compared to MSY	ICES (2020)

In their latest stock assessment ICES (2021a) assesses that fishing pressure on the stock is above F_{MSY} and between F_{pa} and F_{lim} and that spawning-stock size is below MSY $B_{trigger}$ and between B_{pa} and B_{lim} . The 2019-year class which was estimated to be strong in last year’s assessment is now estimated to be below average. There has been no strong recruitment since 2015.

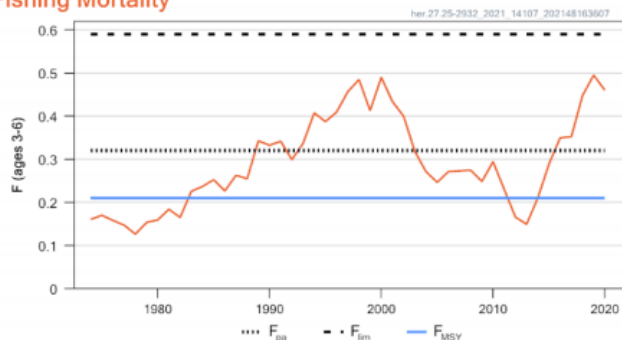
Catches



Recruitment (age 1)



Fishing Mortality



SSB

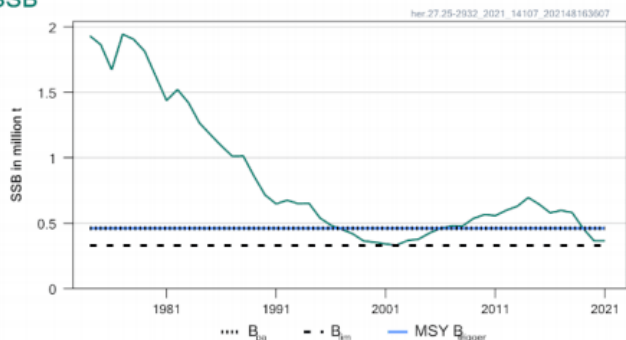


FIGURE 1. HERRING IN SUBDIVISIONS 25–29 AND 32, EXCLUDING THE GULF OF RIGA. SUMMARY OF THE STOCK ASSESSMENT. SSB AT SPAWNING TIME IN 2021 IS PREDICTED (SOURCE: ICES, 2021A).

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

As noted above commercial catches are used in the assessment of stock status. ICES have raised a number of issues relevant to the assessment of fishery removals:

ICES note that mixing of central Baltic herring and Gulf of Riga herring occurs in the central Baltic Sea. This is quantified and taken account of in the advice and TAC-setting (ICES, 2021a).

ICES has been stating for several years that pelagic fisheries take a mixture of herring and sprat and this causes uncertainties in catch levels. The extent to which species misreporting has occurred is however not well known. Analysis of a questionnaire answered by all Baltic countries during 2012 revealed that misreporting is mainly an issue of the industrial trawl fishery targeting sprat-herring mix in nearshore waters. Countries with major proportions of sprat catches used for industrial purposes are Sweden, Poland and Denmark. Countries with major proportions of herring catches used for industrial purposes are Finland and Sweden. The official catch figures of both sprat and herring are modified by Poland and Denmark, but not currently in Sweden. A worst-case scenario using the permitted margin of tolerance of 10% in the logbooks of the quantities by species on board (EU 1224/2009) revealed that sprat catches may be underestimated by 5% and that herring catches may be underestimated by 4%. It was, therefore, concluded at the time after the questionnaire that that species misreporting could be regarded as minor importance. However, as Sweden is not currently correcting for this misreporting and preliminary analyses by Sweden suggests that misreporting of herring and sprat is significantly worse than 5 and 4%, this issue needs to be investigated as soon as possible and when data available addressed in a benchmark. Significant misreporting can potentially be a large problem with regards to the perception of these stocks (ICES, 2020b).

Nonetheless, the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status. **Sub-clause A2.3 is met.**

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

The assessment of central Baltic herring is conducted annually at the ICES WGBFAS (ICES 2021b), where fisheries scientists from about nine European fisheries laboratories participate. The assessment is presented and reviewed at the meeting and must meet ICES standards to be accepted. If the assessment is agreed, it is subsequently reviewed by the ICES Advice Drafting Group which consists of National Experts and, finally, by the Advisory Committee (ACOM) which delivers the ICES advice.

A group of external experts participate every few years in the benchmark process to provide a review of the assessment. The most recent meeting was for an inter-benchmark in March 2020 (ICES, 2020b).

A2.5 The assessment is made publicly available.

ICES operate a transparent assessment framework (TAF); an online open resource of annual ICES stock assessments. All data input and output are fully traceable and versioned. The open framework enables anyone to easily find, reference, download, and run the assessment from any stage in the process leading to published ICES advice for a given stock.

Stock Assessments are made publicly available on the ICES website. Sub-clause A2.5 is met.	
References	
ICES. 2021a. Herring (<i>Clupea harengus</i>) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, her.27.25-2932. https://doi.org/10.17895/ices.advice.7767	
ICES. 2021b. Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 3:53. 717 pp. https://doi.org/10.17895/ices.pub.8187	
ICES, 2020b. Inter-Benchmark Process on Baltic Sprat (<i>Sprattus sprattus</i>) and Herring (<i>Clupea harengus</i>) (IBPBash). ICES Scientific Reports, 2:34. 44 pp. http://doi.org/10.17895/ices.pub.5971	
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.	Yes
	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.	Yes
	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).	Yes
		Clause outcome:	Pass
<p>A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.</p> <p>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.</p> <p>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).</p> <p>The main mechanism to restrict total fishing mortality is the Baltic Sea MAP (Regulation (EU) No 2016/1139 as amended). The multiannual plan established, is based on scientific, technical and economic advice and contains objectives, quantifiable targets with clear time frames, conservation reference points and safeguards which work together towards achieving stock management objectives. The MAP specifies that the target fishing mortality should be maintained (by 2020) in line with the ranges of F_{MSY} specified in the plan, informed by advice on the state of the stock which is assessed annually by ICES. It requires that fishing opportunities (the TAC) for the stock should be established within the lower range of F_{MSY} available at that time for the stock. In specific circumstances fishing opportunities may be fixed in line with the upper range of F_{MSY}, provided that the stock is above $MSY_{Btrigger}$. These circumstances include to avoid serious harm arising from intra- or inter-species stock dynamics.</p>			

Until recently, the harvest strategy has been largely effective in maintaining central Baltic herring SSB above MSY $B_{trigger}$. However, spawning-stock size is now below MSY $B_{trigger}$ and between B_{pa} and B_{lim} . Catches have been in line with the agreed TAC which has also been set consistently with the MAP and ICES advice. Note for years 2018-2020: as referred to above, Article 4 of the MAP (paragraphs 3 and 5) requires that fishing opportunities are set within the lower range of F_{MSY} unless the stock is above MSY $B_{trigger}$ (and certain conditions apply). In each of these years, at the time the advice was published, the stock was above MSY $B_{trigger}$.

