MarinTrust Standard V2

Whole fish Fishery Assessment

WF07 Gulf of Riga Herring

Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name(s):			
Country: Denmark			
Email address:		**Applicant Code**	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor Name	**CB Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**
Sam Peacock	Matthew Jew	2.5	Surveillance 2
Assessment Period		July 2022	
Scope Details			
Management Authority (Country/State)		EU	
Main Species		Herring, *Clupea harengus*; sprat, *Sprattus sprattus*	
Fishery Location		ICES subdivision 28.1 (Gulf of Riga)	
Gear Type(s)		Pelagic trawl	
Outcome of Assessment			
Overall Outcome		Pass	
Clauses Failed		None	
CB Peer Review Evaluation		Agree with assessor's evaluation	
Fishery Assessment Peer Review Group Evaluation		Approval -see appendix	
Recommendation		Maintain Approval	

Table 2. Assessment Determination

Assessment Determination

This assessment covers 11 stocks and 10 species. The available information indicates that there have been no substantial changes to catch composition since the previous initial (2020) and surveillance (2021) assessments, and therefore the species categorisation section remains largely unchanged. All of the species covered by this assessment continue to be categorised on the IUCN Red List as Least Concern, and are therefore eligible for use as an MT raw material.

The large majority of the areas of the fishery covered by the MT standard remain unchanged since previous MT assessments. A robust and effective management, control and enforcement framework remains in place, with no substantial evidence of widespread noncompliance. There is no new evidence to suggest that the fishery has a significant negative impact on habitats, ecosystems, or ETP species, and measures remain in place to mitigate what impacts may occur.

The two Category A stocks – Gulf of Riga herring and Baltic sprat – continue to be primarily managed according to the EU MAP. ICES stock assessments and catch recommendations have continued as previously, and the biomass of both stocks is estimated to be considerably above their respective target and limit reference points. In the case of Gulf of Riga herring, TACs and catches continue to be in line with the ICES advice. Baltic sprat is subject to an additional Russian quota which is set autonomously to the EU MAP, and this lack of an international management plan covering all relevant coastal states appears to be the reason behind the total quota and catch often exceeding the ICES advice. However, such excesses are relatively minor and due to the biomass remaining well above the limit reference point the stock meets the MT requirements.

The only Category C stock – Baltic Sea herring – also continues to be assessed by ICES as previously, with a biomass estimated to be between the target and limit reference points (though currently increasing). At this time the stock continues to meet the MT requirements.

All 8 Category D stocks were subjected to the revised PSA process and awarded a Pass against Table D3.

Overall the fishery continues to meet the MT requirements and it is recommended that its approval for use as a source of raw materials be maintained.

Fishery Assessment Peer Review Comments

The peer reviewer agrees with the findings of the assessment.

Categorization of the species are correct. IUCN Redlist Statuses and assessment categories were correctly assigned according to MarinTrust guidelines. There is no new evidence or data that would contradict the previous initial and surveillance assessments. New data was reported and correctly applied in the MT assessment process.

All Category A species have passed Clauses A1-A4. Baltic Sea Herring was correctly assigned and assessed under Categroy C, per MT guidelines. All other species which made up <5% of the landings were assessed under Category D and passed PSA on Table D3.

As stated, the peer reviewer agrees with the assessor's determination and the stocks are approved by the assessment team for the production of fishmeal and fish oil under the MarinTrust v2.0 Whole Fish Stnadard.
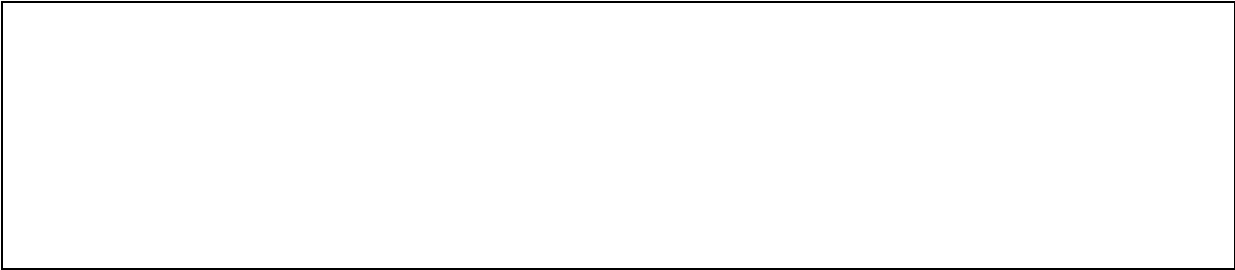
Notes for On-site Auditor

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	Gulf of Riga Herring, *Clupea harengus*	85-95%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category A	Baltic sprat, *Sprattus sprattus*	5-15%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B	None			
Category C	Central Baltic herring, *Clupea harengus*	<5%	PASS	
Category D	Fourhorn sculpin, *Myoxocephalus quadricornis*	<5%	PASS	
	Round goby, *Neogobius melanostomus*	<5%	PASS	
	Shorthorn sculpin, *Myoxocephalus Scorpius*	<5%	PASS	
	Lamprey, *Petromyzon marinus*	<5%	PASS	
	Smelt, *Osmerus eperlanus*	<5%	PASS	
	Eelpout, *Zoarces viviparus*	<5%	PASS	
	Three-spined stickleback, *Gasterosteus aculeatus*	<5%	PASS	
	Eastern Gotland and Gulf of Gdansk flounder, *Platichthys flesus*	<5%	PASS	

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category[1]	% of landings	Management	Category
Herring	*Clupea harengus*	Gulf of Riga	Least Concern[2]	85-95%	Yes	A
Sprat	*Sprattus sprattus*	Baltic sea	Least Concern[3]	5-15%	Yes	A
Herring	*Clupea harengus*	Central Baltic	Least Concern[2]	<5%	Yes	C
Fourhorn sculpin	*Myoxocephalus quadricornis*		Least Concern[4]	<5%	No	D
Round goby	*Neogobius melanostomus*		Least Concern[5]	<5%	No	D
Shorthorn sculpin	*Myoxocephalus scorpius*		Least Concern[6]	<5%	No	D
Lamprey	*Petromyzon marinus*		Least Concern[7]	<5%	No	D
Smelt	*Osmerus eperlanus*		Least Concern[8]	<5%	No	D
Eelpout	*Zoarces viviparus*		Least Concern[9]	<5%	No	D
Three-spined stickleback	*Gasterosteus aculeatus*		Least Concern[10]	<5%	No	D
Flounder	*Platichthys flesus*	Eastern Gotland & Gulf of Gdansk	Least Concern[11]	<5%	No	D
Species categorisation rationale						

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

[2] https://www.iucnredlist.org/species/155123/4717767

[3] https://www.iucnredlist.org/species/198583/143833310

[4] https://www.iucnredlist.org/species/14214/134235538

[5] https://www.iucnredlist.org/species/14524/136567104

[6] https://www.iucnredlist.org/species/190210/18983059

[7] https://www.iucnredlist.org/species/16781/18229984

[8] https://www.iucnredlist.org/species/15631/4924600

[9] https://www.iucnredlist.org/species/18181090/45904990

[10] https://www.iucnredlist.org/species/8951/136558155

[11] https://www.iucnredlist.org/species/135717/136579365

The species categorisation is unchanged since the 2021 MT Surveillance assessment. The catch composition data for the surveillance assessment originated from the 2020 MSC certification report for the fishery. Since that time two MSC surveillance reports have been published, each with an additional year of catch composition data. Although the detail of the data varies each year, overall there is no evidence to suggest that the proportions of landings originally identified in the fishery have changed substantially. Additionally, there have been no changes in which of the stocks are subject to stock-specific management. Therefore, this surveillance reports includes two Category A species, one Category C species, and eight Category D species, as previously.

MANAGEMENT

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

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

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section M1. The conclusions of the initial assessment are summarised here for convenience; please refer to the previous surveillance report (Global Trust Certification 2021) and initial assessment report (Lloyds Register 2020) for more detail.

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

Management of the fishery falls within the EU Common Fisheries Policy (CFP), and also the Latvian national system for fisheries management. Regionally, management is based on input from the Regional Baltic Sea Fisheries Forum (BALTFISH) and the Baltic Sea Advisory Council (BASC). At the EU level the main management body is the EU Commission's Director-General for Maritime Affairs and Fisheries, while in Latvia responsibility falls to the Fisheries Department of the Ministry of Agriculture and the State Environmental Service. There are organisations responsible for managing the fishery and M1.1 is met.

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

Within Latvian waters, the agency responsible for scientific assessment and advice relating to fisheries is the BIOR Institute. Internationally, fishery management advice is provided by the International Council for the Exploration of the Sea (ICES), to whose work the BIOR Institute contributes. ICES provides annual stock assessment and management advice relating to Baltic herring and sprat fisheries through the Baltic Fisheries Assessment Working Group (WGBFAS). There are organisations responsible for collecting data and assessing the fishery and M1.2 is met.

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

The CFP is the primary instrument guiding the management of the fishery. One objective of the CFP (Article 2.3) is "…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". Additionally, Article 3 of the Baltic Sea Multiannual Plan (MAP) states, "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". Fishery management organisations are publicly committed to sustainability and M1.3 is met.

