MarinTrust Whole fish fishery assessment report

Denmark
Clupea harengus - Herring and Sprattus sprattus - Sprat
FAO 27, ICES 3.d.28.1 (Gulf of Riga)
Initial
WF07

Document TEM-002 (prev. FISH2) - Version 3.0

Issued June 2024 – Effective June 2024

Table 1: Whole fish fishery assessment scope

Fishery name	**Denmark - *Clupea harengus* - Herring and *Sprattus sprattus* - Sprat - FAO 27, ICES 3.d.28.1 (Gulf of Riga)**
MarinTrust report code	**WF07**
Type 1 species (common name, Latin name)	*Herring (Clupea harengus) and sprat (Sprattus sprattus)*
Fishery location	FAO 27, ICES 3.d.28.1 (Gulf of Riga)
Gear type(s)	Pelagic Trawl
Management authority (country/state)	EU, Estonian government, Latvian government

Table 2: Applicant and Certification Body details

Application details			
Applicant(s)		FF Skagen A/S, Thyborøn (TripleNine)	
Applicant country		Denmark	
Certification Body details			
Name of Certification Body		LRQA	
Contact Information for CB (e.g. email address/address/telephone number)		E: mt-ca@lrqa.com LRQA, 4-5 Lochside Way, Edinburgh Park, EH12 9DT T: +44 800 092 0452	
Fishery Assessor name		Blanca Gonzalez	
CB Peer Reviewer name		Jim Missen	
Number of assessment days	4	**Assessment period**	September 2025 – September 2026

Table 3: Assessment outcome

Assessment outcome (See Table 4 for a summary of assessment determination)		*Approve*
Approval validity	Valid from: September 2025	Valid until: September 2026
CB peer reviewer evaluation		*Agree with assessment determination*
Fishery Assessment Peer Review Group external peer reviewer evaluation		*Agree with assessment determination*

Table 4: Assessment determination

Assessment determination **Summary of assessment and outcome**

The pelagic trawl herring (*Clupea harengus*) and sprat (*Sprattus sprattus*) fishery in the Gulf of Riga represents more than 95% of the total catch. Both species are categorized by the IUCN as Least Concern, are not in any CITES appendix, and ICES establishes a reference point, a total allowable catch (TAC), and the stocks are assessed annually by the Baltic Fisheries Assessment Working Group (WGBFAS). Therefore, herring from the Gulf of Riga and central Baltic stocks, and sprat were assessed as Category A species. Smelt (*Osmerus eperlanus*), fourhorn sculpin (*Triglopsis quadricornis*), flounder (*Platichthys flesus*), round goby (*Neogobius melanostomus*), three-spined stickleback (*Gasterosteus aculeatus*), and eelpout (*Zoarces viviparus*) represent less than 2% but more than 0.1% of the catches. All these species are considered Least Concern by the IUCN, are not included in any CITES appendix, and are not managed in relation to reference points; therefore, they were assessed as category D species.

The reviewed evidence about the herring and sprat stock management framework (M1) indicates that there is an organisation responsible for managing the fishery which are legally empowered to take management actions, also, there are entities responsible for collecting scientific data and assessing the fishery, and the fishery management system is based on principles of sustainable fishing and a precautionary approach and there is a consultation process through which fishery stakeholders are engaged in decision-making, the process is transparent and results are publicly available; therefore all clauses were met. Regarding surveillance, control and enforcement measures (M2), there is an organisation responsible for monitoring compliance with fishery laws and regulations, there is a framework of sanctions which are applied when laws and regulations are discovered to have been broken, and there is no substantial evidence of widespread non-compliance in the fishery, nor IUU fishing; thus, all clauses were also met.

Despite the issue of misreported herring and sprat catches having been discussed for many years in this fishery, there is no concern about IUU-caught fish being used as raw material, based on the following considerations: 1) stock assessment accounts for uncertainty, 2) documented decline in misreporting, 3)low IUU risk scores for Latvia and Estonia, and 4)robust surveillance, control, and enforcement systems.

As indicated by MarinTrust, the outcomes of the harmonization process for Baltic Sea herring and sprat fisheries were used for Category A and B species. Gulf of Riga herring and sprat met all clauses, while Central Baltic herring failed in Category A, but passed in Category B. In the Productivity-Susceptibility Analysis (PSA) of category D species, all six assessed species passed the criteria, indicating that these stocks are not vulnerable to the fishery under assessment.

The fishery has a minimal impact on ETP species and does not affect the habitat, as pelagic trawls generally do not interact with physical habitats. The fishery management framework considers an ecosystem approach to ensure the long-term conservation and sustainable use of resources while safeguarding marine ecosystems.

The herring and sprat fishery in the Gulf of Riga PASSED all the MarinTrust requirements in this assessment; therefore, its approval is recommended to be used as a MarinTrust certified product.