TABLE 7. HERRING IN SUBDIVISIONS 25–29 AND 32, EXCLUDING THE GULF OF RIGA. ICES ADVICE, TACS, AND CATCHES. ALL WEIGHTS ARE IN TONNES (SOURCE: ICES. 2021A)

Year	ICES advice	Catch corresponding to the advice	Agreed TAC	ICES catch SDs 25–29 + 32	ICES catch
2016	MSY approach ($F_{MSY} = 0.22$)	≤ 201000	206605 ^{^^}		192056
2017	MSY approach ($F_{MSY} = 0.22$)	≤ 216000	220629 ^{^^}		202517
2018	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than $F_{MSY} = 0.22$ only under conditions specified in MAP	200236–331510, but catch higher than 267745 only under conditions specified in MAP	258855 ^{^^}		244365
2019	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than $F_{MSY} = 0.22$ only under conditions specified in MAP	115591–192787, but catch higher than 155333 only under conditions specified in MAP	200260 ^{^^}		204438
2020	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than $F_{MSY} = 0.22$ only under conditions specified in MAP	130546–214553, but catch higher than 173975 only under conditions specified in MAP	182484 ^{^^}		177079
2021	Management Plan	111852 (range 83971–138183)	126051 ^{^^}		
2022	Management Plan	71939 (range 52443–87581)			

^{^^} TAC is calculated as EU (subdivisions 25–28(2), 29, and 32) + Russian autonomous quotas

The MAP requires that fishing opportunities are fixed in such a way that there is a less than 5% probability of the spawning stock biomass falling below B_{lim} . When scientific advice indicates that the spawning stock biomass of the stock is below B_{lim} , further remedial measures shall be taken to ensure rapid return of the stock to levels above the level capable of producing MSY. Those remedial measures may include suspending the targeted fishery for the stock and the adequate reduction of fishing opportunities.

It is worth noting that there was a significant change in the perception of central Baltic herring stock status recently – following an inter-benchmark process in 2020. This led to a revision of SSB and F such that F was estimated above F_{pa} and SSB below MSY $B_{trigger}$. The MAP responded to the changed perception of stock status in 2020 with a reduction of the TAC by 36% (see:

https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1522). This was consistent with ICES advice, would reduce F to a level within the range required by the MAP, and is anticipated by ICES to restore SSB above MSY $B_{trigger}$ (the conservation reference point set out in the MAP) within a year (in 2022, see the forecast in ICES. 2020. Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 2:45. <http://doi.org/10.17895/ices.pub.6024>. Table 4.2.20). This response was consistent with the overall objective of the MAP and is being delivered by the revised targets and conservation reference points that were introduced to the MAP in 2019 and which were themselves linked to the ICES advice published in 2020.

The latest advice for the stock (ICES, 2021a) shows the decline in SSB has levelled off below MSY $B_{trigger}$ and, although still above F_{MSY} , fishing mortality has reduced since last year. SSB is now not expected to rise above MSY $B_{trigger}$ until 2023 (Table 2, ICES, 2021a). The latest WGBFAS report notes that the large 2014-year class will still be an important contributor to the yields in 2021 and that stock status in the next years will depend on the further development of the incoming 2019- and 2020-year classes. These year classes will contribute to a larger extent to the yield in 2022 and to the SSB in 2022 and 2023 (ICES, 2021b).

Sub-clauses A3.1 to A3.3 are met.

References

ICES. 2021a. Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, her.27.25-2932. <https://doi.org/10.17895/ices.advice.7767>

ICES. 2021b. Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 3:53. 717 pp. <https://doi.org/10.17895/ices.pub.8187>

Regulation (EU) 2016/1139 (as amended) of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R1139-20190814&from=EN>

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:	Yes
	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.	
Clause outcome:		Pass

A4.1 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

As noted in clause A2, following a revision of reference points at the last inter-benchmark assessment (ICES. 2020b), the stock level was revised downwards so that it is below the target biomass reference point (MSY $B_{trigger}$), but above the limit reference point B_{lim} (ICES. 2020c). The latest advice for the stock (ICES, 2021a) shows the decline in SSB has levelled off below MSY $B_{trigger}$ and, although still above F_{MSY} , fishing mortality has reduced since last year.

As noted in clause A3, the MAP requires that fishing opportunities are fixed in such a way that there is a less than 5% probability of the spawning stock biomass falling below B_{lim} . When scientific advice indicates that the spawning stock biomass of the stock is below B_{lim} , further remedial measures shall be taken to ensure rapid return of the stock to levels above the level capable of producing MSY. Those remedial measures may include suspending the targeted fishery for the stock and the adequate reduction of fishing opportunities.

The stock is above the limit reference point and there is evidence that a fall below the limit reference point would result in fishery closure. **Clause A4.1 is met.**

References

ICES. 2021a. Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, her.27.25-2932. <https://doi.org/10.17895/ices.advice.7767>

ICES, 2020b. Inter-Benchmark Process on Baltic Sprat (*Sprattus sprattus*) and Herring (*Clupea harengus*) (IBPBash). ICES Scientific Reports, 2:34. 44 pp. <http://doi.org/10.17895/ices.pub.5971>

ICES. 2020c. Herring (*Clupea harengus*) in subdivisions 25–29 and 32, excluding the Gulf of Riga (central Baltic Sea). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, her.27.25-2932. <http://ices.dk/sites/pub/Publication%20Reports/Advice/2020/2020/her.27.25-2932.pdf>

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

Species Name		Baltic sprat <i>Sprattus sprattus</i>	
A1	Data Collection - Minimum Requirements		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	Yes
			Clause outcome: Pass
<p>A1.1 Landings data are collected such that the fishery-wide removals of this species are known.</p> <p>The EU Fisheries Control System, through the Fisheries Control Regulation (EC Regulation No 1224/2009) requires that data on catches (target species and bycatch) are recorded in logbooks by vessel captains and transmitted to the competent authority of each member state who then provide it to the Commission. These landings data are used in the stock assessment undertaken by ICES and published in their advice (e.g. ICES, 2021c).</p> <p>Landings data are collected such that the fishery-wide removals of this species are known. Sub-clause A1.1 is met.</p>			
<p>A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.</p> <p>In addition to commercial catch data, stock abundance estimates are made from two acoustic surveys (BASS, BIAS) and natural mortalities calculated from the SMS multispecies model until 2018, 2019 =2018, 2020 from regression with eastern Baltic cod biomass of individuals ≥ 20 cm (ICES, 2021c). Mixing also occurs with herring stocks, which varies on a spatial scale. According to logbooks and sales slips, this mixing can vary between $< 5\%$ and 40%, although these percentages are not quantifiable at this stage (ICES, 2020a).</p> <p>Sufficient additional information is collected to enable an indication of stock status to be estimated. Sub-clause A1.2 is met.</p>			
References			
<p>Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006.</p> <p>https://eur-lex.europa.eu/eli/reg/2009/1224/oj/eng</p> <p>ICES. 2021c. Sprat (<i>Sprattus sprattus</i>) in Subdivisions 22-32 (Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, spr.27.22-32. https://doi.org/10.17895/ices.advice.7867</p> <p>ICES. 2020a. Baltic Sea ecoregion – Fisheries overview. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, section 4.2. https://doi.org/10.17895/ices.advice.7607</p>			
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	