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

Legal empowerment comes primarily from the CFP, and the national legislation which originates from it. The CFP was originally legislated via Regulation (EEC) No 2141/70 of the Council of 20 October 1970 laying down a common structural policy for the fishing industry. This original legislation has been amended repeatedly, most recently by Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Within Latvian fisheries management the primary regulation is the Fishing Law (12/4/1995, as amended). Fishery management organisations are legally empowered to take management actions and M1.4 is met.

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

The main mechanism through which stakeholders are engaged is the BSAC. Established in 2006, the BSAC provides advice on the management of Baltic fisheries to the European Commission and member states. Following the reform of the CFP, a new regulation was adopted in 2013 to mandate that advisory councils – including the BSAC – must be consulted in the context of regionalisation and should also contribute data towards fisheries management and conservation measures. There is a consultation process through which stakeholders are engaged in decision-making and M1.5 is met.

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

The annual ICES catch recommendations and management advice is published on the ICES website, along with reports detailing the stock assessment process and methodology, and the discussions of the WGBFAS. Quotas are published online as part of the EC Regulations establishing them. The decision-making process is transparent and M1.6 is met.

References
Global Trust Certification (2021). Denmark Gulf of Riga herring surveillance assessment, May 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF7_Herring_Denmark_ICES%20Subdivisions%2028.1_Surv%201_May%202021.%20Updated%20post%20PR.pdf
Lloyds Register (2020). Denmark Gulf of Riga herring initial assessment, 2020. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF%20321%20Gulf%20of%20Riga%20Herring_Entire%20fishery%20%28Latvia%20%2B%20Estonia%29%202020.pdf

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

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

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section M2. The conclusions of the initial assessment are summarised here for convenience; please refer to the previous surveillance report (Global Trust Certification 2021) and initial assessment report (Lloyds Register 2020) for more detail.

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

Monitoring and enforcement of fisheries compliance in the EU is the responsibility of the individual member states. In Latvian waters the responsibility falls to the State Environmental Service, part of the Ministry of Environmental Protection and Regional Development.

National control and enforcement activities are supported by the European Fisheries Control Agency (EFCA). The EFCA aims to promote the highest common standards for control, inspection and surveillance under the CFP. There are organisations responsible for monitoring compliance with fisheries laws and regulations, and M2.1 is met.

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

A framework of sanctions is mandated by the CFP and is present in Latvian national law. The Latvian Administrative Penalty Code is applied for violations of fishery rules, with sanctions including fines, confiscation of gear, and suspension of fishing licences. There is a framework of sanctions which are applied when laws and regulations are broken, and M2.2 is met.

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

As at the time of the initial and first surveillance assessments, no evidence was encountered to suggest widespread non-compliance in the fishery. Inspections by the State Environmental Service have continued, and observer coverage is around 8-10%. There is no substantial evidence of widespread non-compliance and therefore 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.

The State Environment Service monitors compliance with fishing laws and regulations through at-sea and in-port inspections of vessels, gear and catch. As set out in the CFP, vessels must complete and submit logbooks. Compliance is actively monitored and M2.4 is met.

References

Global Trust Certification (2021). Denmark Gulf of Riga herring surveillance assessment, May 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF7_Herring_Denmark_ICES%20Subdivisions%2028.1_Surv%201_May%202021.%20Updated%20post%20PR.pdf

Lloyds Register (2020). Denmark Gulf of Riga herring initial assessment, 2020. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF%20321%20Gulf%20of%20Riga%20Herring_Entire%20fishery%20%28Latvia%20%2B%20Estonia%29%202020.pdf

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

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

Landings data are recorded and reported by vessels participating in the fishery. The reporting of catch taken in EU waters is mandated by Council Regulations 2874/93, 1006/2008, and 1224/2009 (Scottish Government 2019). This reporting mandate includes target species and bycatch. Additionally, the fishery is covered by the landing obligation (EC 2022), which requires that all catch is landed and therefore further recorded.
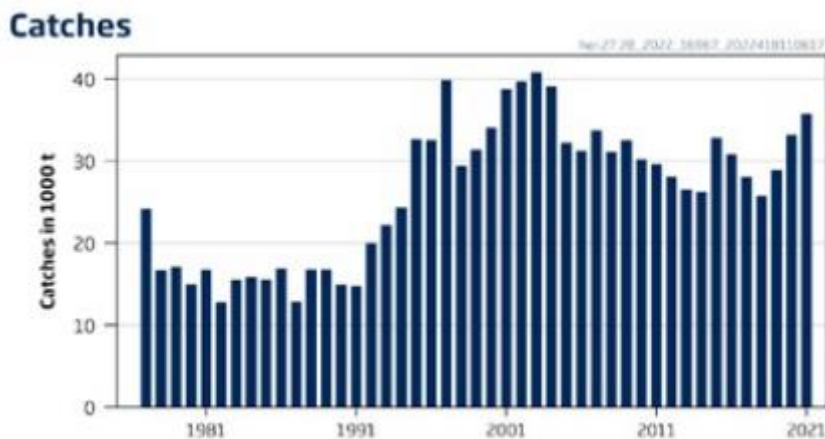

Figure 1 – Herring in Subdivision 28.1 (Gulf of Riga herring), catches 1977 – 2021 (ICES, 2022a)

Figure 1 shows the estimated total catch of Gulf of Riga herring over the last 45 years. This information is incorporated into the regular stock assessment conducted by ICES (ICES, 2022a). Fishery-wide removals of Gulf of Riga herring are known, and A1.1 is met.

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

The stock assessment conducted by ICES makes use of a range of additional information, including (ICES 2022b):

- Estimates of unallocated landings (considered zero in Latvia)
- Estimates of discards (also considered negligible)
- Effort and CPUE data
- Age composition data

- Catch quality and biological data
- Mean weight-at-age data from catch sampling
- Data from one hydro-acoustic survey

The annual ICES advice includes a section commenting on the quality of the assessment, which indicates any important sources of uncertainty or need for additional information. The most recent ICES advice does not include any mention of a lack of information or any potential sources of uncertainty (ICES 2022a).

As ICES considers the amount of information collected to be sufficient to enable an indication of stock status to be estimated, A1.2 is met.

References

European Commission (2022). Discarding in Fisheries. https://ec.europa.eu/oceans-and-fisheries/fisheries/rules/discarding-fisheries_en

ICES (2022a). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES advice 2022, her.27.28. https://doi.org/10.17895/ices.advice.19447976

ICES (2022b). Baltic Fisheries Assessment Working Group (WGBFAS) Scientific Report, Volume 4, Issue 44. http://doi.org/10.17895/ices.pub.19793014

Scottish Government (2019). Marine and fisheries compliance: submission of paper logbooks and declarations. Available online at https://www.gov.scot/publications/marine-and-fisheries-compliance-submission-of-paper-logbooks-and-declarations/

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

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

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

Stock assessments are conducted annually by the Baltic Fisheries Assessment Working Group (WGBFAS). The most recent was published in May 2022 and made available on the ICES website (ICES 2022a). Stock-specific advice has been produced by ICES in this way in every year since 1997. The stock assessment was designed based on the biological characteristics of the species

and considers all fishery removals plus all the information sources listed in A1.2 (ICES 2022b). The stock assessment is an age-based analytical model which produces a range of catch recommendations based primarily on the EU Multi-Annual Plan (MAP). As a stock assessment, taking into account all available information, is conducted every year, A2.1 is met.

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

The annual ICES stock assessment provides an estimate of the current and projected Spawning Stock Biomass (SSB) of Gulf of Riga herring. Target and limit reference points are established for the stock; those adopted in the MAP include MSY $B_{ttrigger}$ (60,000t), B_{lim} (40,800t) and F_{MSY} (0.32). The most recent ICES advice (ICES 2022a) stated that "fishing pressure on the stock is below F_{lim} and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}". Figure 2 shows the estimated historical biomass of the herring stock since the late 1970s, relative to the current biomass reference points. The annual ICES stock assessment produces estimates of the stock biomass and fishing mortality relative to formally-established reference points, and A2.2 is met.
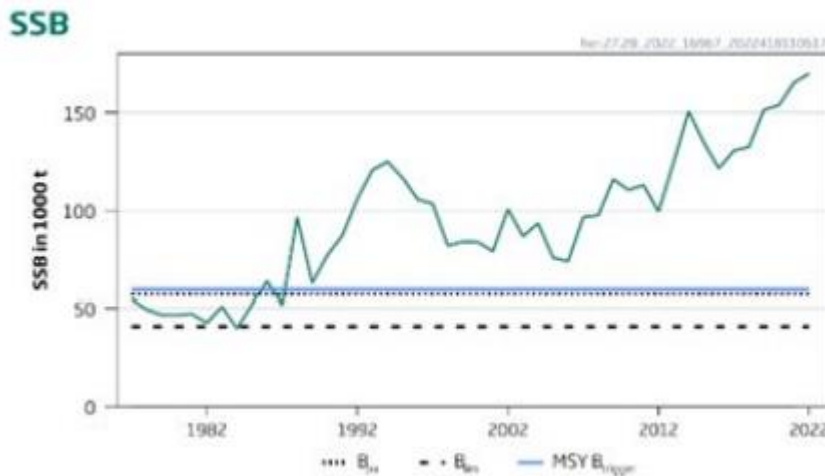

Figure 2 – Herring in Subdivision 28.1 (Gulf of Riga herring), biomass (green line) relative to reference points, 1977 – 2021 (ICES, 2022a)

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

The annual ICES advice provides an indication of the appropriate level of fishery removals for the coming fishing season. Table 1 is taken from the most recent advice (ICES 2022a) and lists a series of potential catch scenarios. The most recent headline catch advice is that "when the EU MAP for the Baltic Sea is applied, the catches in 2023 that correspond to the F ranges in the plan are between 33,519 tonnes and 50,079 tonnes". The advice also notes that "the entire range [of potential total catches] is considered precautionary when applying the ICES advice rule" (ICES 2022a).