Summary of CB peer review	The CB peer reviewer agrees with the assessor's determination of a pass for this fishery, confirming that sufficient evidence has been provided to demonstrate compliance with all the requirements of Version 3 of the MarinTrust Whole Fish Fishery Assessment. The reviewer agrees with the assessor's categorisation of herring in

	the Gulf of Riga and the Central Baltic, along with sprat, as Category A species. Subsequently, Central Baltic herring did not meet the requirements under Category A and was reassessed against Category B, where it passed. Smelt, fourhorn sculpin, flounder, round goby, three-spined stickleback, and eelpout were all categorised as Category D species and passed. Therefore, the CB supports the decision for approval under the MarinTrust Standard.
Summary of external peer review (see Appendix 1 for the full peer review report)	*Note to assessor: Include a brief summary of the external peer review evaluation.*
Notes for on-site auditor	*Note to assessor: Notes for on-site auditor should be included where there may be reason to validate the findings of the assessment during the on-site audit. For example, if a marine mammal or ETP shark is allowed to be landed by the fishery, the auditor on site can review evidence to ensure this species is not used for reduction purposes.*

Table 5: General results

Section	Outcome (Pass/Fail)
M1 - Management Framework	Pass
M2 - Surveillance, Control and Enforcement	Pass
E1 - Impacts on ETP Species	Pass
E2 - Impacts on Habitats	Pass
E3 - Ecosystem Impacts	Pass

Table 6: Species-specific results

See Table 7 for further details of species categorisation.

Category	Species name (common & Latin name)	Outcome (Pass/Fail/n/a)	
Category A	Gulf of Riga herring - *Clupea harengus*	A1	Pass
		A2	Pass
		A3	Pass
		A4	Pass
	Sprat - *Sprattus sprattus*	A1	Pass
		A2	Pass
		A3	Pass
		A4	Pass
	Central Baltic herring - *Clupea harengus*	A1	Pass
		A2	Pass
		A3	Fail

		A4	Fail
Category B	Central Baltic herring - *Clupea harengus* (Failed A)	Pass	
Category C	N/A	N/A	
Category D	Smelt - *Osmerus eperlanus*	Pass	
	Fourhorn sculpin - *Triglopsis quadricornis*	Pass	
	Flounder - *Platichthys flesus*	Pass	
	Round goby - *Neogobius melanostomus*	Pass	
	Three-spined stickleback - *Gasterosteus aculeatus*	Pass	
	Eelpout - *Zoarces viviparus*	Pass	

Table 7: Species categorisation table

List of all the species assessed. Type 1 species are assessed against Category A or Category B. Type 1 species must represent 95% of the total annual catch. Type 2 species are assessed against Category C or Category D. Type 2 species may represent a maximum of 5% of the annual catch. Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

Species name (common & Latin name)	Stock	CITES listed yes/no	IUCN Red list Category	% Catch composition	Management (Y/N)	Category (A, B, C or D)
Herring - *Clupea harengus*	Gulf of Riga	No	Least Concern	59.23	Y	A
Sprat - *Sprattus sprattus*	Baltic Sea	No	Least Concern	29.28	Y	A
Herring - *Clupea harengus*	Central Baltic	No	Least Concern	7.31	Y	A (Fail) - B
Smelt - *Osmerus eperlanus*	Baltic Sea	No	Least Concern	1.57	N	D
Fourhorn sculpin - *Triglopsis quadricornis*	Baltic Sea	No	Least Concern	1.13	N	D
Flounder - *Platichthys flesus*	Baltic Sea	No	Least Concern	0.81	N	D
Round goby - *Neogobius melanostomus*	Baltic Sea	No	Least Concern	0.45	N	D
Three-spined stickleback - *Gasterosteus aculeatus*	Baltic Sea	No	Least Concern	0.13	N	D
Eelpout - *Zoarces viviparus*	Baltic Sea	No	Least Concern	0.12	N	D

Rationale

The herring and sprat fisheries in the Gulf of Riga are exclusive to Latvia and Estonia, and these two species are the primary targets for commercial fishing (ICES 2025a). The Latvian herring and sprat

fishery is an MSC-certified fishery and is now under reassessment. In the Announcement Comment Draft Report, the catch composition of the fishery is reported from 2019 to 2023, considering data provided by the client and the Ministry, as well as data collected from biological samples of the commercial pelagic trawl fishery, which provides a more detailed species composition (Global Trust 2025).

Both catch composition reports demonstrate that more than 98% of the fishery is composed of herring and sprat; however, there were variations regarding the presence of other species. To obtain the best representation of the fishery catch, averages from both data sources were estimated to define the percentage composition of the catch. In addition, considering that Gulf of Riga herrings represent 89% of the herring catch in the Gulf of Riga (average from 2018 to 2024) (ICES 2025b), this value was used to estimate the herring catch composition from each stock (Table 1).

Species	Average Catch composition t
Gulf of Riga herring	61.00
Sprat	30.15
Central Baltic herring	7.53
Smelt	1.62
Fourhorn sculpin	1.13
Flounder	0.84
Round goby	0.46
Three-spined stickleback	0.13
Eelpout	0.12
cod	0.01

Table 1. Catch composition according to average catches from data provided by the client and data collected from biological samples of the commercial pelagic trawl fishery.

Data indicate that Gulf of Riga herring, sprat, and Central Baltic herring represent 95.82 % of the total catch. These two species are considered Least Concern by the IUCN and are not included in any CITES appendix. Herring and sprat are the target fishery species, managed in relation to reference points; therefore, they were assessed as Category A species.