Stock Assessment - Minimum Requirements
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A2	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.	Yes
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	Yes
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	Yes
	A2.4	The assessment is subject to internal or external peer review.	Yes
	A2.5	The assessment is made publicly available.	Yes
Clause outcome:			Pass
<p>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.</p> <p>A stock assessment is conducted annually. The latest stock assessment was undertaken in May 2021 by the Working Group on Baltic Sea Fisheries (WGBFAS) (ICES, 2021c). It includes commercial catches from international catches. Discard data have not generally been available for inclusion in stock assessments, although discards are estimated to be negligible. It is expected that misreporting of catches occurs, as estimates of species composition of clupeid catches are imprecise in some mixed pelagic fisheries. This is taken into account when assessing sprat stocks (ICES, 2018).</p> <p>Biological information used in the assessment includes stock abundance estimates from the BASS and BIAS surveys and natural mortalities from the SMS multispecies model until 2018, 2019 =2018, 2020 from regression with eastern Baltic cod biomass of individuals ≥ 20 cm and (ICES, 2021c). Clause A2.1 is met.</p> <p>A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.</p> <p>Reference points have been defined for the stock under ICES MSY and precautionary approach and also under the Baltic Sea MAP. Both MSY and PA reference points were re-estimated during an Inter-Benchmark Process (IBP) on Baltic Sprat (<i>Sprattus sprattus</i>) and herring (<i>Clupea harengus</i>) (IBPBASH) in March 2020 (ICES, 2020b). The reference points are presented in the table below.</p>			

TABLE 8. SPRAT IN SUBDIVISIONS 22–32. REFERENCE POINTS, VALUES, AND THEIR TECHNICAL BASIS. WEIGHTS IN TONNES (SOURCE: ICES. 2021c)

Framework	Reference point	Value	Technical basis
MSY approach	MSY $B_{trigger}$	570 000	Assumed at B_{pa}
	F_{MSY}	0.31	Stochastic simulations with Beverton–Holt stock–recruitment model
Precautionary approach	B_{lim}	410 000	Stock–recruitment relationship (average of biomasses which produce half of the maximal recruitment in the Beverton–Holt and Ricker models)
	B_{pa}	570 000	$B_{lim} \times \exp(1.645 \times \sigma)$, where $\sigma = 0.2$
	F_{lim}	0.63	Consistent with B_{lim}
	F_{pa}	0.41	F_{POS} . The F that leads to $SSB \geq B_{lim}$ with 95% probability
Management plan	MAP MSY $B_{trigger}$	570 000	MSY $B_{trigger}$
	MAP B_{lim}	410 000	B_{lim}
	MAP F_{MSY}	0.31	F_{MSY}
	MAP target range F_{lower} – F_{MSY}	0.22–0.31	Consistent with the ranges that result in a no more than 5% reduction in long-term yield compared with MSY
	MAP target range F_{MSY} – F_{upper}	0.31–0.41	Consistent with the ranges that result in a no more than 5% reduction in long-term yield compared with MSY

The latest stock assessment (ICES, 2021c) shows SSB is above MSY $B_{trigger}$ in 2021 and has been since 1991 (see figure below). Fishing mortality has been above F_{MSY} since 2002.

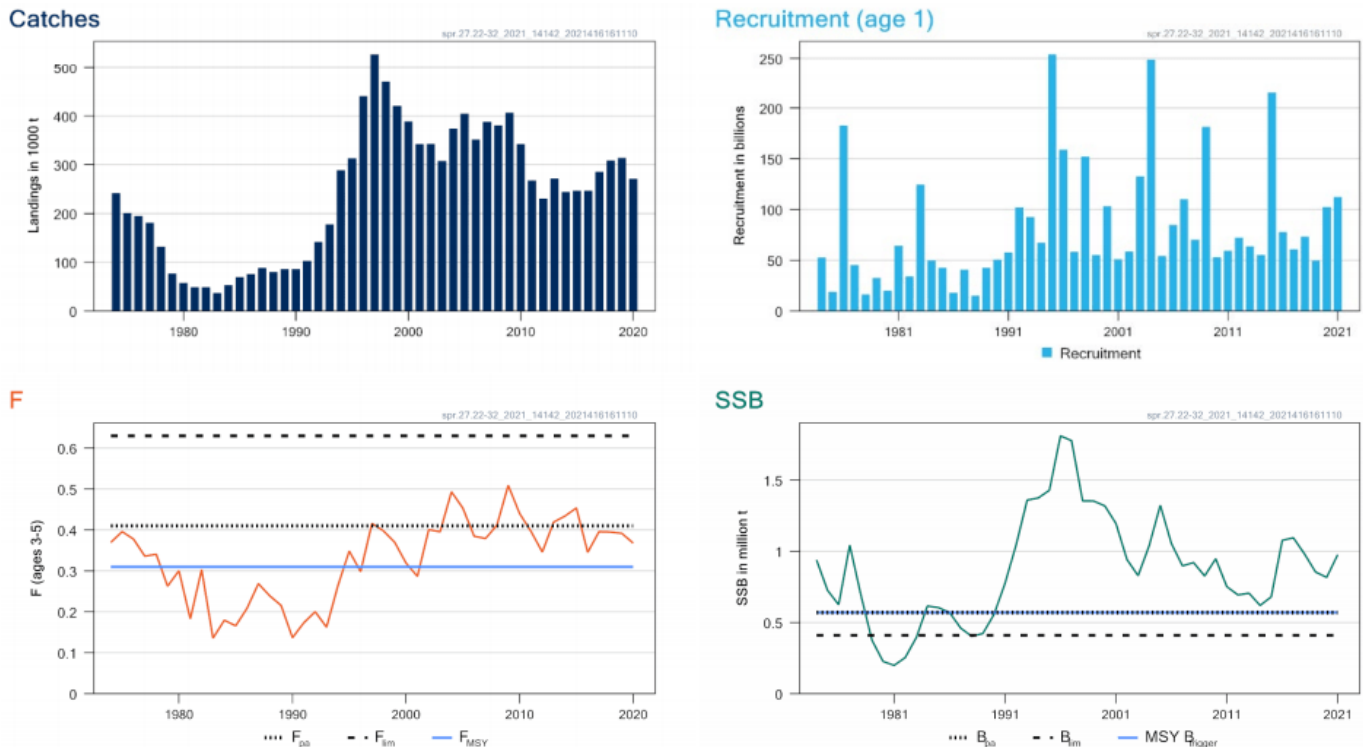


FIGURE 2. SPRAT IN SUBDIVISIONS 22–32. SUMMARY OF THE STOCK ASSESSMENT. SSB AT SPAWNING TIME IS PREDICTED FOR 2021 (SOURCE: ICES. 2020c).