Table 1 also indicates the projected SSB levels associated with each total catch scenario. If the maximum advised total catch were taken in 2023, the estimated SSB would be 148,373t in 2023 and 125,496t in 2024. Both would be substantially higher than the target reference point MSY $B_{trigger}$, set at 60,000t.

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

Table 1 – Herring in Subdivision 28.1, annual catch scenarios from the ICES advice, 2022. All weights are in tonnes (ICES, 2022a).

Basis	Total catch (2023)	F (2023)	SSB (2023)	SSB (2024)	% SSB change **	% Advice change ***
ICES advice basis						
EU MAP *: F_{MSY}	43 226	0.32	150 026	133 034	−11%	−3.8%
EU MAP *: MAP range F_{lower}	33 519	0.24	152 258	143 856	−5.5%	−3.7%^
EU MAP *: MAP range F_{upper}	50 079	0.38	148 373	125 496	−15%	−3.9%^^
Other scenarios						
F_{MSY}	43 226	0.32	150 026	133 034	−11%	−3.8%
F = 0	0	0	159 163	182 424	15%	−100%
F = F_{pa}	50 079	0.38	148 373	125 496	−15%	11%
F = F_{lim}	95 373	0.88	135 331	78 079	−42%	112%
SSB (2024) = SSB (2023)	24 318	0.17	154 267	154 267	0%	−46%
SSB (2024) = B_{lim}	135 147	1.60	118 582	40 800	−66%	201%
SSB (2024) = B_{pa}	117 106	1.22	127 103	57 100	−55%	161%
SSB (2024) = MSY $B_{trigger}$	114 006	1.17	128 390	60 000	−53%	154%
F = F_{2022}	41 195	0.30	150 503	135 285	−10%	−8.3%

* MAP multiannual plan (EU, 2016).
** SSB 2024 relative to SSB 2023.
*** Total catch in 2023 relative to ICES advice for 2022 (44 945 tonnes for the Gulf of Riga herring stock).
^ ICES advice for F_{lower} for 2023 relative to ICES advice for EU MAP range F_{lower} for 2022 (34 797 tonnes).
^^ ICES advice for F_{upper} for 2023 relative to ICES advice for EU MAP range F_{upper} for 2022 (52 132 tonnes).

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

The Guide to ICES Advisory Framework and Principles (ICES 2020) sets out the process by which ICES carries out scientific activities and provides fishery management advice. The process is designed to be transparent, independent and produce peer-reviewed recommendations. Advice is provided based on ten key Principles, of which Principle seven states that "To ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice, all analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests through one-off reviews".

The ICES advice, and the stock assessment methodology underpinning it, are subject to independent peer review. A2.4 is met.

A2.5 The assessment is made publicly available.

All the stock assessment information used to produce this MarinTrust assessment report was publicly available. Specifically, information is published in the WGBFAS report (ICES 2022b) and the catch advice (ICES 2022a). Additionally, the publication of methodologies, data, deliberations, and outcomes is a core part of the ICES process, as set out by the ICES Advisory Framework and Principles, particularly Principles 4, 5 and 6 (ICES 2020).

The stock assessment process and outcomes are made publicly available and therefore A2.5 is met.

References

ICES (2020), Guide to ICES advisory framework and principles. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Guide to ICES Advice. https://doi.org/10.17895/ices.advice.7648

ICES (2022a). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES advice 2022, her.27.28. https://doi.org/10.17895/ices.advice.19447976

ICES (2022b). Baltic Fisheries Assessment Working Group (WGBFAS) Scientific Report, Volume 4, Issue 44. http://doi.org/10.17895/ices.pub.19793014

Links

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

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

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

As at the time of the initial and first surveillance assessments, total fishing mortality is restricted through the implementation of a TAC, set according to the ICES advice which in turn is guided by the EU Baltic Sea MAP (Regulation (EU) 2016/1139 as amended). The 2022 TAC was set in line with the ICES advice, at 47,697t (ICES 2022). The TAC allocation mechanism and associated control and enforcement systems in place in the fishery are effective at limiting total fishing activity, as demonstrated by total catches being consistently lower than the TAC level (see Table 2). Thus, 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 EU regulation establishing the Baltic Sea MAP (Regulation 2016/1139) ensures that TACs are set in line with the ICES advice. Table 2 lists the historical catch recommendations since 2012, alongside the eventual TAC and total catch. The TAC has been set within the recommended range in every year since 2018, when MAP-based advice was first provided by ICES, and actual catches have been lower than the TAC every year since it was established in 2003. Total fishery removals have not exceeded the level recommended by ICES since the establishment of the MAP, and A3.2 is met.

Table 2 – Herring in Subdivision 28.1. ICES advice, TAC, and catches for herring the Gulf of Riga, 2012 – present. All weights in tonnes (ICES, 2022).

Year	ICES advice	Catch from stock corresp. to advice	Agreed TAC for Gulf of Riga	Catches of Gulf of Riga herring stock
2012	MSY transition	< 25 500	30 600	28 115
2013	MSY framework	< 23 200	30 600	26 511
2014	MSY	< 25 800	30 700	26 253
2015	MSY (F_{MSY} = 0.35)	< 34 300	38 800	32 851
2016	MSY approach (F_{MSY} = 0.32)	≤ 26 200	34 900	30 865
2017	MSY approach (F_{MSY} = 0.32)	≤ 23 100	31 100	28 058
2018	MAP target F ranges: F_{lower} to F_{upper} (0.24–0.38), but F higher than F_{MSY} = 0.32 only under conditions specified in the MAP	19 396–29 195, but catch higher than 24 919 only under conditions specified in the MAP	28 999	25 747
2019	MAP target F ranges: F_{lower} to F_{upper} (0.24–0.38), but F higher than F_{MSY} = 0.32 only under conditions specified in the MAP	20 664–31 237, but catch higher than 26 932 only under conditions specified in the MAP	31 044	28 922
2020	MAP target F ranges: F_{lower} to F_{upper} (0.24–0.38), but F higher than F_{MSY} = 0.32 only under conditions specified in the MAP	23 395–35 094, but catch higher than 30382 only under conditions specified in the MAP	34 445	33 215
2021	Management Plan	35 771 (ranges 27 702–41 423)	39 446	35 758
2022	Management Plan	44 945 (range 34 797–52 132)	47 697	
2023	Management Plan	43 226 (range 33 519–50 079)		

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 Baltic Sea MAP states that "Fishing opportunities shall in any event be fixed in such a way as to ensure that there is less than a 5 % probability of the spawning stock biomass falling below the limit spawning stock biomass reference point (B_{lim})". This clearly implies that should the stock biomass fall below B_{lim}, the catch recommendation will be made with the intention of maximising the probability that the stock recovers to above B_{lim} in the following year. Although the recommendation will take into account the incoming year class, it is likely to be low or even zero. The MAP also states that safeguard measures should be put in place if the stock is "under threat", defined as having a biomass below the limit reference point.

At the present time the estimated biomass of the Gulf of Riga herring stock has been substantially above B_{lim} for several decades, and therefore there has been no need for a fishery closure. However, the MAP indicates that B_{lim} will be avoided if possible and that catches will be restricted to allow the stock to recover should it fall below B_{lim} in future. A3.3 is met.

References

ICES (2022). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES advice 2022, her.27.28. https://doi.org/10.17895/ices.advice.19447976

Regulation (EU) 2016/1139 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/?uri=CELEX%3A32016R1139

Standard clause 1.3.2.1.3

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

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

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

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

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

Two potential target reference points have been established for the Gulf of Riga herring stock: B_{pa} (57,100t), and MSY $B_{trigger}$ (60,000t). The MAP adopts the latter as the target reference point for management purposes. In the most recent ICES advice, SSB was projected to be 169,866t at spawning time (ICES, 2022), nearly three times larger than the target reference point. The advice also states that "spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}. Therefore, the stock is highly likely to be above the target reference point and A4.1 is met.