Despite misreporting of herring and sprat catch being discussed for many years in this fishery, the Baltic Fisheries Assessment Working Group states that "In most recent years, the level of misreporting is gradually decreasing due to scrapping of the fishing vessels and better monitoring systems. Thus, in Latvia, the trawl fishing fleet is currently approximately three times smaller than it was previously. Therefore, it is considered that the fishing capacities are now roughly balanced with the fishing possibilities, and no unallocated landings have been assumed since 2011. The level of misreporting in the Estonian herring fishery has been estimated to be low " (ICES 2025a). Also, Latvia and Estonia currently hold IUU fishing risk index scores of 1.9 and 2.09, respectively. This index evaluates the likelihood that a country is exposed to, and effectively responds to, illegal, unreported, and unregulated (IUU) fishing. It assigns scores ranging from 1 (indicating low risk and strong performance) to 5 (indicating high risk and weak performance). The index enables benchmarking of coastal states based on their vulnerability, the prevalence of IUU fishing, and their

enforcement and monitoring responses (IUU fishing risk index 2025a, 2025b). All this information, indicates that the probability of IUU fishing is low.

All other species included in the report (smelt, fourhorn sculpin, flounder, round goby, three-spined stickleback, and eelpout represent less than 2% of the catches. All of them are considered Least Concern by the IUCN, are not included in any CITES appendix, and are not managed in relation to reference points; therefore, they were assessed as category D species. Cod was not included in the assessment since catches are less than 0.1%.

References

Global Trust (2025). NZRO Gulf of Riga herring and sprat trawl fishery. Announcement Comment Draft Report.https://fisheries.msc.org/en/fisheries/nzro-gulf-of-riga-herring-and-sprat-trawl-fishery/

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

IUU fishing risk index (2025a). Latvia. https://iuufishingindex.net/profile/latvia

IUU fishing risk index (2025b). Estonia. https://iuufishingindex.net/profile/estonia

Management requirements

This section, or module, assesses the general management regime applied to the fishery under assessment. It comprises two parts, M1, which evaluates the management framework, and M2, which evaluates surveillance, control and enforcement within the fishery.

2.6. All management criteria must be met (pass) for a fishery to pass the Management requirements.

2.6.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the management criteria. It is not expected that sub-criteria are assessed independently of the main criterion.

M1 Management framework

M1.1	**M1.1 There is an organisation responsible for managing the fishery.** *In reaching a determination for M1.1, the assessor should consider if the following is in place:*
	M1.1.1 The management and administration organisations within the fishery are clearly identified.
	M1.1.2 The functions and responsibilities of the management organisations include the overall regulation, administration, science and data collection and enforcement roles, and are documented and publicly available.
	M1.1.3 Fishers have access to information and/or training materials through nationally recognised organisations.
Outcome	*Pass*

Rationale

The herring and sprat fishery in the Gulf of Riga is carried out exclusively by Latvia and Estonia using pelagic trawls, mid-water trawls and trap-nets (ICES 2025a); both countries are part of the EU. The European Commission through the Common fisheries policy (CFP) set of rules for sustainably managing European fishing fleets and conserving fish stocks in EU waters (EC 2024a) through the Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the CFP, which sets out objectives for catch and fishing effort limits to ensure that EU fisheries are ecologically, economically and socially sustainable.

In Estonia, fisheries management responsibility is divided between 5 offices: 1) Ministry of the Environment: prepares and implements policies on protection and use of fishery resources, including reproduction of fish stocks and protection and restoration of spawning grounds and habitats. The ministry also provides permits for scientific research and special purpose fishing; 2) Ministry of Rural Affairs: develops market organisation systems, awards structural supports and state aid, manages aquaculture sector and is responsible for policy making regarding commercial fishing; 3) Veterinary and Food Board: manages commercial fishing by issuing permits for

commercial fishing, managing the national registry of fishing vessels and catch accounting; 4) Environmental Board: provides fishing cards and collects recreational fishing data; and 5) Environmental Inspectorate: carries out monitoring of fishing activities (Kliimaministeerium 2025).

Fisheries management in Latvia falls under the Ministry of Agriculture, which is responsible for developing policy and management for the fisheries sector, including surveillance of sustainable use of fish resources, restocking and research, as well as managing of fishing rights in the territorial sea and high seas (Zemkopības ministrija 2025).

Fishers have access to information and/or training materials through nationally recognised organisations in both countries. In Estonia, a Fisheries Information Centre was established in 2011 as part of the Department of Fish Biology and Fisheries at the Estonian Marine Institute, to enhance the knowledge of entrepreneurs active in fisheries and aquaculture, and valorise aquatic biological resources to improve their economic and environmental sustainability (FIC 2025). While Latvia doesn't have a counterpart to Estonia's Fisheries Information Centre (FIC), it has several well-established organizations that collectively fulfill similar roles in the fisheries such as the Ministry of Transport–Certified Training to qualify as a fisher (LIKUMI 205), Fish Resources Research Department which providing scientific foundation, data collection, and advisory services (BIOR 2025), Latvian Maritime Administration recognises seven educational institutions and training centers which offered seafarer training courses relevant to navigation, vessel operations, safety and marine resources management (LMA 2025).