Species misreporting of sprat has occurred in the past and there are again indications of sprat being misreported as herring. These effects have not been quantified (ICES, 2021c).

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

As noted above commercial catches are used in the assessment of stock status. ICES have raised a number of issues relevant to the assessment of fishery removals:

ICES has been stating for several years that pelagic fisheries take a mixture of herring and sprat and this causes uncertainties in catch levels. The extent to which species misreporting has occurred is however not well known. Analysis of a questionnaire answered by all Baltic countries during 2012 revealed that misreporting is mainly an issue of the industrial trawl fishery targeting sprat-herring mix in nearshore waters. Countries with major proportions of sprat catches used for industrial purposes are Sweden, Poland and Denmark. Countries with major proportions of herring catches used for industrial purposes are Finland and Sweden. The official catch figures of both sprat and herring are modified by Poland and Denmark, but not currently in Sweden. A worst-case scenario using the permitted margin of tolerance of 10% in the logbooks of the quantities by species on board (EU 1224/2009) revealed that sprat catches may be underestimated by 5% and that herring catches may be underestimated by 4%. It was, therefore, concluded at the time after the questionnaire that that species misreporting could be regarded as minor importance. However, as Sweden is not currently correcting for this misreporting and preliminary analyses by Sweden suggests that misreporting of sprat and herring is significantly worse than 5% and 4%, this issue needs to be investigated as soon as possible and when data available addressed in a benchmark. Significant misreporting can potentially be a large problem with regards to the perception of these stocks (ICES, 2020b).

Nonetheless, the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status. **Sub-clause A2.3 is met**

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

The assessment of Baltic sprat is conducted annually at the ICES WGBFAS (ICES 2021b), where fisheries scientists from about nine European fisheries laboratories participate. The assessment is presented and reviewed at the meeting and must meet ICES standards to be accepted. If the assessment is agreed, it is subsequently reviewed by the ICES Advice Drafting Group which consists of National Experts and, finally, by the Advisory Committee (ACOM) which delivers the ICES advice.

A group of external experts participate every few years in the benchmark process to provide a review of the assessment. The most recent meeting was for an inter-benchmark in March 2020 (ICES, 2020b).

The assessment is subject to internal and external peer-review. **Sub-clause A2.4 is met.**

A2.5 The assessment is made publicly available.

ICES operate a transparent assessment framework (TAF); an online open resource of annual ICES stock assessments. All data input and output are fully traceable and versioned. The open framework enables anyone to easily find, reference, download, and run the assessment from any stage in the process leading to published ICES advice for a given stock.

Stock Assessments are made publicly available on the ICES website. **Sub-clause A2.5 is met.**

References

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ICES Transparent Assessment Framework
<https://www.ices.dk/data/assessment-tools/Pages/transparent-assessment-framework.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.	Yes
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.	Yes
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).	Yes
Clause outcome:		Pass
<p>A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.</p> <p>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.</p>		

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).

The main mechanism to restrict total fishing mortality is the Baltic Sea MAP (Regulation (EU) No 2016/1139 as amended). The multiannual plan established, is based on scientific, technical and economic advice and contains objectives, quantifiable targets with clear time frames, conservation reference points and safeguards which work together towards achieving stock management objectives. The MAP specifies that the target fishing mortality should be maintained (by 2020) in line with the ranges of F_{MSY} specified in the plan, informed by advice on the state of the stock which is assessed annually by ICES. It requires that fishing opportunities (the TAC) for the stock should be established within the lower range of F_{MSY} available at that time for the stock. In specific circumstances fishing opportunities may be fixed in line with the upper range of F_{MSY} , provided that the stock is above $MSY B_{trigger}$. These circumstances include to avoid serious harm arising from intra- or inter-species stock dynamics.

The harvest strategy has been effective in maintaining Baltic sprat SSB above $MSY B_{trigger}$. TACs and catches are largely in line with ICES advice (provided in line with the MAP) – see table below. Whilst SSB has been maintained above $MSY B_{trigger}$ it is noteworthy that fishing mortality has been above F_{MSY} since 2002.

**TABLE 9. BALTIC SPRAT: ICES ADVICE, THE AGREED TAC AND ICES ESTIMATED CATCHES (ALL WEIGHTS ARE IN TONNES)
(SOURCE: ICES. 2021c)**

Year	ICES advice	Catch corresponding to advice	Agreed TAC	ICES catch
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2017	MSY approach (F = 0.26)	≤ 314000	303593**	285701
2018	MAP target F ranges: F_{lower} to F_{upper} (0.19–0.27), but F higher than $F_{MSY} = 0.26$ only under conditions specified in MAP	219152–301722, but catch higher than 291715 only under conditions specified in MAP	304900**	308827
2019	MAP target F ranges: F_{lower} to F_{upper} (0.19–0.27), but F higher than $F_{MSY} = 0.26$ only under conditions specified in MAP	225752–311523, but catch higher than 301125 only under conditions specified in MAP	313100**	314147
2020	MAP target F ranges: F_{lower} to F_{upper} (0.19–0.27), but F higher than $F_{MSY} = 0.26$ only under conditions specified in MAP	169965–233704, but catch higher than 225786 only under conditions specified in MAP	256700**	271531
2021	Management Plan	247952 (range 181567–316833)	268458**	
2022	Management Plan	291745 (range 214000–373210)		

** TAC is calculated as EU + Russian autonomous quotas.

The MAP requires that fishing opportunities are fixed in such a way that there is a less than 5% probability of the spawning stock biomass falling below B_{lim} . When scientific advice indicates that the spawning stock biomass of the stock is below B_{lim} , further remedial measures shall be taken to ensure rapid return of the stock to levels above the level capable of producing MSY. Those remedial measures may include suspending the targeted fishery for the stock and the adequate reduction of fishing opportunities.

Sub-clauses A3.1 to A3.3 are met.