References

ICES (2022). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES advice 2022, her.27.28. https://doi.org/10.17895/ices.advice.19447976

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

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

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

Landings data are recorded and reported by vessels participating in the fishery. The reporting of catch taken in EU waters is mandated by Council Regulations 2874/93, 1006/2008, and 1224/2009 (Scottish Government 2019). This reporting mandate includes target species and bycatch. Additionally, the fishery is covered by the landing obligation (EC 2022), which requires that all catch is landed and therefore further recorded.
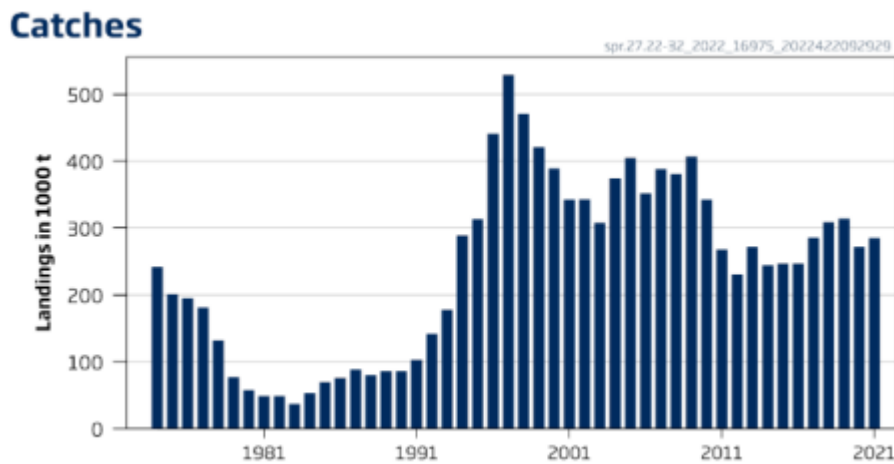

Figure 3 – Sprat in subdivisions 22-32. Landings, 1974 – 2021 (ICES, 2022a).

Figure 3 shows the historical time series for the estimated total catch of Baltic sprat. This information is incorporated into the regular stock assessment conducted by ICES (ICES, 2022a). Fishery-wide removals of Baltic sprat are known, and A1.1 is met.

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

The stock assessment conducted by ICES makes use of a range of additional information, including (ICES 2022b):

- Discard data, where available
- Effort and CPUE data
- Age composition data from the catch
- Weight-at-age data from the catch
- Estimates of natural mortality
- Estimated maturity-at-age data
- Data from the Baltic International Acoustic Survey (BIAS) carried out each autumn since 1991
- Data from the Baltic Acoustic Spring Survey (BASS) carried out each May since 2001

Some CPUE data were also available, but were restricted to specific regions and years and so were not considered representative for the entire stock and were not used.

The annual ICES advice includes a section commenting on the quality of the assessment, which indicates any important sources of uncertainty or need for additional information. The most recent ICES advice notes that "species misreporting of sprat has occurred in the past", and that "these effects have not been quantified or included in the assessment" (ICES 2022a). However, the ICES documentation does not appear to mention any specific missing information sources and therefore the amount of additional information collected is considered sufficient to enable an indication of stock status to be estimated. A1.2 is met.

References

European Commission (2022). Discarding in Fisheries. https://ec.europa.eu/oceans-and-fisheries/fisheries/rules/discarding-fisheries_en

ICES (2022). Sprat (*Sprattus sprattus*) in Subdivisions 22-32 (Baltic Sea). ICES advice 2022. https://doi.org/10.17895/ices.advice.19453856

ICES (2022b). Baltic Fisheries Assessment Working Group (WGBFAS) Scientific Report, Volume 4, Issue 44. http://doi.org/10.17895/ices.pub.19793014

Scottish Government (2019). Marine and fisheries compliance: submission of paper logbooks and declarations. Available online at https://www.gov.scot/publications/marine-and-fisheries-compliance-submission-of-paper-logbooks-and-declarations/

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

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

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

Stock assessments are conducted annually by the Baltic Fisheries Assessment Working Group (WGBFAS). The most recent was published in May 2022 and made available on the ICES website (ICES 2022a). Stock-specific advice has been produced by ICES in this way in almost every year since 1987. The stock assessment was designed based on the biological characteristics of the species and considers all fishery removals plus all the information sources listed in A1.2 (ICES 2022b). The stock assessment is an age-based analytical model which produces a range of catch recommendations based primarily on the EU Multi-Annual Plan (MAP). As a stock assessment, taking into account all available information, is conducted every year, A2.1 is met.

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

The annual ICES stock assessment provides an estimate of the Spawning Stock Biomass (SSB) of Baltic sprat relative to formally established reference points. The reference points originating from the MAP include MSY $B_{trigger}$ (set at 570,000t), B_{lim} (410,000t) and F_{MSY} (0.31). Figure 4 shows the estimated SSB for each year since the late 1970's relative to the current target and limit reference points, as reported in the ICES catch advice. The stock assessment produces an estimate of the biological status of the stock relative to target and limit reference points, and A2.2 is met.
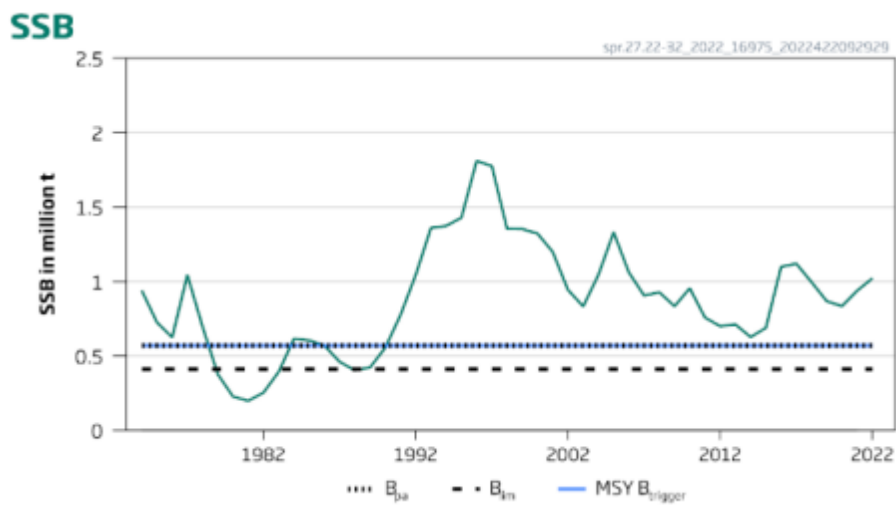

Figure 4 - Sprat in subdivisions 22-32. Estimated biomass (green line) relative to reference points, 1974 – 2021 (ICES, 2022a).

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

The annual ICES advice provides an indication of the appropriate level of fishery removals for the coming fishing season. Table 3 lists a series of potential catch scenarios provided by the most recent advice (ICES 2022a). The most recent headline catch advice is that "when the EU MAP for the Baltic Sea is applied, catches in 2023 that correspond to the F ranges in the plan are between 183,749 tonnes and 317,905 tonnes". The advice also notes that "the entire range [of potential total catches] is considered precautionary when applying the ICES advice rule" (ICES 2022a).

Table 1 also indicates the projected SSB levels associated with each total catch scenario. If the maximum advised total catch were taken in 2023, the estimated SSB would be 878,469t in 2023 and 904,540t in 2024. In both years this would leave the SSB substantially higher than the target reference point MSY $B_{trigger}$, set at 570,000t.

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

Table 3 – Sprat in Subdivisions 22-32. Annual catch scenarios from the ICES advice, 2022. All weights are in tonnes (ICES, 2022a).

Basis	Total catch (2023)	F_{total} (2023)	SSB (2023)	SSB (2024)	% SSB change *	% TAC change **	% advice change ***
ICES advice basis							
EU MAP^^: F_{MSY}	249 237	0.31	907 905	986 716	8.7	-16	-15
EU MAP^^range F_{lower}	183 749	0.22	935 258	1 067 775	14	-38	-14^
EU MAP^^range F_{upper}	317 905	0.41	878 469	904 540	3.0	7.7	-15^
Other scenarios							
F_{MSY}	249 237	0.31	907 905	986 716	8.7	-16	-15
F = 0	0	0	1 006 000	1 306 000	30	-100	-100
F = F_{pa}	317 905	0.41	878 469	904 540	3.0	7.7	9.0
F = F_{lim}	452 071	0.63	816 965	753 170	-7.8	53	55
SSB (2024) = B_{lim}	801 586	1.47	623 172	410 000	-34	171	175
SSB (2024) = B_{pa}	630 357	1.01	723 893	570 000	-21	113	116
SSB (2024) = MSY $B_{trigger}$	630 357	1.01	723 893	570 000	-21	113	116
SSB (2024) = SSB (2023)	354 500	0.47	862 333	862 333	0	20	22
F = F_{2022}	284 943	0.36	892 853	943 758	5.7	-3.5	-2.3

* SSB_{2024} relative to SSB_{2023}.

** Catch in 2023 relative to the sum of autonomous quotas in 2022 (295 300 tonnes = EU quota of 251 900 tonnes + Russian quota of 43 400 tonnes).

