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IFFO RS
Global Standard for Responsible Supply
of Marine Ingredients

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**Global Standard for
Responsible Supply
of Marine Ingredients**
Fishery Assessment
Methodology and
Template Report V2.0



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Fishery Under Assessment	Central Baltic herring <i>Clupea harengus</i>
Date	July 2020
Report Code	2020 - 60
Assessor	Conor Donnelly
Stock (s) Pass	Central Baltic herring ICES subdivisions 25-29 and 32 excluding the Gulf of Riga
Stock (s) Fail	

Application details and summary of the assessment outcome

Name:				
Address:				
Country: Denmark, Latvia			Zip:	
Tel. No.:			Fax. No.:	
Email address:			Applicant Code	
Key Contact:			Title:	
Certification Body Details				
Name of Certification Body:			SAI Global	
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval	Whole fish/ By-product
Conor Donnelly	Virginia Polonio	2.5	Surveillance 1	Whole fish
Assessment Period		2020		

Scope Details

Management Authority (Country/State)	EU, Denmark: Ministry of Food, Agriculture and Fisheries; Latvia: National Board of Fisheries of the Ministry of Agriculture; Russia: Federal Agency for Fishery
Main Species	Herring <i>Clupea harengus</i>
Fishery Location	Central Baltic Sea, ICES subdivisions 25-29 and 32, excluding Gulf of Riga
Gear Type(s)	Pelagic trawl
Outcome of Assessment	

Overall Outcome	PASS
Clauses Failed	NONE
Peer Review Evaluation	Agree with scores
Recommendation	PASS

Assessment Determination
<p>In this surveillance the main change has been that the spawning stock biomass has dropped just below the target reference point (MSY $B_{trigger}$). However, clause A4 is still met since 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.</p> <p>As noted in the original assessment there remains uncertainty regarding the level of mixing of western Baltic spring-spawning herring (WBSSH) with the central Baltic stock. Consequently, WBSSH has been assessed here as a bycatch species, initially as a category C species but when it failed clause C1.2 because it is below its limit reference point (B_{lim}), it was assessed under clause D and passed.</p> <p>In relation to ecosystem effects of the fishery, clause F3 is passed. However, whilst herring (and sprat stocks) in the Baltic proper are considered healthy there is evidence of a spatial separation in the southern Baltic of the clupeid stocks and the eastern Baltic cod stock for which these are key prey species and which is in poor status. There is some uncertainty arising from this including whether fishery removals may exacerbate the problem.</p> <p>Central Baltic herring is assessed as of least concern on the IUCN Red List and is not on the current list of CITES endangered species.</p> <p>Central Baltic herring is approved by the assessment team for the production of fishmeal and fish oil under the IFFO-RS v 2.0 by-products standard.</p>
Peer Review Comments
Notes for On-site Auditor

Note: This table should be completed for whole fish assessments only.

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

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A	Central Baltic herring <i>Clupea harengus</i>	95	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B				
Category C	Sprat <i>Sprattus sprattus</i>	≤5	PASS	
Category D	Western Baltic spring-spawning herring <i>Clupea harengus</i>	≤5	PASS	

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

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)**Category A:** Species-specific management regime in place.**Category B:** No species-specific management regime in place.**TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)****Category C:** Species-specific management regime in place.**Category D:** No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Herring	<i>Clupea harengus</i>	Subdivisions 25-29 and 32 (excl. Gulf of Riga. Central Baltic herring.	95	EU, Baltic MAP	A
Sprat	<i>Sprattus sprattus</i>	Subdivisions 22-32. Baltic sprat.	≤5	EU, Baltic MAP	C
Herring	<i>Clupea harengus</i>	Subdivisions 20-24. Western Baltic spring-spawners	≤5	EU, Baltic MAP	D

MANAGEMENT

The two clauses in this section relate to the general management regime applied to the fishery under assessment. 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 publically 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 publically available	YES
Clause outcome:		PASS

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

The fishery is managed within the context of the EU Common Fisheries Policy (CFP) and the Danish and Latvian national systems 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.

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.

In Denmark, responsibility for fisheries management lies with the Ministry of the Environment and Food. The Danish Fisheries Agency is under the Ministry and implements the government's fisheries policy with responsibility *inter alia* for policy preparation, fisheries control, regulatory preparedness and participation in international co-operation.

The Danish National Institute of Aquatic Resources (DTU Aqua) at the Technical University of Denmark (DTU) conducts research and provides advice on fisheries research to all stakeholders.

In Latvia, fisheries administration is through the Fisheries Department of the Ministry of Agriculture, responsible for the overall management of the fisheries sector, including implementation of fisheries policy, management of fish resources, coordination of measures and obligations arising from the EU Common Fisheries Policy, national fishery legislation and coordinating operations of the Fisheries Integrated Control and Information System. The State Environmental Service (SES), part of the Ministry of Environmental Protection and Regional Development, carries out fishing controls in marine waters under Latvian jurisdiction. An action plan was agreed with the EU in 2013 to address shortcomings in Latvia's national fisheries control system.

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. The EU and Norway concluded an agreement on fisheries management cooperation in 1980, and annual negotiations are conducted separately for the North Sea stocks and the Skagerrak/Kattegat stocks.