References

ICES. 2021c. Sprat (*Sprattus sprattus*) in Subdivisions 22-32 (Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, spr.27.22-32. <https://doi.org/10.17895/ices.advice.7867>

Regulation (EU) 2016/1139 (as amended) of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R1139-20190814&from=EN>

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	<p>The stock is at or above the target reference point, OR IF NOT:</p> <p>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:</p> <p>The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p>	Yes						
Clause outcome:		Pass						
<p>A4.1 The stock is at or above the target reference point, OR IF NOT: As noted in clause A2, the stock is above the target biomass reference point (MSY B_{trigger}).</p> <p>Clause A4.1 is met.</p>								
<p>References</p> <p>ICES. 2021c. Sprat (<i>Sprattus sprattus</i>) in Subdivisions 22-32 (Baltic Sea). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, spr.27.22-32. https://doi.org/10.17895/ices.advice.7867</p>								
<p>Links</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">MARINTRUST Standard clause</td> <td style="width: 50%;">1.3.2.1.4</td> </tr> <tr> <td>FAO CCRF</td> <td>7.2.1, 7.2.2 (e)</td> </tr> <tr> <td>GSSI</td> <td>D6 01</td> </tr> </table>			MARINTRUST Standard clause	1.3.2.1.4	FAO CCRF	7.2.1, 7.2.2 (e)	GSSI	D6 01
MARINTRUST Standard clause	1.3.2.1.4							
FAO CCRF	7.2.1, 7.2.2 (e)							
GSSI	D6 01							

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
	Overlap of adult species range with fishery		
	Distribution		
	Habitat		
	Depth range		
	Selectivity		
	Post-capture mortality		
	Average Susceptibility Score		
	PSA Risk Rating (From Table D3)		
	Compliance rating		
References			
<i>Standard clauses 1.3.2.2</i>			

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.

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

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.	Yes
F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	Yes
F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	Yes
Clause outcome:		Pass
<p>F1.1 Interactions with ETP species are recorded.</p> <p>Recording of the catch of seabirds and mammals has been undertaken in some Baltic Sea fisheries, usually where there is perceived risk of such bycatch. Seabirds can become entangled in gillnets or hooked on longlines. Seals can be caught in submerged trap nets and harbour porpoises entangled in gillnets. Pelagic trawlers or purse seines in general are not known to cause significant bycatch of birds or mammals in the offshore fishery.</p> <p>There is a requirement for EU member states to record ETP bycatch initially through Council Regulation (EC) 812/2004 (which was focused on cetaceans, although member states also provided information on other species) and from 2019 through the technical Conservation Measures Regulation (EU Regulation 2019/1241) (Annex XIII sets out monitoring requirements for marine mammals, reptiles and seabirds) and the Habitats and Birds Directives (1992/43/EC and 2009/47/EC) also require monitoring of bycatch of species protected under the Directives (ICES, 2020d).</p> <p>Whilst the observer programmes have been running for a number of years, they have been abandoned in some countries on the basis that no records of incidental catch of marine mammals were made. For this reason, Denmark has not undertaken a specific marine mammal monitoring programme for its pelagic trawl fishery (monitoring is undertaken of its gillnet fisheries under the Data Collection Regulation (DCR) scheme) (ICES, 2019a). Observer coverage for some of these fisheries has been low (<5%).</p> <p>The Public Certification Report (PCR) for Denmark, Estonia, Germany, Sweden Baltic Sea herring and sprat (Lloyd’s Register, 2020) notes that the Denmark observer program includes at sea observer coverage and at sea self-sampling for vessels targeting small pelagic species in the Baltic Sea. The at sea observer scheme samples a subsample of the retained part of the haul at sea. The sub-samples are small and will in general only contain fish. The scheme is not designed to measure rare bycatch events (DTU Aqua <i>et al.</i>, 2018). The 2017-2019 data call indicates no records of incidental capture of marine mammals for the pelagic fleet in the Baltic. The PCT refers to the existence of the Danish Code of Conduct (CoC) which commits to the following:</p> <p><i>“To work to avoid catching marine mammals and other endangered and protected species. If we catch a protected species, we will record this in the PO logbook, and if it is still alive, we will return it to sea as quickly and gently as possible. The relevant species and how to register, are described in the wheelhouse guide and accompanying instructions. The registrations are monitored by the DFPO and shared with relevant scientific institutions. The extent of by-catches of the relevant species is calculated annually, and on this basis, DFPO may choose to develop a plan to reduce the extent (through advice, rules, development, etc.) if specific problems occur in specific fisheries or areas.”</i></p> <p>It further notes that data from the CoC on incidental by-catches from the Danish pelagic fleet in the Baltic Sea are not yet available so that quantitative data is not yet available however qualitative data is.</p>		

Interaction with ETP is considered rare. In the latest ICES WGBYC report (data from 2018), the only ETP species caught by pelagic trawls in the Baltic Sea was in the Gulf of Riga (outside the area of operation of this fishery) and related to incidents of capture of whitefish *Coregonus lavaretus*. Whilst recording of interaction is an area for improvement (hence the condition on the Danish fishery in the MSC assessment) it is sufficient to meet the requirements of F1.1. **Clause F1.1 is met.**

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

At least four species of marine mammals can be found in the Baltic Sea: grey seal; harbour seal; ringed seal and a small population of harbour porpoise. The status of grey seals is generally good, whereas that of the Baltic proper ‘Kalmarsund’ population of common seal and the southern populations of ringed seal is poor according to the latest HELCOM assessment (HELCOM, 2018a; HELCOM, 2018b). The two sub-populations of harbour porpoise in the Baltic Sea are also considered to be in a poor state. The Western Baltic (or Belt Sea) population is classified as vulnerable on the HELCOM Red List of species in danger of becoming extinct, which uses the IUCN Red List criteria as its basis, and the Baltic proper sub-population is classified as critically endangered (HELCOM, 2013a).

As noted in the previous clause there is little evidence of bycatch of marine mammals in the pelagic trawl fisheries from observer programmes although coverage is low. The ICES Working group on Bycatch (WGBYC) recently assessed the bycatch risk posed by different fishing gears to protected species in the Baltic Seas using expert judgement. Each combination of protected species and gear type was assigned a simple 1 to 3 (lower-higher risk) score. Pelagic trawls were scored at ‘1’, except for seals and harbour porpoise which were scored at ‘2’ based on a record from Poland of one porpoise bycatch from a pelagic trawl (Skora and Kuklik, 2003 cited in ICES, 2018).