References

BIOR (2025). Fish Resources Research Department. https://bior.lv/en/

EC (2025a). European Commission. Common fisheries policy (CFP). https://oceans-and-fisheries.ec.europa.eu/policy/common-fisheries-policy-cfp_en

FIC (2025). Fisheries Information Center. https://www.kalateave.ee/en/

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

Kliimaministeerium (2025). Republic of Estonia. Ministry of Climate. Fisheries. https://kliimaministeerium.ee/en/water-forest-resources/fisheries

LIKUMI (2025). Legal Acts of the Republic of Latvia. Regulations Regarding Certification of Seafarers. https://likumi.lv/ta/en/en/id/123870

LMA (2025). Latvian Maritime Administration. https://www.lja.lv/jurniekiem/jurnieku-sagatavosana/macibu-kursu-programmas/

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

Zemkopības ministrija (2025). Republic of Latvia. Ministry of Agriculture. https://www.zm.gov.lv/en/about-us#fisheries-and-aquaculture

M1.2	**M1.2 Fishery management organisations are legally empowered to take management actions.** *In reaching a determination for M1.2, the assessor should consider if the following is in place:*	
	M1.2.1 There are legal instruments in place to give authority to the management organisation(s) which can include policies, regulations, acts or other legal mechanisms.	
	M1.2.2 Vessels wishing to participate in the fishery must be authorised by the management organisation(s).	
	M1.2.3 The management system has a mechanism in place for the resolution of legal disputes.	
	M1.2.4 There is evidence of the legal rights of people dependent on fishing for food or livelihood.	
Outcome	*Pass*	

Rationale

In EU member states, fisheries management is generally carried out under national legislation arising from the implementation and/or transposition of EU regulations, in particular, but not limited to, Regulation (EU) No 1380/2013. In Estonia, the primary fisheries legislation is the Fishing Act of 19th February 2015 (2015), as amended, which empowers the Ministry of Rural Affairs and Agriculture to implement the measures of the CFP. In Latvia, the primary fisheries legislation is the Fishery Law (1995), as amended, which similarly empowers the Ministry of Agriculture.

Governmental authorities must authorize vessels wishing to participate in marine fisheries: in Estonia the Fishing Act states that the Transport Administration handles vessel registration, while the Ministry of Agriculture (backed by the Agriculture and Food Board) issues fishing licences and authorisation, while in Latvia, Regulation No. 467 states that vessel registrations are managed by the Maritime Administration, with required consent from the Ministry of Agriculture, and operational fishing permits are issued by the State Environmental Service.

Both Estonia and Latvia have legal mechanisms in place for resolving disputes under their fishing laws, typically through standard administrative and judicial channels, but also offer mediation mechanisms, which are alternative dispute resolution measures, whereby a mediator helps those involved in a dispute to reach an agreement (Mediation in EU Countries 2025a, 2025b).

Both Estonia and Latvia have legal provisions that recognize and protect the fishing rights of individuals who depend on fishing for food or livelihood, ensuring their access under regulated

conditions. In Estonia the Fishing Act explicitly grants a right to fish with a simple hand line on public waters without charge or license, reflecting a kind of universal subsistence right: "Everyone may fish, free of charge and without having applied for the right to fish, with one simple hand line on a public water body and a water body designated for public use". For commercial or large-scale fishing, fishing rights are formalized through authorizations. However, when the allocation of fishing opportunities exceeds availability, authorities prioritize applicants based on their historical fishing rights, meaning those who have fished in the prior three years receive preference. This approach supports long-standing fishers and preserves access to livelihoods. In Latvia, the Fishery Law differentiates between public waters (state-owned and controlled) and private waters where fishing rights may belong to the landowner. Traditional or community-based fishing practices in shared private waters are regulated by mutual agreement among water owners. If the owners cannot reach an agreement, disputes can be resolved by a municipal or regional environmental authority, which functions as a mediator. The law also states that a natural person is entitled to engage in angling, crayfish catching, and underwater hunting in all waters of the Republic of Latvia as long as they comply with applicable regulations and as long as the water isn't private; for self-subsistence marine fishery, individuals may use one gear type—either a gill net (with regulated length), a pot, or up to 100 hooks in a long-line—under a one-year licence and a fishing rights lease contract with the relevant municipality. These licences are granted within scientifically recommended gear limits and prohibit the sale of the catch; they also impose requirements like daily catch logbooks and respect catch bans.

References

Fishery Law of Latvia (1995) . https://www.fao.org/faolex/results/details/en/c/LEX-FAOC037831/

Fishing Act of 19th February 2015 (2015). https://www.riigiteataja.ee/en/eli/529062015006/consolide

Mediation in EU Countries (2025a). Estonia. https://e-justice.europa.eu/topics/taking-legal-action/mediation/mediation-eu-countries/ee_en

Mediation on EU Countries (2025b). Latvia. https://e-justice.europa.eu/topics/taking-legal-action/mediation/mediation-eu-countries/lv_en

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

Regulation No. 467. Regulations Regarding Registration of Ships in the Latvian Ship Register. https://likumi.lv/ta/en/en/id/138488

M1.3	**M1.3 There is an organisation responsible for collecting data and (scientifically) assessing the fishery.** *In reaching a determination for M1.3, the assessor should consider if the following is in place:*
	M1.3.1 The organisation(s) responsible for collecting data and assessing the fishery is/are clearly identified.
	M1.3.2 The management system receives scientific advice regarding stock, non-target species and ecosystem status.
	M1.3.3 Scientific advice is independent from the management organisation(s) and transparent in its formulation through a clearly defined process.
Clause outcome	*Pass*

Rationale

The EU's data collection framework outlines the EU countries' obligations to collect, manage, and make available a wide range of fisheries and aquaculture data needed for scientific advice. This includes biological, environmental, economic, and social data. Member States' data collection activities are financially supported by the EU. Data collection needs to ensure accuracy, reliability, and timeliness, safe storage, and improved availability of data (EC 2025).