There is an organisation responsible for managing the fishery. **Sub-clause M1.1 is met.**

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

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 aquatic resources. DTU Aqua

directly advises the Danish Ministry of Food, Agriculture and Fisheries and other public authorities. Scientists based in Latvia's Ministry also contribute to stock advice on the species.

Science-based fishery management advice at the international level is provided by the International Council for the Exploration of the Sea (ICES).

ICES provides annual stock assessment and management advice in relation to the central Baltic herring fishery 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.

Baltic Sea Advisory Council:

Also relevant to the management of herring in the Baltic Sea is the Baltic Sea Advisory Council (BSAC). The main objective of the BSAC is to provide advice on the management of Baltic fisheries, through its membership of representatives of the fishing industry and other non-governmental groups affected by the CFP, including NGOs, consumers and others.

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 and Latvia are Member States of the European Union, and therefore in Community waters implement the CFP and the central Baltic herring 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 and Latvia are Member States of the European Union, and therefore in Community waters are subject to and implement 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. TAC's are then set annually by the European Council. Some multi-annual plans (as in the case of the Baltic MAP for central Baltic herring) 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.

The Danish Fisheries Act sets regulations on the management and conservation of fishery, aquaculture, and trade in related activities with the purpose of ensuring the protection and rehabilitation of natural resources in salt and fresh waters, as well as the protection of other animal and plant species providing a sustainable basis for commercial and recreational fishing.

In Latvia the Fishing Law (12.04.1995, as amended) sets the basis for fisheries legislation in Latvia and institutions responsible for fisheries management and control, as well as rules on fish resources management.

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 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 published annually in the Baltic Sea Fishing Opportunities Regulation.

A number of NGOs have recently made recommendations on improving transparency in the decision-making process in Baltic Sea fisheries management (Joint NGO recommendations, 10 June 2020). These recommendations include providing transparent calculations for TACs based on the ICES advice on fishing opportunities and making publicly available any proposals subsequent to the official Commission proposal, including Commission non-papers, Council Working Party, and AGRIFISH Council documents and minutes.

There are improvements to be made but on balance the decision-making process is transparent, with processes and results publicly available sufficient to meet this sub-clause. **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

Danish Fisheries Act

<http://www.fao.org/faolex/results/details/en/c/LEX-FAOC134943/>

Danish Fisheries Agency

<https://fiskeristyrelsen.dk/erhvervsfiskeri/>

Danish National Institute of Aquatic Resources

<https://www.aqua.dtu.dk/english/about>

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

ICES – who we are

<https://www.ices.dk/about-ICES/who-we-are/Pages/Who-we-are.aspx>

ICES latest advice on central Baltic herring

<http://ices.dk/sites/pub/Publication%20Reports/Advice/2020/2020/her.27.25-2932.pdf>

Joint NGO recommendations on Baltic Sea fishing opportunities for 2021. 10 June 2020.

<https://www.wwf.baltic.org/news/joint-ngo-recommendations-on-baltic-sea-fishing-opportunities-for-2021/>

Latvian Fisheries Department

<https://www.zm.gov.lv/en/statiskas-lapas/zemkopibas-ministrija/statiskas-lapas/fisheries-department?id=4225#jump>

Latvian State Environmental Service (SES)

[http://www.vvd.gov.lv/eng/about-](http://www.vvd.gov.lv/eng/about-us/#:~:text=The%20State%20Environmental%20Service%20(SES,of%20the%20Republic%20of%20Latvia_)

[us/#:~:text=The%20State%20Environmental%20Service%20\(SES,of%20the%20Republic%20of%20Latvia_](http://www.vvd.gov.lv/eng/about-us/#:~:text=The%20State%20Environmental%20Service%20(SES,of%20the%20Republic%20of%20Latvia_)

Latvian Fishery Law

<https://likumi.lv/ta/en/id/34871-fishery>

[law#:~:text=\(1\)%20A%20natural%20person%2C,prohibited%2C%20except%20for%20lakes%20which](https://likumi.lv/ta/en/id/34871-fishery)

STECF home page

<https://stecf.jrc.ec.europa.eu/>

Standard clauses 1.3.1.1, 1.3.1.2

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
Evidence		
M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations		
<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 in connection with the recovery of cod stocks in the Baltic.</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; • List of authorised vessels holding a special permit for fishing for cod in the Baltic Sea; • 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 Fisheries Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules in Denmark. The State Environmental Service (SES), part of the Ministry of Environmental Protection and Regional Development, carries out fishing controls in marine waters under Latvian jurisdiction.</p> <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.</p>		

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.

In 2020 (Jan-Mar) a JDP was undertaken in EU Waters Subdivisions 22-32 (Baltic Sea) with the participation of inspection services and assets from competent authorities in Denmark, Estonia, Finland, Germany, 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 Fisheries Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules in Denmark. State Environmental Service (SES), part of the Ministry of Environmental Protection and Regional Development, carries out fishing controls in marine waters under Latvian jurisdiction.

There is an organisation responsible for monitoring compliance with fishery laws and regulations.
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 2019 in the Baltic involved competent authorities for fisheries control and protection vessels from Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden. The Report (Jan-Dec 2019) noted that a total of 3,182 inspections ashore were reported by Member States concerned. Inspection teams detected 82 apparent infringements on 79 fishing vessels. A total of 25,114t of herring were controlled during landings inspections.