The most likely indirect effects from pelagic trawl fisheries is prey depletion. HELCOM have reviewed and identified threats to the Baltic seal populations (HELCOM, 2013b). With the exception of grey seals, prey depletion is not identified as a major threat to the populations in the Baltic. Grey seals are generalist feeders taking a wide variety of prey including sandeels, gadoids (cod, whiting, haddock, ling) and flatfish (plaice, sole, flounder, dab) (ICES, 2015). Amongst these sandeels are typically the most important. Diet varies seasonally and from region to region. Taking into account these preferred forage species it is unlikely the fishery is posing a risk to grey seals.

The Baltic is an important overwintering ground for seabirds and sea ducks and nine of nineteen species breeding in the area are decreasing in numbers, ten have increased, nine were stable, and the trend was uncertain in one species (ICES Ecosystem Overview, Baltic Sea Ecoregion; ICES, 2020e). The greatest declines in breeding numbers were observed in common eider *Somateria mollissima* and great black-backed gull *Larus marinus*. Three species that feed mainly on herring and sprat (common guillemot, razorbill, and Arctic tern) have increased in number over recent decades. The Baltic Sea is an important wintering area for many species, including the globally threatened long-tailed duck, velvet scoter *Melanitta fusca*, and Steller’s eider *Polysticta stelleri*. These three species have been declining in number during the last 25 years, as have many other benthic-feeding species (ICES, 2020e). However, pelagic trawls have not been identified as posing a significant risk to seabirds.

In conclusion, there is no substantial evidence that the fishery has a significant negative effect on ETP species. **Clause F1.2 is met.**

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

Denmark is a contracting party to HELCOM which agreed in 2006 on a Recommendation of the 'Conservation of seals in the Baltic Sea'. This is a regional agreement on joint management principles, management units for the different seal populations, limit reference levels for the respective management unit, and coordinated monitoring programmes.

Denmark is a contracting party to the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS). The purpose of the Agreement is to achieve and maintain a favourable conservation status for small cetaceans. ASCOBANS has made a number of resolutions relating to harbour porpoise bycatch, most recently in ASCOBANS Resolution 8.5, which sets out targets for the reduction of bycatch. A number of harbour porpoise recovery plans have also been developed of which the 'Jastarnia Plan' (ASCOBANS, 2016) covers the harbour porpoise in the Baltic Sea, and a plan covering the Western Baltic, Belt Sea and Kattegat population (ASCOBANS, 2012). These list a range of actions to protect harbour porpoise including for instance by reducing bycatch in fisheries towards zero, designating marine protected areas for them and minimising the impacts of anthropogenic noise.

ICES has recently been requested by the EU to produce advice on emergency measures to prevent bycatch of harbour porpoise (ICES, 2020f). Following this advice, BALTFISH and the European Commission met on the 3rd March 2021 and agreed emergency measures for the protection of harbour porpoises for 6 months starting April/May 2021. These measures (closures, use of pingers) are focused on the 'fisheries of concern', namely static net fisheries (i.e. trammel net, gillnet and semi-driftnet) rather than the pelagic trawls considered in this assessment.

The EU technical measure regulations, which covers all marine mammals listed under the Habitats Directive Annexes II and IV and seabirds covered by the Birds Directive, prohibits their capture and where captured requires their prompt release. Monitoring and reporting requirements also apply to marine mammals and seabirds as referred to in F1.1.

Pelagic trawlers are not known to cause significant bycatch of ETP in the offshore fishery in the Baltic Sea but there is some evidence of interaction. Measures are in place to minimise mortality including area closures (e.g. offshore from mouth of Oder), ban on fishing in inshore areas in certain locations as well as monitoring requirements, marine protected areas designated for ETP species, a ban on capture of ETP and where this occurs their prompt release. **Clause F1.3 is met**

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Oder closure

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REGULATION (EU) 2019/1241 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1241&from=EN	
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.	Yes
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	Yes
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	Yes
			Clause outcome: Pass
<p>F2.1 Potential habitat interactions are considered in the management decision-making process.</p> <p>F2.2 There is no substantial evidence that the fishery has a significant negative impact on physical habitats.</p> <p>F2.3 If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.</p> <p>Pelagic trawl gears are not designed to make contact with the seabed, such contact is likely to be minimal and consequently this gear is considered to have marginal impact on benthic habitats and bottom structures. In relation to impact upon the pelagic habitat, the trawl fisheries are targeted at dense homogeneous shoals of herring and sprat with very little bycatch of non-target species so impacts on biological diversity and abundance of the habitat is limited to the target species and bycatch.</p> <p>The HELCOM Baltic Sea Action Plan (BSAP) is a programme to restore the good ecological status of the Baltic marine environment by 2021. The Plan, adopted by all the Baltic coastal states and the EU in 2007, provides the basis for HELCOM work. Under BSAP, several actions are being implemented. Of relevance here, is the establishment of an ecologically coherent and effectively managed network of coastal and marine Baltic Sea protected areas (HELCOM MPAs) to protect marine habitats and species. As at 2018, 11.8% of the total marine area of the Baltic Sea is covered by HELCOM MPAs.</p> <p>HELCOM Recommendation 35/1 also emphasizes the development and implementation of management plans for MPAs, as well as assessing the effectiveness of management plans, or other measures, to ensure protection. One of the commitments is to develop and apply management plans, or measures, for all existing HELCOM MPAs by 2015, and to establish a management plan, or measures, for every new MPA within five years after its designation. This agreement has not been met; currently, of the 176 established HELCOM MPAs, 127 (72%) have a management plan in force, and 39 HELCOM MPAs (22%) have a management plan under preparation. Regarding the monitoring within MPAs which is required to assess their effectiveness, this occurs in 64% of HELCOM MPAs (HELCOM, 2016).</p>			

In addition to the work of HELCOM, habitats are provided protection through the Natura 2000 network established under the EU Birds and Habitats Directives (2009/147/EC; 92/43/EEC). This is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. Under Article 6 of the Habitats Directive, Member States are required to establish the necessary conservation measures, including if necessary, management plans for these sites and the impact of any ‘plans or projects’ likely to have a significant effect on the sites subject to assessment. The definition of “plans or projects” is broad and includes fishing activities. Conservation measures have been developed in the Baltic Sea, in particular to protect reef sites in Denmark from demersal gears used by the nations fishing there, by excluding these gears in reef zones (Regulation (EU) 2017/1181).

The Technical Measures Regulation (Regulation (EU) 2019/1241) also sets out technical measures which can protect habitats including regional measures under Article 15 and powers to introduce real-time closures and moving-on provisions. The regional measures for the Baltic Sea include a closed area for any active gear (offshore from the mouth of the Oder) and temporal area restrictions on fishing with any gear (Annex VIII).