In Estonia, the Estonian Marine Institute (part of the University of Tartu) conducts in-depth marine ecosystem research with dedicated departments for fish biology and fisheries, and carries out field surveys across multiple coastal stations. It contributes scientific findings to national and international bodies, such as ICES and The Baltic Marine Environment Protection Commission (HELCOM) (EMI 2025). In Latvia, the Fish Resources Research Department (within BIOR—the Institute of Food Safety, Animal Health and Environment) serves as the primary scientific body. It implements Latvia's National Fisheries and Aquaculture Data Collection Program, coordinating hydro-acoustic surveys, biological sampling, and monitoring of fleets, aquaculture, and processing sectors. This data enables annual fish stock assessments and forecasts, and supports both national and EU-level fisheries advice (BIOR 2025).

The International Council for the Exploration of the Sea (ICES), which is an intergovernmental marine science organization, meeting societal needs for impartial evidence on the state and sustainable use of our seas and oceans, trough the Baltic Fisheries Assessment Working Group (WGBFAS) assess each year the herring and sprat fisheries, providing advice on fishing opportunities, catch, and effort, including each year Total Allowable Catch (TAC) and an overview of the stock development over time (ICES 2025). In 2023, the Gulf of Riga herring stock was benchmarked (ICES 2023), and the last assessment for herring and sprat was published in 2024 (ICES 2025).

References

BIOR (2025). Fish Resource Research Department. https://bior.lv/en/bior/fish-resource-research-department-2/

EC (2024b). Scientific advice and data collection. https://oceans-and-fisheries.ec.europa.eu/fisheries/scientific-input/scientific-advice-and-data-collection_en

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ICES. (2023) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

M1.4	**M1.4 The fishery management system is based on the principles of sustainable fishing and a precautionary approach.** *In reaching a determination for M1.4, the assessor should consider if the following is in place:*	
	M1.4.1 A policy or long-term management objective for sustainable harvesting based on the best scientific evidence and a precautionary approach is publicly available and implemented for the fishery.	
Outcome	*Pass*	

Rationale

As part of the European Union, Latvia and Estonia's fisheries in the Gulf of Riga are managed according to a Multiannual Plan (MAP), which contains goals for fish stock management, detailed roadmap for achieving objectives, fishing effort restrictions, specific control rules and technical measures, and measures for implementing the landing obligation, safeguards for remedial action and review clauses (EU 2025).

The regulation (EU) No 2016/1139 established the multiannual plan objectives and target for herring and sprat stock in the Baltic Sea, which includes the Gulf of Riga. Article 3 indicates that:

1. The plan shall contribute to the achievement of the objectives of the CFP listed in Article 2 of Regulation (EU) No 1380/2013, 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.

2. The plan shall contribute to the elimination of discards by avoiding and reducing, as far as possible, unwanted catches, and to the implementation of the landing obligation established in Article 15 of Regulation (EU) No 1380/2013 for the species which are subject to catch limits and to which this Regulation applies.

3. 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 minimised. It shall be coherent with Union environmental legislation, in particular with the objective of achieving good environmental status by 2020 as set out in Article 1(1) of Directive 2008/56/EC. 4. Measures under the plan shall be taken in accordance with the best available scientific advice.
References EU (2025). Ocean and Fisheries. Multiannual plans. https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/multiannual-plans_en EU (2016) 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/legalcontent/EN/TXT/?uri=CELEX%3A32016R1139

M1.5	**M1.5**	**There is a clearly defined decision-making process which is transparent, with processes and results made publicly available.** *In reaching a determination for M1.5, the assessor should consider if the following is in place:*
	M1.5.1	There is participatory engagement through which fishery stakeholders and other stakeholders can access, provide information, consult with, and respond to, the management systems' decision-making process.
	M1.5.2	The decision-making process is transparent, with results made publicly available.
	M1.5.3	he fishery management system is subject to periodic internal or external review to validate the decision-making process, outcomes and scientific data.
Outcome	*Pass*	

Rationale

Regarding the EU, the latest reform of the CFP, introduced in 2013, features regionalization, allowing EU countries with a management interest to propose detailed measures. These measures can then be adopted by the Commission as delegated or implementing acts and transposed into EU law (EC 2025a). The CFP foresees regionalization for several instruments, including multiannual plans, discard plans, the establishment of fish stock recovery areas, conservation measures to comply with EU environmental laws, and technical measures, to ensure that joint recommendations reflect the views of stakeholders (EC 2025b). According to the CFP, multiannual plans should be adopted in consultation with Advisory Councils, operators in the fishing industry, scientists, and other stakeholders having an interest in fisheries management.