*** Advice value this year relative to the advice value last year (291 745 tonnes).

^ Advice value this year relative to the advice value last year for the MAP range F_{lower} (214 000 tonnes) and MAP range F_{upper} (373 210 tonnes)

^^ MAP multiannual plan (EU, 2016, 2019).

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

The Guide to ICES Advisory Framework and Principles (ICES 2020) sets out the process by which ICES carries out scientific activities and provides fishery management advice. The process is designed to be transparent, independent and produce peer-

reviewed recommendations. Advice is provided based on ten key Principles, of which Principle seven states that "To ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice, all analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests through one-off reviews".

The ICES advice, and the stock assessment methodology underpinning it, are subject to independent peer review. A2.4 is met.

A2.5 The assessment is made publicly available.

All the stock assessment information used to produce this MarinTrust assessment report was publicly available. Specifically, information is published in the WGBFAS report (ICES 2022b) and the catch advice (ICES 2022a). Additionally, the publication of methodologies, data, deliberations, and outcomes is a core part of the ICES process, as set out by the ICES Advisory Framework and Principles, particularly Principles 4, 5 and 6 (ICES 2020).

The stock assessment process and outcomes are made publicly available and therefore A2.5 is met.

References
ICES (2020), Guide to ICES advisory framework and principles. In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, Guide to ICES Advice. https://doi.org/10.17895/ices.advice.7648
ICES (2022a). Sprat (*Sprattus sprattus*) in Subdivisions 22-32 (Baltic Sea). ICES advice 2022. https://doi.org/10.17895/ices.advice.19453856
ICES (2022b). Baltic Fisheries Assessment Working Group (WGBFAS) Scientific Report, Volume 4, Issue 44. http://doi.org/10.17895/ices.pub.19793014

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

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

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

As at the time of the initial and first surveillance assessments, total fishing mortality is restricted through the implementation of a TAC. In EU waters this is set according to the ICES advice which in turn is guided by the EU Baltic Sea MAP (Regulation (EU) 2016/1139 as amended). The 2022 EU TAC was set in line with the ICES advice, at 251,900t (ICES 2022). Additionally, total removals by the Russian fleet are restricted by a Russian autonomous quota, set in 2022 at 43,300t. When added together, the total international quota is also within the ICES advice range (i.e. 295,300t, against a range of 183,749t – 317,905t).

The TAC allocation mechanism and associated control and enforcement systems in place in the fishery restrict total fishing mortality, and 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 EU regulation establishing the Baltic Sea MAP (Regulation 2016/1139) ensures that the EU TACs are set in line with the ICES advice. Table 2 lists the historical catch recommendations since 2007, alongside the eventual TAC and total catch. In 2021 and 2022, the total EU + Russian TAC was in line with the ICES advice; however, historically the total TAC was higher than the maximum advised level in most years. Additionally, total catch has often exceeded the TAC. However, these discrepancies are generally small: the total catch has only exceeded the maximum catch advice by more than 10% in 2 of the last 10 years, and only once in the last 5 years. For this reason, it is considered that total removals do not **regularly** exceed the recommended level by more than 10%, and exceeding by up to 10% is permitted by the MT requirements as the stock is currently estimated to be well above the limit reference point (see A4.1). For these reasons, A3.2 continues to be met.

Table 4 – Sprat in Subdivisions 22-32. ICES advice, agreed TAC, and ICES estimate of total catch. All weights are in tonnes (ICES, 2022).

Year	ICES advice	Catch corresponding to advice	Agreed TAC	ICES catch
2007	$< F_{pa}$	< 477 000	454 000*	388 900
2008	$< F_{pa}$	< 432 000	454 000*	380 500
2009	$< F_{pa}$	< 291 000	399 000*	407 100
2010	$< F_{pa}$	< 306 000	380 000*	341 500
2011	$< F_{pa}$	< 242 000	322 700**	267 900
2012	MSY transition scheme	< 242 000	255 100**	235 000
2013	$F < F_{MSY}$	< 278 000	278 000**	272 400
2014	MSY approach	< 247 000	267 900**	243 800
2015	MSY approach	< 222 000	240 200**	247 200
2016	MSY approach (F = 0.26)	≤ 205 000	243 000**	246 500
2017	MSY approach (F = 0.26)	≤ 314 000	303 593**	285 701
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	219 152–301 722, but catch higher than 291 715 only under conditions specified in MAP	304 900**	308 827
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	225 752–311 523, but catch higher than 301 125 only under conditions specified in MAP	313 100**	314 147
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	169 965–233 704, but catch higher than 225 786 only under conditions specified in MAP	256 700**	271 531
2021	Management plan	247 952 (range 181 567–316 833)	268 458**	284 890
2022	Management plan	291 745 (range 214 000– 373 210)	295 300***	
2023	Management plan	249 237 (range 183 749–317 905)		

* EU autonomous quota and doesn't include Russian catches.
** TAC is calculated as EU + Russian autonomous quotas.
*** TAC is calculated as EU quota + Russian autonomous quota of 43 400 tonnes.

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 Baltic Sea MAP states that "Fishing opportunities shall in any event be fixed in such a way as to ensure that there is less than a 5 % probability of the spawning stock biomass falling below the limit spawning stock biomass reference point (B_{lim})". This clearly implies that should the stock biomass fall below B_{lim}, the catch recommendation will be made with the intention of maximising the probability that the stock recovers to above B_{lim} in the following year. Although the recommendation will take into account the incoming year class, it is likely to be low or even zero. The MAP also states that safeguard measures should be put in place if the stock is "under threat", defined as having a biomass below the limit reference point.

At the present time the estimated biomass of the Baltic sprat stock has been above B_{lim} for several decades, and therefore there has been no need for a fishery closure. However, the MAP indicates that B_{lim} will be avoided if possible and that catches will be restricted to allow the stock to recover should it fall below B_{lim} in future. A3.3 is met.
References
ICES (2022). Sprat (*Sprattus sprattus*) in Subdivisions 22-32 (Baltic Sea). ICES advice 2022. https://doi.org/10.17895/ices.advice.19453856
Regulation (EU) 2016/1139 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/?uri=CELEX%3A32016R1139
Standard clause 1.3.2.1.3

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

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

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

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

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

Two potential target reference points have been established for sprat in the Baltic Sea, MSY $B_{trigger}$ and B_{pa}; the estimated value for both of these is 570,000t. The most recent ICES advice estimates that SSB at the time of spawning in 2022 would be 1,022,000t. Additionally, the advice states that "spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES, 2022). There is clear evidence that the stock size is very likely to be considerably above the target reference point and A4.1 is met.

References

ICES (2022). Sprat (*Sprattus sprattus*) in Subdivisions 22-32 (Baltic Sea). ICES advice 2022.
https://doi.org/10.17895/ices.advice.19453856

Links	
MarinTrust Standard clause	1.3.2.1.4
FAO CCRF	7.2.1, 7.2.2 (e)

| GSSI | D6 01 |

CATEGORY C SPECIES

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

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

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

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

As at the time of the previous surveillance assessment, the stock assessment for herring in the central Baltic incorporates international landings data. Discarding is considered negligible (ICES, 2022). The stock assessment model also incorporates estimates of natural mortalities and cod biomass. As fishery removals are included in the stock assessment, C1.2 continues to be met.

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

The most recent ICES advice for central Baltic herring, published in May 2022, states that "spawning-stock size is below MSY $B_{trigger}$ and between B_{pa} and B_{lim}. The limit reference point B_{lim} is set at 330,000t, and SSB at the 2022 spawning time was projected to be 446,582t (ICES, 2022). The advice is based on an age-based analytical assessment incorporating commercial catches, one survey acoustic index, natural mortalities from a multispecies model, and Baltic cod biomass data.

In the most recent stock assessment central Baltic herring biomass was estimated to be above the limit reference point and C1.2 is met.
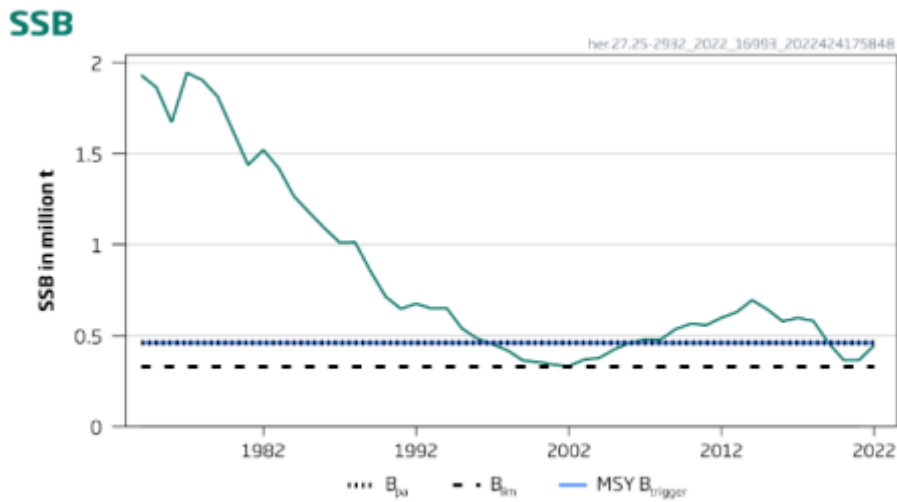
Figure 5 – Herring in Subdivisions 25-29 and 32, excluding the Gulf of Riga. Estimated SSB (green line) relative to reference points (ICES, 2022).