In conclusion, potential habitat interactions are considered in the management decision-making process through the BSAP with its associated measures, the requirements associated with Natura 2000 sites and the technical measures under EU Regulations. There is no substantial evidence that the fishery has a significant negative impact on physical habitats. The pelagic trawl gears operate in the water column. Pelagic trawlers using fishfinders to locate their target shoal and netsounders to monitor the position of the gear, technology which enables fishers to avoid the gear contacting the bottom. This gear is considered to have marginal impact on benthic habitats and bottom structures. **Clauses F2.1, F2.2 and F2.3 are met.**

References

COMMISSION DELEGATED REGULATION (EU) 2017/1181 of 2 March 2017 amending Delegated Regulation (EU) 2017/117 establishing fisheries conservation measures for the protection of the marine environment in the Baltic Sea and repealing Delegated Regulation (EU) 2015/1778

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1181&from=EN>

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:01992L0043-20130701>

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0147>

<https://helcom.fi/baltic-sea-action-plan/>

<https://helcom.fi/action-areas/marine-protected-areas/basic-facts/>

<https://helcom.fi/action-areas/marine-protected-areas/management-of-helcom-mpas/>

HELCOM Recommendation 35/1. Adopted 1 April 2014.

<https://helcom.fi/wp-content/uploads/2019/06/Rec-35-1.pdf>

HELCOM, 2016. Ecological coherence assessment of the Marine Protected Area network in the Baltic. Balt. Sea Environ. Proc. No. 148

https://helcom.fi/wp-content/uploads/2019/08/BSEP148.pdf	
Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005.	
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241	
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.	Yes
F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	Yes
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.	Yes
Clause outcome:		Pass

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

The Baltic Sea main commercial fisheries (i.e. cod, sprat and herring) are regulated through the Baltic Sea MAP (Regulation (EU) 2016/1139). The objectives of the MAP, as set out in Article 3, are inter alia to:

- contribute to the achievement of the Common Fisheries Policy (CFP) (Regulation (EU) 1380/2013) in particular through the application of the precautionary approach to fisheries management.
- implement the ecosystem-based approach to fisheries management in order to ensure that negative impacts of fishing activities on the marine ecosystem are minimised.
- be coherent with EU environmental legislation, in particular with the objective of achieving good environmental status by 2020 as set out in the Marine Strategy Framework Directive MSFD (Directive 2008/56/EC)

The MAP takes account of the multi species context of the Central Baltic fisheries by using a multi-species model to determine the predation impact of the cod stock on herring and sprat. The model outputs are used to determine the natural mortality of each species, and hence the F reference points used to manage the fishery under Article 4 of the MAP. Thus, the reference points for the central Baltic herring stock take account of the role of this stock as a prey item for cod.

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

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

The most significant potential ecosystem impact of the fishery is the removal of herring and sprat biomass. These species are a potential source of food for demersal fish (cod), for birds and for sea mammals.

Cod, herring and sprat comprise the bulk of the fish community in the Baltic proper both in terms of biomass and numbers. Cod is the main predator on herring and sprat and herring and sprat prey on cod eggs and compete with each other for food. Removal of sprat and cod by fisheries could therefore have an impact on the food available for cod.

Depletion of cod in the Baltic Sea in the 1990s has contributed to a shift in the trophic structure from a cod-dominated system to a clupeid-dominated one. Whilst the stock of central Baltic herring has declined recently, the stock of Baltic sprat is healthy.

The ICES Ecosystem Overview (ICES, 2020e) noted that the populations of three seabird species that feed mainly on herring and sprat (common guillemot, razorbill, and Arctic tern) have increased in number over recent decades. As noted in the previous clause, prey depletion of the target clupeids is not considered a major threat to the Baltic Sea harbour porpoise and seal populations. This suggests that food is available and that herring/sprat at present are not constraining these populations.

However, in recent years there has been a mismatch in the spatial overlap between the cod stock (eastern Baltic stock) and the clupeid stocks. ICES (2019c) note that nutritional condition of adult cod has been continuously declining since the early 1990s and that since the mid-2000s, the proportion of cod with a very low condition index rapidly increased. The decline in cod condition is evident in all offshore areas of the central Baltic. Over this time the clupeids have significantly decreased in the southern Baltic where the cod is concentrated, with sprat and herring now more northerly distributed with little overlap with cod (Eero *et al.*, 2012 cited in ICES, 2019d). This lack of overlap has been hypothesized as one of the main reasons for the current poor condition of the cod stock, together with poor oxygen conditions thought to affect cod metabolism and increased infestation with parasites (ICES, 2019c). ICES note that these drivers are interrelated, and the relative effect on the cod stock is unclear (ICES, 2019e).

Given the healthy status of sprat stocks in this area and evidence of increases in predator populations that rely on the clupeid stocks, it is considered that there is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem. However, the current poor condition of the cod stock, a factor in which is thought to be the lack of spatial overlap with its clupeid prey and the potential for the fishery to exacerbate the problem is an area of uncertainty. **Clause 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.

As noted in F3.1, the central Baltic herring and sprat stocks are managed according to an MSY strategy where key trophic interactions are incorporated. Predation pressure on sprat by cod is taken into account in the assessment, reference points, management regulations (MAP ranges). However, there is some uncertainty arising from the spatial separation of the cod and herring stock (referred to in the previous sub-clause) which is hypothesised could be one of the main reasons for its poor growth and condition and which affects the data used in the multi-species models used for stock assessment and estimation of reference points.

On balance, it can be said that additional precaution is included in recommendations relating to the total permissible fishery removals. **Clause F3.3 is met.**

References

ICES. 2020e. Baltic Sea Ecoregion – Ecosystem overview. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Section 4.1, <https://doi.org/10.17895/ices.advice.7635>

<p>ICES, 2019c. Stock Annex: Cod (<i>Gadus morhua</i>) in Subdivisions 24–32, eastern Baltic stock. 8 February, 2019. https://www.ices.dk/sites/pub/Publication%20Reports/Stock%20Annexes/2019/cod.27.24-32_SA.pdf</p> <p>ICES, 2019d. ICES Fisheries overviews. Baltic Sea Ecoregion. Published 2 September 2019. Version 2: 29 November 2019.</p> <p>ICES, 2019e. Cod (<i>Gadus morhua</i>) in subdivisions 24-32, eastern Baltic stock (eastern Baltic Sea). In Report of the ICES Advisory Committee, 2019, cod.27.24-32. https://doi.org/10.17895/ices.advice.4747</p> <p>Regulation (EU) 2016/1139 (as amended) of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R1139-20190814&from=EN</p>	
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 r_m . 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>]

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)