During the reporting period Member States reported 917 inspections at sea with a total of 33 apparent infringements detected on 33 fishing vessels. A total of 1,419t of herring were controlled during inspections at sea.

The percentage of fishing vessels inspected at sea with apparent infringements was 3.6%; the percentage of fishing vessels inspected at port with apparent infringements was 2.5%. The main type of suspected infringement detected related to 'falsifying the logbook, landing declarations, sales notes, transfer declaration, transport docs or failure to keep or submit these documents, as required', accounting for 50% of all infringements detected. No IUU-related apparent 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 log-books.
- 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 Fisheries Agency undertakes fisheries control with surveillance using VMS (vessels over 12m) and carried out inspection at sea and landings.

In Latvia the Marine Environmental Board of the Ministry of Environment carries out fishing control in marine waters under Latvian jurisdiction, issues fishing licences, operates a VMS centre and monitors fish landing at ports.

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

European Fisheries Control Agency

<https://www.efca.europa.eu/en/content/objectives-and-strategy>

EFCA Joint Deployment Plan Baltic Sea January-March 2020.

<https://www.efca.europa.eu/sites/default/files/atoms/files/2020%20-%20THE%20BALTIC%20SEA%20JOINT%20CAMPAIGN%20-%203M%20REP%20WEB.pdf>

EFCA Joint Deployment Plan Baltic Sea January-December 2019

<https://www.efca.europa.eu/sites/default/files/atoms/files/2019%20-%20THE%20BALTIC%20SEA%20JOINT%20CAMPAIGN%20-%2012M%20REP%20WEB.pdf>

EU's Fisheries Control System

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

Fisheries control authorities in the Baltic Sea area

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

Standard clause 1.3.1.3

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. 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
Evidence			
<p>A1.1 Landings data are collected such that the fishery-wide removals of this species are known. 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, 2020).</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. 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 (ICES, 2020).</p> <p>Mixing of herring stocks occurs in the central Baltic, with western Baltic spring-spawning herring (WBSSH) and Gulf of Riga (GoR) herring co-occurring with the central Baltic stock (CBH). There is an allowance in the CBH TAC for the mixing of GoR herring with CBH but some uncertainty over mixing with WBSSH in the southern Baltic (ICES sub-divisions 24 and 25). A separation function (SF) has been developed and applied to German and Swedish catches but requires further validation and has not yet been applied to catches from other nations. Mixing also occurs with Baltic sprat, which varies between fisheries.</p>			

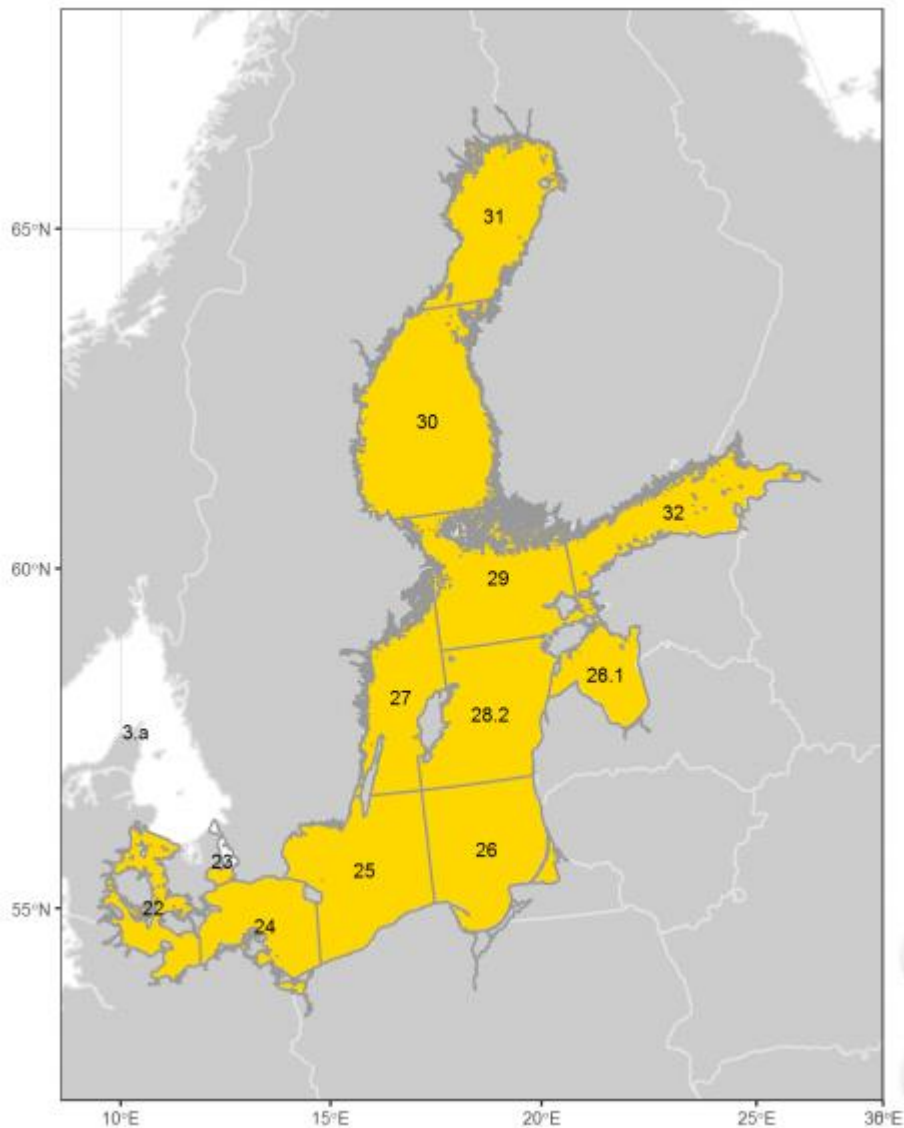


Figure 1. ICES subdivisions in the Baltic Sea (source: ICES, 2019)

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

References

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.