References	
ICES (2022). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES advice 2022. https://doi.org/10.17895/ices.advice.19447970	
Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

CATEGORY D SPECIES

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

D1	Species Name		Fourhorn sculpin	
	Productivity Attribute		**Value**	**Score**
	Average age at maturity (years)		4 years	1
	Average maximum age (years)		14 years	2
	Fecundity (eggs/spawning)		3,776	2
	Average maximum size (cm)		60cm	1
	Average size at maturity (cm)		34.1cm	1
	Reproductive strategy		Demersal egg layer	2
	Mean trophic level		3.9	3
		Average Productivity Score		**1.71**
	Susceptibility Attribute		**Value**	**Score**
	Availability (area overlap)		<10% overlap	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Demersal – low overlap	1
	Selectivity of gear type		Retained	3
	Post-capture mortality		Retained	3
		Average Susceptibility Score		2
		PSA Risk Rating (From Table D3)		PASS
		Compliance rating		PASS

Further justification for susceptibility scoring (where relevant)

References

Fishbase, Fournhorn sculpin. https://www.fishbase.se/summary/Myoxocephalus-quadricornis. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	Species Name		Round goby	
Productivity Attribute			**Value**	**Score**
Average age at maturity (years)			3 years	1
Average maximum age (years)			10.4 years	2
Fecundity (eggs/spawning)			1,225	2
Average maximum size (cm)			35cm	1
Average size at maturity (cm)			10.4cm	1
Reproductive strategy			Demersal egg layer	3
Mean trophic level			3.3	3
			Average Productivity Score	**1.86**
Susceptibility Attribute			**Value**	**Score**
Availability (area overlap)			<10% overlap	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)			Demersal – low overlap	1
Selectivity of gear type			Retained	3
Post-capture mortality			Retained	3
			Average Susceptibility Score	2
			PSA Risk Rating (From Table D3)	PASS
			Compliance rating	PASS

Further justification for susceptibility scoring (where relevant)

References

Fishbase, Round goby. https://www.fishbase.se/Summary/SpeciesSummary.php?ID=12019&AT=round+goby. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	Species Name		Shorthorn sculpin	
Productivity Attribute			**Value**	**Score**
Average age at maturity (years)			1 year	1
Average maximum age (years)			4.2 years	1
Fecundity (eggs/spawning)			9,592	2
Average maximum size (cm)			60cm	1
Average size at maturity (cm)			34.1cm	1

	Reproductive strategy	Demersal spawner	2
	Mean trophic level	3.9	3
		Average Productivity Score	**1.57**
	Susceptibility Attribute	**Value**	**Score**
	Availability (area overlap)	<10% overlap	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Demersal – low overlap	1
	Selectivity of gear type	Retained	3
	Post-capture mortality	Retained	3
		Average Susceptibility Score	2
		PSA Risk Rating (From Table D3)	PASS
		Compliance rating	PASS

Further justification for susceptibility scoring (where relevant)

References

Fishbase, Shorthorn sculpin. https://www.fishbase.se/summary/1329. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	**Species Name**		**Sea lamprey**	
	Productivity Attribute		**Value**	**Score**
	Average age at maturity (years)		7.7 years	2
	Average maximum age (years)		36.3 years	3
	Fecundity (eggs/spawning)		214,960	1
	Average maximum size (cm)		120cm	2
	Average size at maturity (cm)		62.9cm	2
	Reproductive strategy		Demersal egg layer	2
	Mean trophic level		4.4	3
			Average Productivity Score	**2.14**
	Susceptibility Attribute		**Value**	**Score**
	Availability (area overlap)		<10% overlap	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Anadromous & demersal – low overlap	1
	Selectivity of gear type		Retained	3
	Post-capture mortality		Retained	3
			Average Susceptibility Score	2
			PSA Risk Rating (From Table D3)	PASS

	Compliance rating	PASS

Further justification for susceptibility scoring (where relevant)

References

Fishbase, Sea lamprey. https://www.fishbase.se/summary/Petromyzon-marinus.html. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	Species Name		European smelt	
Productivity Attribute			**Value**	**Score**
Average age at maturity (years)			4.7 years	1
Average maximum age (years)			18.9 years	2
Fecundity (eggs/spawning)			18,028	2
Average maximum size (cm)			45cm	1
Average size at maturity (cm)			22.1cm	1
Reproductive strategy			Demersal spawner	2
Mean trophic level			3.5	3
			Average Productivity Score	**1.71**
Susceptibility Attribute			**Value**	**Score**
Availability (area overlap)			<10% overlap	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)			Anadromous & demersal – low overlap	1
Selectivity of gear type			Retained	3
Post-capture mortality			Retained	3
			Average Susceptibility Score	2
			PSA Risk Rating (From Table D3)	PASS
			Compliance rating	PASS
Further justification for susceptibility scoring (where relevant)				

References

Fishbase, European smelt. https://www.fishbase.se/summary/Osmerus-eperlanus.html. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	Species Name		Eelpout	
Productivity Attribute			**Value**	**Score**
Average age at maturity (years)			5.1 years	2
Average maximum age (years)			21.9 years	2
Fecundity (eggs/spawning)			<100 eggs per year	3
Average maximum size (cm)			52cm	1
Average size at maturity (cm)			29cm	1
Reproductive strategy			Live bearer	3
Mean trophic level			3.5	3
		Average Productivity Score		**2.14**
Susceptibility Attribute			**Value**	**Score**
Availability (area overlap)			<10% overlap	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)			Demersal, low overlap	1
Selectivity of gear type			Retained	3
Post-capture mortality			Retained	3
		Average Susceptibility Score		2
		PSA Risk Rating (From Table D3)		PASS
		Compliance rating		PASS
Further justification for susceptibility scoring (where relevant)				

References

Fishbase, eelpout. https://www.fishbase.se/summary/Zoarces-viviparus.html. Accessed on 29 July 2022.
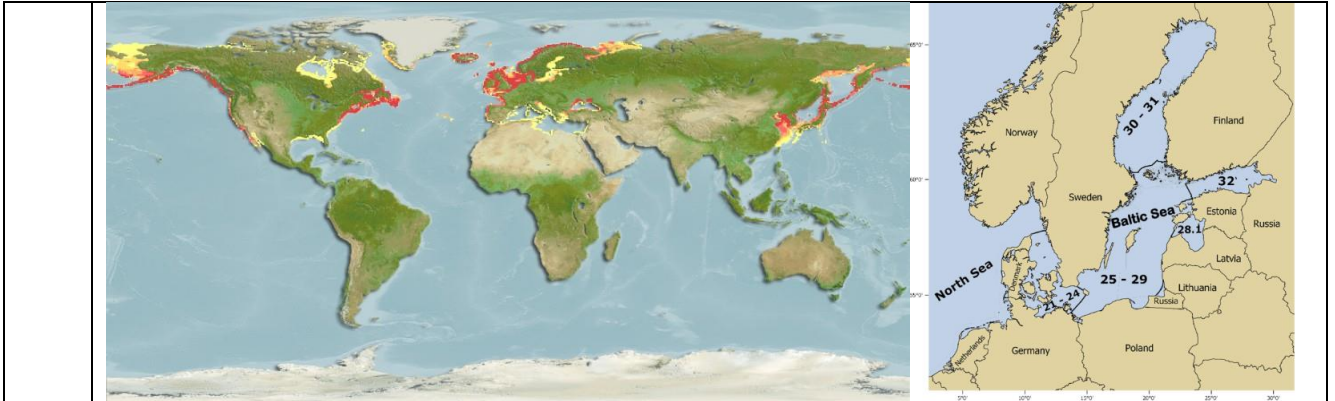
Pörtner HO, Berdal B, Blust R, Brix O, Colosimo A, De Wachter B, Giuliani A, Johansen T, Fischer T, Knust R, Lannig G. Climate induced temperature effects on growth performance, fecundity and recruitment in marine fish: developing a hypothesis for cause and effect relationships in Atlantic cod (Gadus morhua) and common eelpout (Zoarces viviparus). Continental Shelf Research. 2001 Dec 1;21(18-19):1975-97.

Standard clauses 1.3.2.2

D1	Species Name	Three-spined stickleback	
Productivity Attribute		**Value**	**Score**
Average age at maturity (years)		0.5 years	1
Average maximum age (years)		1.6 years	1
Fecundity (eggs/spawning)		255	2
Average maximum size (cm)		11cm	1
Average size at maturity (cm)		5.7cm	1
Reproductive strategy		Demersal spawner	2
Mean trophic level		3.3	3
		Average Productivity Score	**1.57**
Susceptibility Attribute		**Value**	**Score**
Availability (area overlap)		<10% overlap	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Demersal, anadromous. Low overlap.	1
Selectivity of gear type		Retained	3
Post-capture mortality		Retained	3
		Average Susceptibility Score	2
		PSA Risk Rating (From Table D3)	PASS
		Compliance rating	PASS
Further justification for susceptibility scoring (where relevant)			

References

Fishbase, three-spined stickleback. https://www.fishbase.se/summary/Gasterosteus-aculeatus.html. Accessed on 29 July 2022.