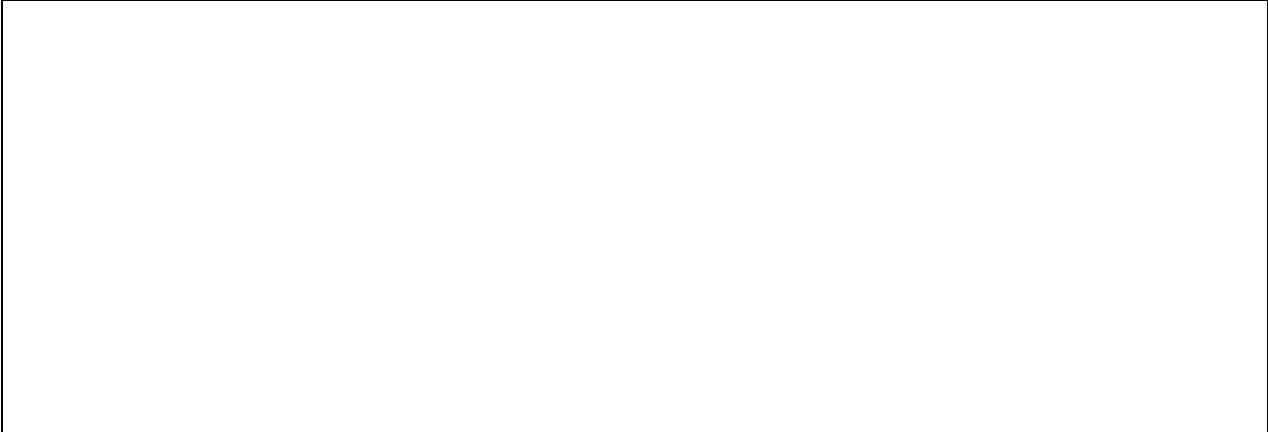
Appendix B

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	Central Baltic herring_Denmark_ICES subdivisions 25-29 and 32_July_2020
Management authority (Country/State)	EU, Denmark
Main species	Central Baltic herring (<i>Clupea harengus</i>) Baltic sprat (<i>Sprattus sprattus</i>)
Fishery location	FAO 27 Northeast Atlantic - Baltic Sea (ICES subdivisions 22 - 32)
Gear type(s)	Pelagic trawl

Summary: in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.



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?
<p>The assessment report is adequate, the MARINTRUST standard has been adequately applied and the information provided seem to be enough to justify the scores assigned to the different categories. This is a pelagic fishery with relatively low impact on bycatch species and the habitat. Three main concerns:</p> <ul style="list-style-type: none"> • The target stock is very close to the Blim which is very worrying. A management plan has been implemented for the fishery. However, based on the stock status of the targets species, I have some concerns about how fishing mortality (F) is restricted as it seems that F is over FMSY and it is not adequately controlled. • The level of misreporting in the fishery is estimated but largely unknown, which could potentially be a large problem with regards to the perception of these stocks (particularly for the herring stock). • The low level of observer coverage prevents to know the real impact of the fishery on ETP species. Although the impact of pelagic fisheries seems to be lower than in gillnet fisheries, the fishery could potentially be a threat to the critically endangered population of the Baltic harbour porpoise, even if it is caught in low numbers.

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?

The MARINTRUST standard has been adequately applied to this assessment.

3. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?

The species categorisation is based on the STECF Fishery Dependant Information, and it seems to be adequate. Two species, Central Baltic herring and Baltic sprat make up 100% of the catch and are classified as category A species. No category B, C and D species are present in the catch according to this data. However, in the report it is noted: "ICES note that mixing of central Baltic herring and Gulf of Riga herring occurs in the central Baltic Sea". So, the Gulf of Riga herring should not be included as category C species here?

3M. Are the scores in "Section M – Management" clearly justified?

A management system is in place for the fishery in the Baltic Sea. The EU adopted a multiannual management plan for cod, herring and sprat in the area. Scientific data is collected by the DTU Aqua. Few minor comments:

M1.6 Yes, I agree that more transparency is necessary on fishing quota negotiations between governments.

M2.1 As in previous reviews, this list of information corresponds specifically to the Danish fisheries management website, or it is a general statement?

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

The information provided is clear. Commercial and survey data is collected for both species. A harvest strategy is in place for both species. Reference points have been defined. The herring stock is below the target reference point and very close to Blim. In the case of the Baltic sprat, the SSB is over the MSY Btrigger (although F is higher than the recommended level). The mechanism in place for restricting Fishing mortalities for these stocks does not seem very effective and misreporting can be an additional problem. Some other minor comments:

Central Baltic herring

A2 Major concerns about the status of this species. Fishing mortality has increased since 2014 (it is now above Fpa) (although it was reduced in the last year). The stock is very close to Blim and there has been no strong recruitments since 2015. I am concerned about what will happen in the following years if fishing mortality is not adequately controlled. So, this stock needs to be carefully watched.

A2.3 The level of misreporting has been estimated (but it is largely unknown) and due to the current status of the stock, this issue is very worrying.

A3 Again, the mechanism to control F does not seem to be effective at all. Fishing mortality has increased in recent years, and recent catches have been above the advice and the agreed TAC. So, I have my doubts about if Sub-clause A3: *There is a mechanism in place by which total fishing mortality of this species is restricted* – Yes, there is but it is not being effective at all.

Sprat

Very similar concerns here, about the level of misreporting and the total catch being above the advice and the agreed TAC, but at least this stock is doing better and it is above the target reference point.

A3. Yes, a mechanism is in place to restrict total fishing mortality, but in recent years, catches have regularly been slightly over the agreed TAC and F is above FMSY. So, I do not think it is very effective.

3B. Are the “Category B Species” scores clearly justified?

No Category B species identified.

3C. Are the “Category C Species” scores clearly justified?

No Category C species identified.

3D. Are the “Category D Species” scores clearly justified?

No Category D species identified.

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

My main concern is about the low level of observer coverage in the fishery (<5%). Although it is true that the impact of pelagic fisheries on ETP species in the area is lower than in other fisheries (such as gillnets), coverage should be improved. According to a recent report from PEW, observer coverages below 20% (Griffiths et al., 2021) are not enough to assess the potential impact of the fishery on target and bycatch species.

It is important to highlight that the Baltic Sea harbour porpoise population is Critically endangered with only 599 individuals left (<https://www.ascobans.org/en/species/phocoena-phocoena>) and even the catch of very few individuals of this species may have an important impact on the population. And according to the information provided by the assessor, the pelagic trawl presents a potential medium risk on these species.

Griffiths et al., 2021. Update on operational longline observer data required under resolution c-19-08 and a preliminary assessment of data reliability for estimating total catch for bycatch species in the eastern pacific ocean. Available at: https://www.iattc.org/Meetings/Meetings2021/BYC-10/English/BYC-10-INF-D_Update%20on%20operational%20longline%20observer%20data.pdf

Optional: General comments on the Peer Review Draft Report

The summary at the beginning of the report is very informative.