<https://eur-lex.europa.eu/eli/reg/2009/1224/oj/eng>

ICES, 2020. 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>

ICES. 2019. Baltic Sea Ecosystem – Fisheries Overview. In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, section 4.2. 28 pp.

https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2019/2019/BalticSeaEcoregion_FisheriesOverviews.pdf

Standard clause 1.3.2.1.1

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 publically available.	YES	
Clause outcome:		PASS	
Evidence			
<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 June 2020 by the Working Group on Baltic Sea Fisheries (WGBFAS) (ICES, 2020a). It includes commercial catches from international catches (ICES, 2020a). Discard data have not generally been available for inclusion in stock assessments, although efforts are underway to remedy this in future. Discards are estimated to be negligible in most countries, as undersized and lower quality fish can be used for fishmeal production. It is expected that misreporting of catches occurs, as estimates of species composition of clupeid catches are imprecise in some mixed pelagic fisheries.</p>			
<p>Biological information used in the assessment includes catch in numbers, mean weights-at-age, maturity at age, natural mortality and stock abundance estimates from the Baltic International Acoustic October Survey (BIAS) (ICES, 2020a; ICES, 2020b). 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, 2020c). For herring the biomass reference points were lowered by about 25%. F_{MSY} and the corresponding range were practically unchanged, while F_{lim} and F_{pa} increased slightly. The reference points are presented in Table 1 below.</p>			

Table 1. Old and updated reference points following IBPASH, March 2020 (source: ICES, 2020c).

Reference Points	Old Values	Updated Values	Rationale
B_{lim}	430 000 t	330 000 t	<i>The lowest SSB that has given rise to above average recruitment, i.e. year 2002. (The SSB in 2002 happens to correspond to Bloss)</i>
B_{pa}	600 000 t	460 000 t	$1.4 * B_{lim}$
MSY-Btrigger	600 000 t	460 000 t	B_{pa}
F_{MSY}	0.22	0.21	<i>Estimated by EqSim</i>
$F_{MSYUpper}$	0.28	0.26	<i>Estimated by EqSim as the upper value of F at 95% of the landings of F_{MSY}</i>
$F_{MSYLower}$	0.16	0.15	<i>Estimated by EqSim as the lower value of F at 95% of the landings of F_{MSY}</i>
F_{lim}	0.52	0.59	<i>Estimated by EqSim as the F with 50% probability of SSB being less than B_{lim}</i>
F_{pa}	0.41	0.43	$F_{lim} * (\exp(-1.645 * 0.2))$

The latest stock assessment (ICES, 2020a) shows SSB has had a decreasing trend since 2014 and is just below MSY $B_{trigger}$ in 2020 (see Figure 2). Fishing mortality has shown an increasing trend since 2014 and has been above F_{MSY} since 2015 and above F_{pa} in 2019. The high recruitment in 2015 was followed by four years of below average or average recruitment. Recruitment in 2020 is above average.