Standard clauses 1.3.2.2

D1	Species Name	European flounder	
Productivity Attribute		**Value**	**Score**
Average age at maturity (years)		3 years	1
Average maximum age (years)		12.4 years	2
Fecundity (eggs/spawning)		894,427	1
Average maximum size (cm)		60cm	1
Average size at maturity (cm)		26.7cm	1
Reproductive strategy		Broadcast spawners	1
Mean trophic level		3.3	3
		Average Productivity Score	**1.43**
Susceptibility Attribute		**Value**	**Score**
Availability (area overlap)		<10%	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)		Demersal, low overlap	1
Selectivity of gear type		Retained	3
Post-capture mortality		Retained	3
		Average Susceptibility Score	2
		PSA Risk Rating (From Table D3)	PASS
		Compliance rating	PASS
Further justification for susceptibility scoring (where relevant)			

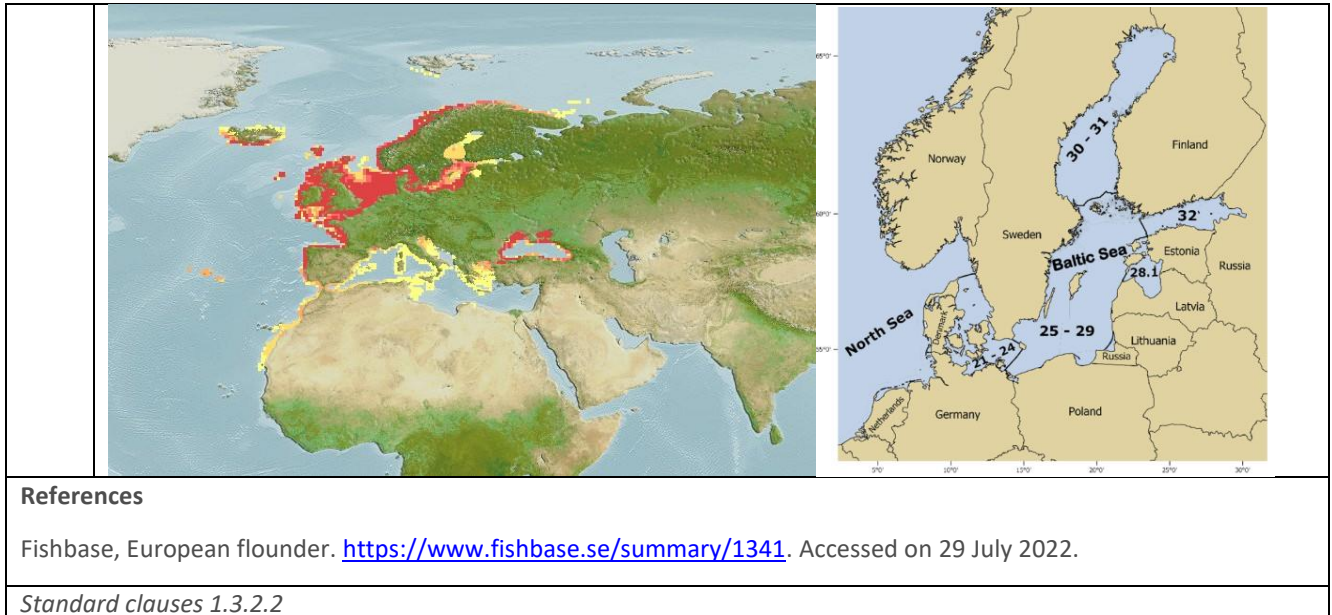| References |
| --- |
| Fishbase, European flounder. https://www.fishbase.se/summary/1341. Accessed on 29 July 2022. |
| *Standard clauses 1.3.2.2* |

Table D2 - Productivity / Susceptibility attributes and scores.

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

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability).

						Default score for target species
water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear						
Selectivity of gear type Potential of the gear to retain species	a	Individuals < size at maturity are rarely caught	a	Individuals < size at maturity are regularly caught.	a	Individuals < size at maturity are frequently caught
	b	Individuals < size at maturity can escape or avoid gear.	b	Individuals < half the size at maturity can escape or avoid gear.	b	Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival		Evidence of majority released post-capture and survival.		Evidence of some released post-capture and survival.		Retained species or majority dead when released.

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

FURTHER IMPACTS

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

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

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section F1. The conclusions of the initial assessment are summarised here for convenience; please refer to the previous surveillance report (Global Trust Certification 2021) and initial assessment report (Lloyds Register 2020) for more detail.

F1.1 Interactions with ETP species are recorded.

Interactions with ETP species are required to be recorded through EU regulations (EC) 812/2004, EU Regulation 2019/1241, and the Habitats and Birds Directives 1992/43/EC and 2009/47/EC; in practice this primarily means recording and reporting via vessel logbooks. Additional information on ETP interactions is recorded by the observer program in the fishery, which covers around 8-10% of catches. The outcomes of these efforts to monitor ETP interactions suggest that interactions between the Gulf of Riga pelagic trawl fishery and ETP species are rare. Interactions are recorded and F1.1 is met.

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

Potential ETP species present in the region where the fishery takes place include ringed seal and harbour porpoise, which are both categorised by the IUCN red list as Least Concern (IUCN 2016; IUCN 2020) but whose Baltic populations are considered to be in a relatively poor state. Potentially at-risk bird species in the area include the common eider, great black-backed gull, long-tailed duck, velvet scoter, and Steller's eider. However, there is no substantial evidence that the herring trawl fishery has a significant negative impact on any of these species; indeed the evidence from the observer programme and other studies suggests that there are minimal interactions of any kind. As at the time of the previous MT assessments, no evidence was discovered to suggest the fishery has a significant negative impact on ETP species and so F1.2 is met.

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

Although interactions between the fishery and ETP species are thought to be rare, some measures are in place to minimise mortality. Latvia is a contracting party to the Baltic Marine Environment Protection Commission (HELCOM), which has established coordinated management programmes and conservation measures for seal populations in the Baltic Sea. In 2020 ICES provided advice on emergency measures to prevent the bycatch of harbour porpoise; these measures were focussed on "fisheries of concern" in relation to the species, and due to the rarity of interactions with the pelagic trawl fishery did not result in any changes to the fishery in this assessment. Finally, EU technical measures include provisions to prohibit the capture and mandate the release of many marine mammals and seabirds, and also mandates the recording and reporting of interactions. As measures are in place, F1.3 is met.

References

Global Trust Certification (2021). Denmark Gulf of Riga herring surveillance assessment, May 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF7_Herring_Denmark_ICES%20Subdivisions%2028.1_Surv%201_May%202021.%20Updated%20post%20PR.pdf

IUCN (2016). Ringed seal. https://www.iucnredlist.org/species/41672/45231341

IUCN (2020). Harbour porpoise. https://www.iucnredlist.org/species/17027/50369903

Lloyds Register (2020). Denmark Gulf of Riga herring initial assessment, 2020. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF%20321%20Gulf%20of%20Riga%20Herring_Entire%20fishery%20%28Latvia%20%2B%20Estonia%29%202020.pdf

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

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

There have been no changes in the gears used in the fishery since the initial and surveillance MT assessments, and the nature of the fishing activity being conducted renders interactions with physical habitats very unlikely.

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

The pelagic trawl gears used in this fishery are not intended to make contact with the sea bed, and in order to avoid damage vessels will attempt to avoid such interactions wherever possible. The assessment guidance for this clause states that "good practice requires there to be a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types". For fisheries in the region which interact with seabed habitats, measures are in place to manage and mitigate impacts via mechanisms such as the HELCOM Baltic Sea Action Plan (BSAP), the requirements associated with Natura 2000 sites, and the technical measures set out in EU regulation. The Gulf of Riga herring fishery does not require a strategy to be in place as the gears used already do not pose a risk to habitats. Potential habitat impacts are considered and F2.1 is met.

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

There is substantial evidence that pelagic trawl gears rarely have any impact on physical habitats. Pelagic gears are not intended to interact with the sea bed and vessels make efforts to avoid interactions wherever possible. Examples of the conclusion that interactions are minimal can be found throughout the literature, for example in the BENTHIS project (Rijnsdorp 2013) and also in the risk ratings of many fishery assessment methodologies (such as the Seafish RASS methodology and the Monterey Bay Aquarium scoring guidance). There is no evidence that the fishery has a significant negative impact, and considerable evidence that it has very little impact. F2.2 is met.

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

The fishery is known not to interact with physical habitats, and therefore no such measures are required to be in place. The nature of the fishery means that in the absence of any evidence of habitat interactions, the requirements of clause F2.3 are met.