In Estonia, the primary fisheries legislation is the Fishing Act of 19th February 2015, as amended, which empowers the Ministry of Rural Affairs and Agriculture to implement the measures of the CFP. In Latvia, the primary fisheries legislation is the Fishery Law (1995), as amended, which similarly empowers the Ministry of Agriculture. All of the information used to produce this MarinTrust assessment report was freely available online. The ICES advice primarily guides the fisheries management decision-making process, the basis for which and its outcomes are made available via the ICES website. Decisions and outcomes at the EU level are published on the EC website and elsewhere. This indicates that the decision-making process is transparent.
References EC (2025a). https://oceans-and-fisheries.ec.europa.eu/policy/common-fisheries-policy-cfp_en EC (2025b). Multiannual plans. https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/multiannual-plans_en Fishery Law of Latvia (1995) . https://www.fao.org/faolex/results/details/en/c/LEX-FAOC037831/ Fishing Act of 19th February 2015 (2015). https://www.riigiteataja.ee/en/eli/529062015006/consolide

M2 Surveillance, control and enforcement

M2.1	**M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.** *In reaching a determination for M2.1, the assessor should consider if the following is in place:*	
	M2.1.1	There is an organisation responsible for monitoring compliance with specific monitoring, control and surveillance (MCS) mechanisms in place.
	M2.1.2	There are relevant tools or mechanisms used to minimise IUU fishing activity.
	M2.1.3	There is evidence of monitoring and surveillance activity appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery.
Outcome	*Pass*	

Rationale

Monitoring and enforcement of fisheries compliance in the EU is primarily the responsibility of the individual member states. Through the Council Regulation No. 1005/2008, a community system is established to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing, where

each Member State shall take appropriate measures, in accordance with Community law, to ensure the effectiveness of that system. Within Estonia, the relevant authority is the Environmental Inspectorate, as outlined in the Fishing Act of 2015. In Latvia, responsibility falls to the Ministry of Agriculture.

Latvia and Estonia currently hold IUU fishing risk index scores of 1.9 and 2.09, respectively. This index evaluates the likelihood that a country is exposed to, and effectively responds to, illegal, unreported, and unregulated (IUU) fishing. It assigns scores ranging from 1 (indicating low risk and strong performance) to 5 (indicating high risk and weak performance). Thus, the index enables benchmarking of coastal states based on their vulnerability, the prevalence of IUU fishing, and their enforcement and monitoring responses. The given scores indicate a low risk and strong performance regarding the minimization of IUU fishing (IUU fishing risk index 2025a, 2025b).

National control and enforcement activities are supported by the European Fisheries Control Agency (EFCA). The EFCA aims to "promote the highest common standards for control, inspection and surveillance under the CFP" (EFCA 2025a). The EFCA collaborates with the European Border and Coast Guard Agency and the European Maritime Safety Agency to support the various national agencies responsible for coastguard functions.

The EFCA coordinates international control and enforcement activities through the use of Joint Deployment Plans (JDPs). The JDP for the Baltic Sea, which coordinates actions between Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, and Sweden, has been in place since 2007. (EFCA 2025b)

In Estonia and Latvia, there are robust legal frameworks (Fishery Law of Latvia of 1995 and Fishing Act of 19th February 2015) that include vessel tracking, a penalty point system, fines, catch recording, and quota control measures; that, in combination with advanced electronic monitoring systems, data transparency, and institutional cooperation, ensure compliance with fishery laws and regulations.

References

EFCA (2025a). Mission and Strategy. https://www.efca.europa.eu/en/content/mission-and-strategy

EFCA (2025b). Baltic Sea JDP overview. https://www.efca.europa.eu/en/content/baltic-sea

Fishery Law of Latvia (1995) . https://www.fao.org/faolex/results/details/en/c/LEX-FAOC037831/

Fishing Act of 19th February 2015 (2015). https://www.riigiteataja.ee/en/eli/529062015006/consolide

IUU fishing risk index (2025a). Latvia. https://iuufishingindex.net/profile/latvia

IUU fishing risk index (2025a). Estonia. https://iuufishingindex.net/profile/estonia

M2.2	**M2.2 There is a framework of sanctions which are applied when infringements against laws and regulations are discovered.** *In reaching a determination for M2.2, the assessor should consider if the following is in place:*
	M2.2.1 The laws and regulations provide for penalties or sanctions that are adequate in severity to act as an effective deterrent.
	M2.2.2 There is no evidence of systematic non-compliance.
Outcome	*Pass*

Rationale

Regulation (EC) No 1224/2009 establishes a community system for control, inspection and enforcement to ensure compliance with the rules of the common fisheries policy. EU countries must ensure that a system of inspections and enforcement measures is in place to identify infringements and sanction offenders. They are responsible for establishing their own sanctioning systems but to ensure a level playing field they must conform to the requirements of the EU laws. These requirements include the obligation for sanctions to be 'dissuasive, proportionate and effective', to consider the seriousness and potential economic benefit of the offence as well as the prejudice to fishing resources and marine environments. EU countries are required to have a point system to sanction fishing vessel masters and license holders when they commit serious infringements, the number of points to be attributed for specific infringements is fixed in detailed rules. Any vessel that accumulates more than a certain number of points in three years will have its fishing license suspended for up to 12 months. For repeat offenders after the fourth event, the license will be removed permanently (EC 2025).

Both Latvia and Estonia apply the EU regulations, and infringements under either jurisdiction may incur sanctions including fines, gear confiscation, and/or licence suspension.