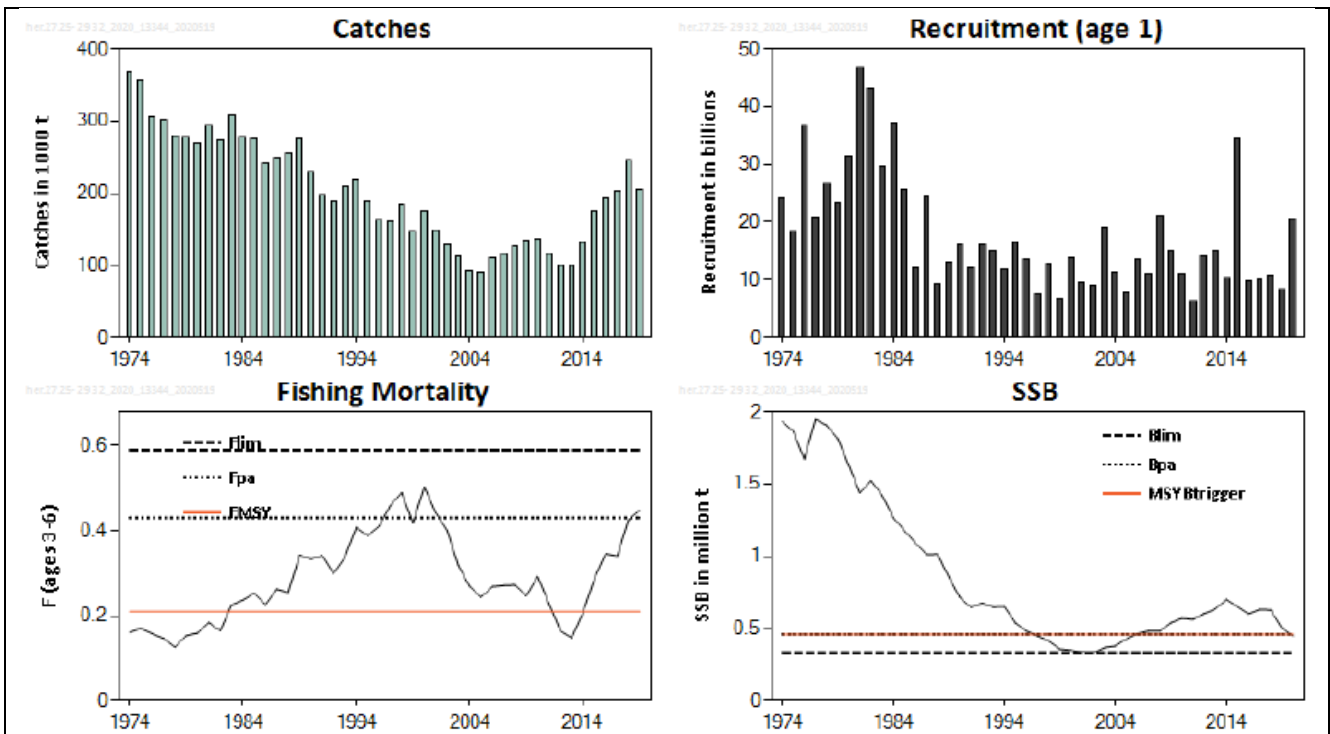


Figure 2. Herring in subdivisions 25–29 and 32, excluding the Gulf of Riga. Summary of the stock assessment. SSB at spawning time in 2020 is predicted (source: ICES, 2020a).

The status of the stock relative to its reference points is shown in Table 2 below.

Table 2. Herring in subdivisions 25-29 and 32, excluding the Gulf of Riga. State of the stock and the fishery relative to reference points.

		Fishing pressure			Stock size			
		2017	2018	2019	2018	2019	2020	
Maximum sustainable yield	F_{MSY}	✘	✘	✘ Above	$MSY B_{trigger}$	✔	✔	✘ Below trigger
Precautionary approach	F_{pa}, F_{lim}	✔	✔	○ Increased risk	B_{pa}, B_{lim}	✔	✔	○ Increased risk
Management plan	F_{MGT}	✘	✘	✘ Above the range	SSB_{MGT}	✔	✔	✘ Below

The recent inter-benchmark assessment (ICES, 2020c), which introduced updated natural mortalities for 1974-2018, led to a downward revision of SSB and an upward revision of fishing mortality. The estimate of the large 2014 year class is imprecise. Species misreporting of herring has occurred in the past, and there are indications of sprat being misreported as herring. These effects have not been quantified; however, they may affect the quality of the assessment (ICES, 2020a).

Preliminary investigations indicate that stocks of western Baltic spring-spawning herring and central Baltic herring are mixing in Subdivisions 24-26 (Figure 1). This is not taken into account in the current assessment but should be investigated further.

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 international 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 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, 2020c).

Likewise, ICES note it is important to investigate further the mixing of central Baltic herring (CBH) and western Baltic spring-spawning herring (WBSSH) in subdivisions 24-26. Depending on the degree of mixing it could have significant impacts on the perception of both herring stocks. A working group has been initiated to look further into this issue (ICES, 2020c).

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 2020b), where fisheries scientists from about nine European fisheries laboratories participate. The assessment is presented and reviewed at the meeting and has to 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, 2020c).

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 is 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, 2020a. 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>

ICES, 2020b. ICES. 2020. Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 2:45. 643 pp.

http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WGBFAS_2020.pdf

ICES, 2020c. 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, 2018. 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 2018, her.27.25-2932.

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/her.27.25-2932.pdf>

ICES Transparent Assessment Framework

<https://www.ices.dk/data/assessment-tools/Pages/transparent-assessment-framework.aspx>

Standard clause 1.3.2.2, 1.3.2.1.2, 1.3.2.1.4

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

Evidence

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

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. **Sub-clause A3.1 is met.**

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

The harvest strategy has generally been effective in maintaining the SSB above the $MSY B_{trigger}$, SSB has dropped just below $MSY B_{trigger}$ in the last stock assessment. TACs and catches are largely in line with ICES advice (provided in line with the MAP) – see Table 3 below. **Sub-clause A3.2 is met.**

Table 3. Herring in subdivisions 25–29 and 32, excluding the Gulf of Riga. ICES advice, TACs, and catches. All weights are in tonnes (source: ICES, 2020).