References

Caveen, A. & Lart, B. (2020). Seafish RASS scoring guidance. https://www.seafish.org/document/?id=4351A6BB-D3E4-4D26-BE93-EE19695C5FA9

Global Trust Certification (2021). Denmark Gulf of Riga herring surveillance assessment, May 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF7_Herring_Denmark_ICES%20Subdivisions%2028.1_Surv%201_May%202021.%20Updated%20post%20PR.pdf

Lloyds Register (2020). Denmark Gulf of Riga herring initial assessment, 2020. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF%20321%20Gulf%20of%20Riga%20Herring_Entire%20fishery%20%28Latvia%20%2B%20Estonia%29%202020.pdf

Rijnsdorp, A. (2013). BENTHIS deliverable 1.1b: Benthic impact from the perspective of the fisheries. https://www.benthis.eu/web/file?uuid=e89c7e3e-a611-4d12-b829-47caed6f8313&owner=fd9fa22c-6bf7-42dc-ad64-ad4cbd966f98

Seafood Watch Fisheries Standard V F4 (2020). https://www.seafoodwatch.org/globalassets/sfw/pdf/standards/fisheries/seafood-watch-fisheries-standard-version-f4.pdf

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

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

The surveillance assessment information review did not uncover any substantial changes to the components of the fishery relevant to Section F3. Some minor changes of note have been introduced through the publishing of an updated ICES Ecosystem Overview for the Baltic Sea (ICES, 2021). While these do not change the assessment outcomes, they are included in the summary below setting out the conclusions of the 2020 initial and 2021 surveillance MT assessment reports.

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

Commercial fisheries in the Baltic Sea are managed according to a Multi-Annual Plan (MAP), EU Regulation 2016/1139. The objectives of the MAP include implementing the ecosystem-based approach to fisheries management, the precautionary approach, and EU legislation including the Marine Strategy Framework Directive (MSFD), Directive 2008/56/EC. The regular management advice published by ICES includes an ecoregion overview for the Baltic Sea (ICES, 2021), which summarises the

most up to date understanding of the Baltic ecosystem and the ways in which this knowledge influences the management advice. These include noting the likely current and future impacts of climate change, and the shifts in the food web which have occurred since the late 1980s. The broader ecosystem is considered during the decision-making process and F3.1 is met.

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

The most significant potential ecosystem impacts of the fishery arise from the removal of herring and sprat biomass. The ICES ecosystem overview (ICES, 2021) states that since the late 1980's "the open-sea system has been dominated by small pelagic fish, such as sprat", and that "in general, those seabird species eating sprat and herring have increased in number". Prey depletion is not considered to be a determining factor in the health of populations of porpoise, seal or cod populations, all of which predate sprat and herring. As at the time of the initial and first surveillance assessments, there is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem in which it occurs and F3.2 is met.

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

Herring and sprat are both considered to be important prey species in the Baltic Sea ecosystem. Predation of sprat is considered in the EU MAP, and factored in when establishing reference points and management regulations such as quotas, area and seasonal restrictions, gear limitations, and controls on the number of vessels in the fishery. As consideration of the role of sprat and herring in the ecosystem impacts the management measures in place – including total permissible fishery removals – clause F3.3 is met.

References

Global Trust Certification (2021). Denmark Gulf of Riga herring surveillance assessment, May 2021. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF7_Herring_Denmark_ICES%20Subdivisions%2028.1_Surv%201_May%202021.%20Updated%20post%20PR.pdf

ICES (2021). Baltic Sea Ecoregion – Ecosystem overview. https://doi.org/10.17895/ices.advice.9437

Lloyds Register (2020). Denmark Gulf of Riga herring initial assessment, 2020. https://www.marin-trust.com/sites/marintrust/files/approved-raw-materials/WF%20321%20Gulf%20of%20Riga%20Herring_Entire%20fishery%20%28Latvia%20%2B%20Estonia%29%202020.pdf

Links

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

SOCIAL CRITERION

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

Appendix A - Determining Resilience Ratings

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

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

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

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

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)

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	WF07 Gulf of Riga Herring
Management authority (Country/State)	EU
Main species	Herring, *Clupea harengus*; sprat, *Sprattus sprattus*
Fishery location	ICES subdivision 28.1 (Gulf of Riga)
Gear type(s)	Pelagic trawl
Overall recommendation. (Approve/ Fail)	Approve

Summary: in this section, provide any additional information about the fishery that the reviewers feel is significant to their decision.
The assessor has provided a detailed examination of the fishery with appropriate levels of evidence and which follows the standards required. The following comments are of note: • Can the assessor provide some evidence that sanctions are applied? • The number of inspections and infringements were provided in the 2020/21 reviews – is there evidence of the current inspections/infringements and if these have changed since 2020/21. Can the assessor compare if the same offence is occurring overtime by comparing between years? • Is there any evidence that landing or observer data has been used to quantify the level of misreporting of catches? • Is there any evidence of management measures being implemented for central Baltic herring stock rebuilding given SSB has mostly had a decreasing trend since 2014 and is currently below MSY Btrigger? • Observer coverage is 8-10% - is there evidence of any ETP species interactions for the past year and how this has changed since previous years? • Given some of the ETP species are threatened or endangered is it possible to provide evidence of their population trends?
General Comments on the Draft Report provided to the peer reviewer

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?	✓		
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	✓		
3. Are the scores in the following sections accurate (i.e. do the scores reflect the evidence provided)?	✓		
Section M - Management	✓		
Category A Species	✓		
Category B Species	N/A		
Category C Species	✓		
Category D Species	✓		
Section F – Further Impacts	✓		

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?
The scoring is consistent with the MT standard and the appropriate evidence is provided within the assessment report. The detailed information is provided in the previous assessment (for M and F sections) as referred to by the assessor (Global Trust Certification 2021 and Lloyds Register 2020). Most factors remain consistent with previous assessments, including catch composition.
Certification body response

2. Has the fishery assessment been fully completed, using the recognised MARINTRUST fishery assessment methodology and associated guidance?
The fishery assessment has been fully completed following the MARINTRUST methodology and with minor remarks in this peer review report (see summary and below). The assessor provided an appropriate summary within the Assessment determination.

An internal review of the assessment has been conducted and agrees with the assessor determination.

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

The species categorisation has not changed since previous assessment and indicates the catch composition is made up of two category A species 85-95% Gulf of Riga Herring, Clupea harengus and 5-15% Baltic sprat, Sprattus sprattus. There is one category C species (Central Baltic herring, Clupea harengus) and eight category D species. This reflects the best current understanding of the catch composition of the fishery.

Certification body response

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

The scores in this section are clearly justified by the assessor with reference to little change from previous assessments.

Comments:
M1.5 Does BSAC include representation from fishing industry and environmental NGOs?
M2.2 Can the assessor provide some evidence that sanctions are applied?
M2.3 The number of inspections and infringements were provided in the 2020/21 reviews – is there evidence of the current inspections/infringements and if these have changed since 2020/2021. Can the assessor compare if the same offence is occurring overtime by comparing between years?
Is there any evidence of fishers providing additional information to managers to support the effective management of the fishery e.g reporting illegal activity?

Certification body response

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

The scores in this section are clearly justified by the assessor with responses supported by evidence. There is an annual stock assessment and fishing pressure on the stock is below F_{lim} and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}.

While there does not appear to be a specific regulation whereby commercial fishery removals would be prohibited if the stock was estimated to be below the limit reference point, the Baltic Sea MAP clearly implies that should the stock biomass fall below Blim, the catch recommendation would have the intention to allow the stock to recover and would likely be low or even zero. Estimated biomass of the Gulf of Riga herring and Baltic sprat stocks have been substantially above Blim for several decades.

Comments:

In the 2020 review it was stated "misreporting can potentially be a large problem with regards to the perception of Baltic sprat and central Baltic herring stocks (ICES, 2020c)." Is there evidence to confirm that Gulf of Riga misreporting continues to not be considered a significant problem? Is there any evidence that landing or observer data has been used to quantify the level of misreporting of catches?

Certification body response

3B. Are the "Category B Species" scores clearly justified?
No Category B species were identified.

Certification body response

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

The scores in this section are clearly justified and accurate.
The most recent ICES stock evaluation is available, and the spawning-stock size is below MSY $B_{trigger}$ and between B_{pa} and B_{lim} and fishing removals are considered in the stock assessment

Comments:
Is there any evidence of management measures being implemented for stock rebuilding given SSB has mostly had a decreasing trend since 2014 and is currently below MSY $B_{trigger}$?

Certification body response

3D. Are the "Category D Species" scores clearly justified?
The scores in this section are clearly justified by the assessor, with good references and distribution maps provided.

Certification body response

3F. Are the scores in "Section F – Further Impacts" clearly justified?
The scores in this section are clearly justified by the assessor.

Comments

Observer coverage is 8-10% - is there evidence of any ETP species interactions for the past year and how this has changed since previous years?

Given some of the ETP species are threatened or endangered is it possible to provide evidence of their population trends?

The fishery review by the assessor has a good level of detail provided and useful references. As a large percent of the detailed information is provided in the previous assessment for sections M and F as referred to by the assessor (Global Trust Certification 2021 and Lloyds Register 2020), current information should be provided where available – e.g. updated levels of inspections and infringements, any changes in ETP by-catch interactions reported.