References

EC (2009) Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009R1224-20241011

EC (2025). Infringements and sanctions. https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/enforcing-rules/infringements-and-sanctions_en

Fishery Law of Latvia (1995) . https://www.fao.org/faolex/results/details/en/c/LEX-FAOC037831/

Fishing Act of 19th February 2015 (2015). https://www.riigiteataja.ee/en/eli/529062015006/consolide

M2.3	**M2.3 There is substantial evidence of widespread compliance in the fishery, and no substantial evidence of IUU fishing.** *In reaching a determination for M2.3, the assessor should consider if the following is in place:*	
	M2.3.1	The level of compliance is documented and updated routinely, statistically reviewed and available.
	M2.3.2	Fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery.
	M2.3.3	The catch recording and reporting system is sufficient for effective traceability of catches per vessel and supports the prevention of IUU fishing.
Outcome	*Pass*	

Rationale

The EFCA publishes quarterly reports detailing control and enforcement activities under the Baltic Sea JDP (EFCA 2024a). The most recent available report is from January to June 2024 (EFCA 2024b), which states that as part of the JDP, there were (across the entire Baltic Sea area) 1,393 inspections carried out ashore, the majority on landings, including inspections on 44 vehicle transport, 10 on businesses and 4 inspections related to the gear. The inspection teams reported 57 suspected infringements detected during landing inspections on fishing vessels. There were 2 suspected infringements detected during the transport and 2 in business inspections. At sea, during the reporting period, 274 inspections were carried out, including 47 inspections of fishing gear (e.g. salmon or eel traps) with 4 suspected infringements reported. Member states also reported 133 sightings. No suspected infringements were detected related to sightings. Aircraft surveillance reported 88 air sightings with no suspected infringements detected during the surveillance flights carried out in this period (EFCA 2024b).

Throughout the compilation of this MarinTrust assessment report, no evidence was encountered suggesting widespread non-compliance in the fishery, and available evidence indicates that a robust and focused control and enforcement regime is in place, so that IUU fishing is a low risk, as stated insection M2.1..

References

EFCA (2024a). Baltic Sea JDP, Reports 2023. https://www.efca.europa.eu/en/content/BalticS-reports-2024

EFCA (2024b). Baltic Sea JDP Q2 Report. https://www.efca.europa.eu/sites/default/files/2024-11/6M-2024-WEB%20report-JDP-BS.pdf

Species requirements

This section, or module, comprises of four species categories. Each species in the catch is subject to an assessment against the relevant species category in this section (see clauses 1.2 and 1.3 and Table 6).

Type 1 species can be considered the 'target' or 'main' species in the fishery under assessment. They make up the bulk of the catch and a subjected to a detailed assessment. Type 1 species must represent 95% of the total annual catch. If a species-specific management regime is in place for a Type 1 species, it shall be assessed under Category A. If there is no species-specific management regime in place for a Type 1 species, it shall be assessed under Category B.

Type 2 Species can be considered the 'non-target' species in the fishery under assessment. They comprise a small proportion of the annual catch and are subjected to a relatively high-level assessment. Type 2 species may represent a maximum of 5% of the annual catch. If a species-specific management regime is in place for a Type 2 species, it shall be assessed under Category C. If there is no species-specific management regime in place for a Type 2 species, it shall be assessed under Category D.

Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

Category A species

3.1. All clauses must be met for a species to pass the Category A assessment.

3.1.1. If a species fails any of the Category A clauses, it should be re-assessed as a Category B species.

Gulf of Riga Herring - *Clupea harengus*

A1 Data collection

A1.1	**A1.1 Landings data are collected such that the fishery-wide removals of this species are known.**
Outcome	*Pass*
Rationale The EU Fisheries Control System, through the Fisheries Control Regulation (EC Regulation No 1224/2009), requires that each vessel record data on catches (target species and bycatch) in logbooks and complete a landing declaration indicating specifically all quantities of each species landed. Information should be transmitted to the competent authority of each member state, who then provide it to the Commission (EC 2009).	

Russia does not report landing information to ICES; however, the Baltic Fisheries Assessment Working Group (WGBFAS) estimates catches based on information available on the Russian Federation's official websites, providing a comprehensive overview of the fishery removals (ICES 2025a). Uncertainty around the accuracy of this catch data is factored into the stock assessment process.

The total catch of Gulf of Riga herring in the Gulf of Riga in 2024 was 31,152 t (ICES 2025b).

Landings data are collected and A1.1 is met.