Year	ICES advice	Catch corresponding to the advice	Agreed TAC	ICES catch SDs 25–29+32	ICES catch
2014	MSY approach	< 164000	132225 ^{^^}		132700
2015	MSY approach ($F_{MSY} = 0.26$)	< 193000	186351 ^{^^}		174433
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} ($F = 0.16–0.28$), 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} ($F = 0.16–0.28$), 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} ($F = 0.16–0.28$), 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 ^{^^}		
2021	Management Plan	111852 (range 83971–138183)			

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 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-clause A3.3 is met.**

References

ICES, 2020a. 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>

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

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>
Clause outcome:	
PASS	
<p>Evidence</p> <p>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.</p> <p>As noted in clause A2, the stock is above B_{lim} and just below the target biomass reference point ($MSY B_{trigger}$). As noted in clause A4.3, the harvest strategy has generally been effective in maintaining the SSB above the $MSY B_{trigger}$, SSB has dropped just below $MSY B_{trigger}$ in the last stock assessment. TACs and catches are largely in line with ICES advice (provided in line with the MAP).</p> <p>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.</p> <p>Clause A4.1 is met.</p>	
References	
<i>Standard clause 1.3.2.1.4</i>	

CATEGORY C SPECIES

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

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		Baltic sprat <i>sprattus sprattus</i>	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.	YES
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	YES
			Clause outcome: PASS
Evidence			
<p>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible. Baltic sprat is managed through the Baltic MAP. Scientific advice is provided by ICES, who use commercial catch data in the stock assessment. Clause C1.1 is met.</p> <p>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</p> <p>Fishing mortality information used in the assessment is presented in ICES' annual advice. Figure 3 below shows the latest stock status information. As can be seen, the SSB is above MSY $B_{trigger}$ and well above the limit reference point, B_{lim}. Clause C1.2 is met.</p>			

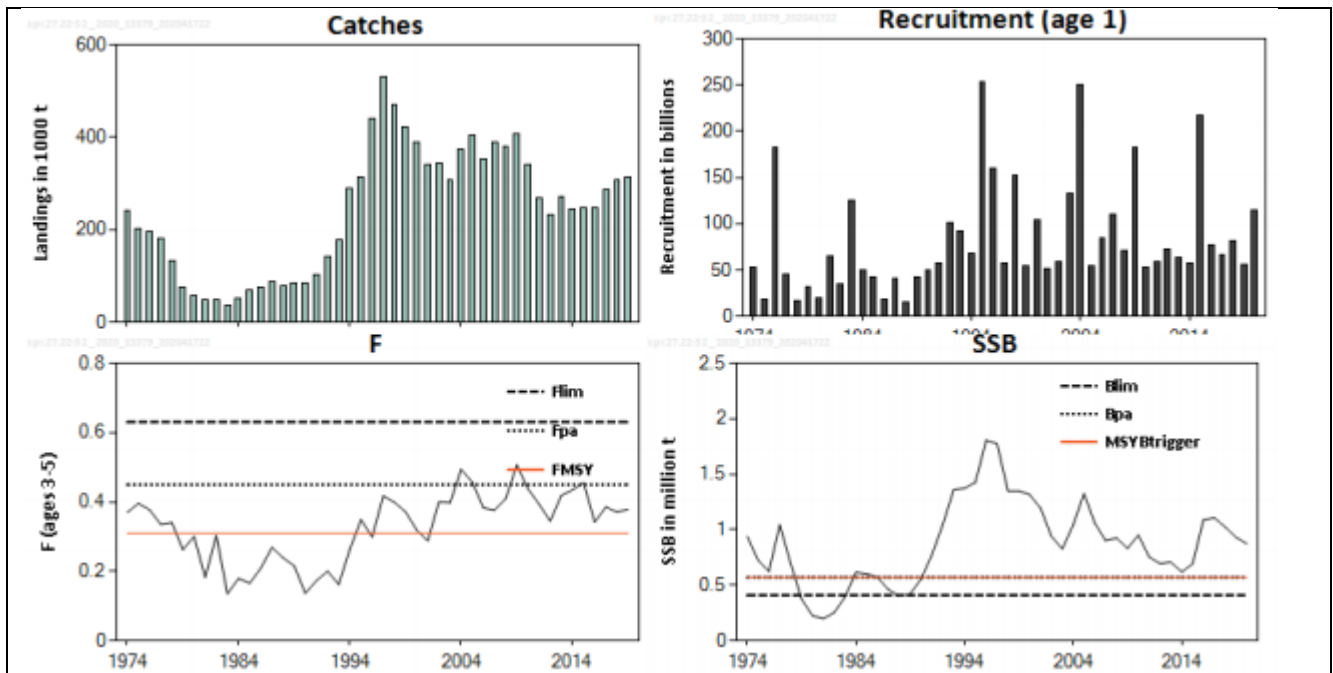


Figure 3. Sprat in subdivisions 22–32. Summary of the stock assessment. SSB at spawning time is predicted for 2020 (source: ICES, 2020d)

References

ICES, 2020d. Sprat (*Sprattus sprattus*) in subdivisions 22–32 (Baltic Sea). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, spr.27.22-32. <https://doi.org/10.17895/ices.advice.5879>.

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 clauses 1.3.2.2

Species Name		Western Baltic spring-spawning herring <i>Clupea harengus</i>	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.	YES
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	NO
Clause outcome:			D1
Evidence			
<p>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.</p> <p>Western Baltic spring-spawning herring is managed through the Baltic MAP. Scientific advice is provided by ICES, who use commercial catch data in the stock assessment. Clause C1.1 is met.</p> <p>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</p> <p>Fishing mortality information used in the assessment is presented in ICES' annual advice. Figure 4 below shows the latest stock status information. As can be seen, the SSB is below the limit reference point, B_{lim}.</p> <p>Looking at the second part of clause C1.2, there is no evidence that scientific authorities consider catches to be negligible. The information presented in Figure 4 on catches and fishing mortality indicates otherwise.</p> <p>As Western Baltic spring-spawning herring does not meet the minimum requirements of clause C1 it is re-assessed as a Category D species.</p>			

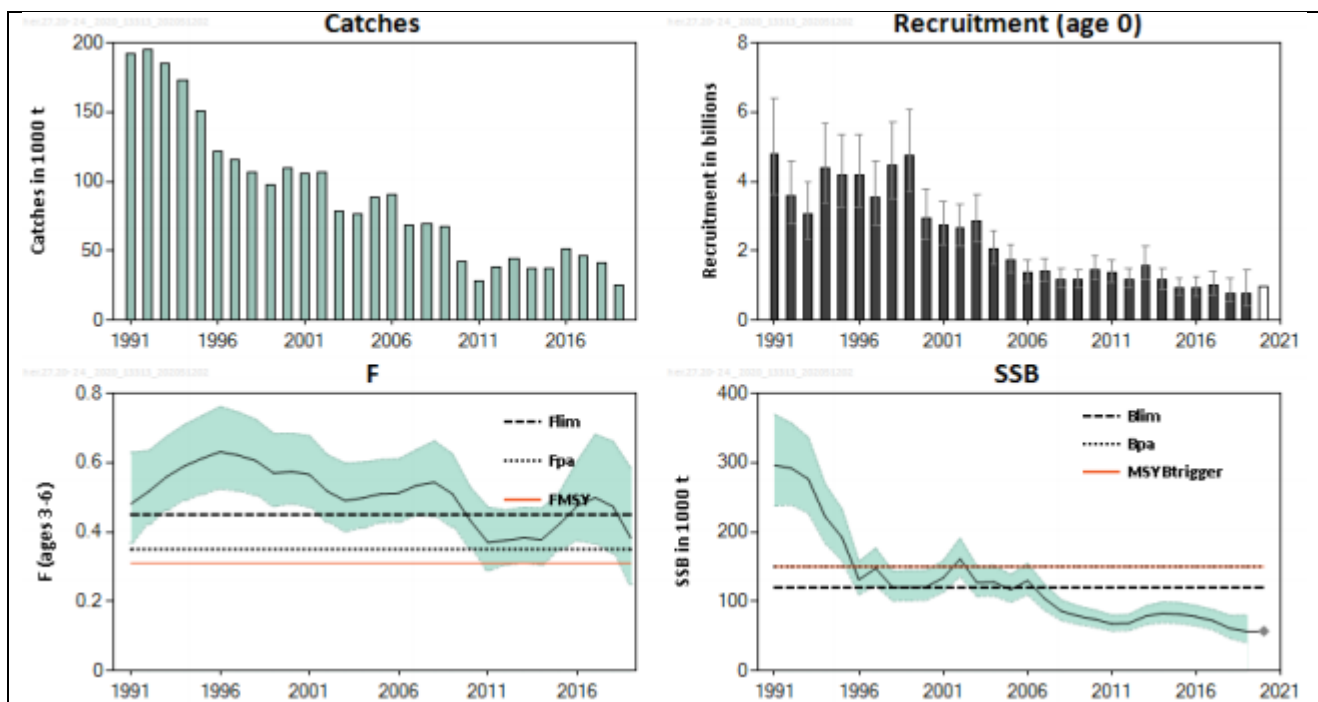


Figure 4. Herring in subdivisions 20–24, spring spawners. Commercial catches, recruitment, fishing mortality (F), and spawning stock biomass (SSB) from the summary of the stock assessment; 95% confidence intervals are shown for SSB, F, and recruitment. Unshaded value of the recruitment is the average value of 2014–2018, and the grey diamond in the SSB plot is a predicted number for 2020 (source: ICES, 2020e).

References

ICES, 2020e. Herring (*Clupea harengus*) in subdivisions 20–24, spring spawners (Skagerrak, Kattegat, and western Baltic). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, her.27.20-24, <https://doi.org/10.17895/ices.advice.5928>.

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 clauses 1.3.2.2

CATEGORY D SPECIES

In a whole fish assessment, 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. In a by-product assessment, Category D species are those which are not subject to a species-specific management regime. In both cases, 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.

The process for assessing Category D species involves the use of a Productivity-Susceptibility Analysis (PSA) to further subdivide the species into 'Critical Risk', 'Major Risk' and 'Minor Risk' groups. If there are no Category D species in the fishery under assessment, this section can be deleted.

Productivity and susceptibility ratings are calculated using a process derived from the APFIC document "Regional Guidelines for the Management of Tropical Trawl Fisheries, which in turn was derived from papers by Patrick *et al* (2009) and Hobday *et al* (2007). Table D1 should be completed for each Category D species as follows:

- Firstly, the best available information should be used to fill in values for each productivity and susceptibility attribute.
- Table D2 should be used to convert each attribute value into a score between 1 and 3.
- The average score for productivity attributes and the average for susceptibility attributes should be calculated.
- Table D3 should be used to determine whether the species is required to meet the requirements of Table D4. A species which does not need to meet the requirements of D4 is automatically awarded a pass.
- Table D4 should be used to assess those species indicated by Table D3 to determine a pass/fail rating.
- Any Category D species which has been categorised by the IUCN Red List as Endangered or Critically Endangered, or which appears in the CITES appendices, automatically results in a fail.

D1	Species Name:	Western Baltic spring-spawning herring <i>Clupea harengus</i>	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	3.16	2
	Average maximum age (years)	25	2
	Fecundity (eggs/spawning)	13,000 – 65,403	1
	Average maximum size (cm)	30	1
	Average size at maturity (cm)	22.1	1
	Reproductive strategy	Open water/substratum egg scatterers	1
	Mean trophic level	3.4	3
	Average Productivity Score		1.57
	Susceptibility Attribute	Value	Score
	Overlap of adult species range with fishery	<25% of stock occurs in area fished	1
	Distribution	Not used where information available for overlap attribute	NA
	Habitat	Bentho-pelagic targeted by pelagic gears	3
	Depth range	0 – 364m	3
	Selectivity	Up to 4m length	3
	Post-capture mortality	Most dead or retained	3
	Average Susceptibility Score		2.6
	PSA Risk Rating (From Table D3)		PASS
	References		
Fishbase: https://www.fishbase.de/Summary/SpeciesSummary.php?ID=24&AT=herring			
<i>Standard clauses 1.3.2.2</i>			

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		
		1.00 – 1.75	1.76 – 2.24	2.25 – 3.00
Average Productivity Score	1.00 – 1.75	PASS	PASS	PASS
	1.76 – 2.24	PASS	PASS	TABLE D4
	2.25 – 3.00	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			
References			
<i>Standard clause 1.3.2.2</i>			

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
Evidence			
F1.1 Interactions with ETP species are recorded.			
<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 focussed on cetaceans, although member states also provided information on other species) and from 2019 through the technical 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, 2020f).</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 monitoring programme for its pelagic trawl fishery (monitoring is undertaken of its gillnet fisheries under the Data Collection Regulation (DCR) scheme) and Latvia is proposing to do the same in future for its pelagic trawl fisheries (ICES, 2019a). Observer coverage for some of these fisheries has been quite low (<5%).</p> <p>Whilst observer coverage may be low, there is evidence that interactions with ETP species are recorded and where interactions occur these monitoring programmes have been maintained.</p> <p>Clause F1.1 is met.</p> <p>F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.</p>			

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

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).

Denmark and Latvia are both contracting parties 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 which is to achieve and maintain a favourable conservation status for small cetaceans. Latvia is not a contracting party. 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.

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 the previous sub-clause.

As noted in the previous clause no incidental catch of marine mammals has been recorded in the pelagic trawl fisheries. 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. 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, 2019b). However, pelagic trawls have not been identified as posing a significant risk to seabirds.

Pelagic trawlers or purse seines are not known to cause any significant bycatch of seabirds or marine mammals in the offshore fishery in the Baltic Sea. **Clauses F1.1 and F1.2 are met.**

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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>

Standard clause 1.3.3.1

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

Evidence

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

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

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

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.

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.

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).

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>

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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>

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<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241>

Standard clause 1.3.3.2

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

Evidence

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 central Baltic herring stock is managed according to an MSY strategy where key trophic interactions are incorporated. Predation pressure on herring by cod is taken into account in the assessment, reference points, management regulations (MAP ranges).

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. Both stocks of central Baltic herring and Baltic sprat are healthy and are considered highly likely to be above the point where serious ecosystem impacts could occur and fluctuating at a level consistent with ecosystem needs.

The ICES Ecosystem Overview (ICES, 2019b) 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 the clupeid stocks targeted by the fishery in this area and evidence of increases in predator populations that rely on these 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 the F3.1, the central Baltic herring stock is managed according to an MSY strategy where key trophic interactions are incorporated. Predation pressure on herring 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, evidence indicates additional precaution is included in recommendations relating to the total permissible fishery removals. **Clause F3.3 is met.**

References

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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 1.3.3.3

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>

Appendix B – Background on the 5% catch rule

The proposed fishery assessment methodology uses a species categorisation approach to divide the catch in the assessment fishery into groups. These groups are:

- **Category A:** "Target" species with a species-specific management regime in place.
- **Category B:** "Target" species with no species-specific management regime in place.
- **Category C:** "Non-target" species with a species-specific management regime in place.
- **Category D:** "Non-target" species with no species-specific management regime in place

The distinction between 'target' and 'non-target' species is made to enable the assessment to consider the impact of the fishery on all the species caught regularly, without requiring a full assessment be conducted for each. Thus 'target' species are subjected to a more detailed assessment, while 'non-target' species are considered more briefly. For the purposes of the IFFO RS fishery assessment, 'target' and 'non-target' species are defined by their prevalence in the catch, by weight. Applicants must declare which species are considered 'target' species in the fishery, and the combined weight of these must be at least 95% of the annual catch. The remaining 5% can be made up of 'non-target' species. Note also that ETP species are considered separately, irrespective of their frequency of occurrence in the catch.

The proposed use of 5% as a limit for 'non-target' species is one area in which feedback is being sought via the public consultation. The decision to propose a value of 5% ensures consistency with other fishery assessment programmes, such as the MSC which uses 5% to distinguish between 'main' and 'minor' species (see MSC Standard, SA3.4 and GSA3.4.2); and Seafood Watch, which uses 5% when defining the 'main' species for the assessment (see Seafood Watch Standard, Criterion 2). The value is also consistent with the approach used in Version 1 of the IFFO RS Standard, in which up to 5% of the raw material could be comprised of 'unassessed' species.

Comments on this proposition are welcomed along with any other feedback on the proposed approach.