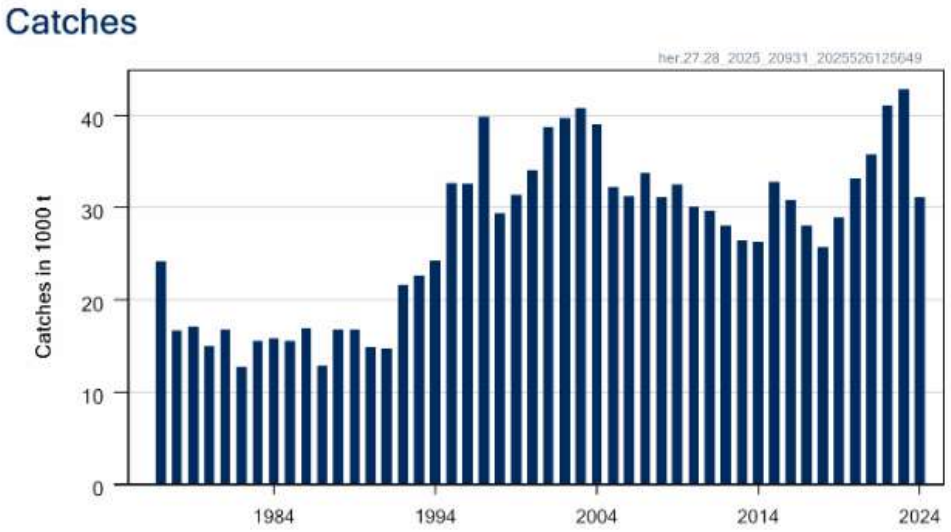

Figure 1. Herring catches in ICES subdivision 28.1 (Gulf of Riga), 1977 – 2024 (ICES 2025b).

References

EC (2009). Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the common fisheries policy https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009R1224-20241011.

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

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

Rationale

In addition to commercial catch data, the stock assessment carried out annually by the ICES Baltic Fisheries Assessment Working Group (WGBFAS) utilises one acoustic survey index (GRAHS); maturity estimates from sampling; and a constant rate of natural mortality. Discards and bycatch

are considered to be negligible (ICES 2025a).

The 2025 catch advice includes a section covering the quality of the assessment. Although not mentioned in the herring catch advice, the sprat advice which covers sprat in the Gulf of Riga states that misreporting of herring and sprat is an ongoing problem which is challenging to quantify, and which introduces an unquantifiable level of uncertainty into the assessment (ICES 2025b). Another challenging issue faced when assessing this fishery is distinguishing between the herring stocks from the Central Baltic and Gulf of Riga; however, the assessment and the advice take in account of all of the Gulf of Riga herring stock, both that harvested in the Gulf of Riga and that harvested outside of it. The distinct differences in otolith structure serve as a basis for discrimination of Baltic herring populations, therefore the population belonging of individuals is assigned during the age reading process (ICES 2025c).

Overall, the assessment is considered by ICES to be supported by adequate data collection and analysis, and A1.2 is met.

References

ICES (2025a). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

ICES (2025b). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

ICES (2025c). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

A2 Stock assessment

A2.1	**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.**
Outcome	*Pass*	

Rationale

Gulf of Riga herring is subjected to an annual stock assessment carried out by the ICES Baltic Fisheries Assessment Working Group (WGBFAS). The stock was benchmarked in 2023 (ICES, 2023a), and outcomes were implemented in the last assessment published in 2025 (ICES, 2025). The benchmarking process ensures the stock assessment recognises the most recent available scientific understanding of the species, the stock, the fishery, and the ecosystems within which they occur. The stock assessment is conducted as a whole following the ICES methodology (ICES 2023b).

The data used for the stock assessment included landing and catch data from all countries exploiting the stock, as well as biological data such as age composition, mean weights at age, maturity at age,

and natural mortality. Additionally, fishery-independent information from the Estonian-Latvian hydro-acoustic survey in the Gulf of Riga (GRAHS) was also utilized. (ICES, 2025).

An appropriate stock assessment is conducted annually and A2.1 is met.

References

ICES. (2023a) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

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

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

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

Rationale

The WGBFAS stock assessment provides an indication of the status of the stock relative to target and limit reference points. These reference points were updated in 2023 as a result of the full benchmarking of the stock. The reference points are listed in the table below. Key among these for the purposes of this Marin Trust assessment are the target reference points MSY $B_{trigger}$ and MAP MSY $B_{trigger}$, set at 72,907t; and the limit reference points B_{lim} and MAP B_{lim}, set at 52,076t (ICES 2025).

The 2025 catch advice indicates that the stock assessment projected an estimated SSB at spawning time 2025 of 119,208t, and states that "spawning-stock size is above MSY $B_{trigger}$, BPA, and B_{lim}" (ICES 2025).

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

Framework	Reference point	Value	Technical basis	Source
Maximum sustainable yield (MSY) approach	MSY $B_{trigger}$	72 907	B_{PA}	ICES (2023a)
	F_{MSY}	0.28	Stochastic simulations (EqSim) with segmented regression with fixed breakpoint at B_{PA} stock–recruitment model from the full time-series (1977–2021)	ICES (2023a)
Precautionary approach	B_{lim}	52 076	$B_{lim} = B_{PA}/1.4$	ICES (2023a)
	B_{PA}	72 907	Average spawning-stock biomass (SSB) based on SSB–recruitment pairs where SSB ≤ median SSB and recruitment ≥ median recruitment	ICES (2023a)
	F_{PA}	0.35	F_{P05}; the F that leads to SSB ≥ B_{lim} with 95% probability	ICES (2023a)
Management plan	Multiannual (MAP) MSY $B_{trigger}$	72 907	MSY $B_{trigger}$	ICES (2023a)
	MAP B_{lim}	52 076	B_{lim}	ICES (2023a)
	MAP F_{MSY}	0.28	F_{MSY}	ICES (2023a)
	MAP target F_{lower}	0.21	Consistent with the ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2023a)
	MAP target F_{upper}	0.33	Consistent with the ranges resulting in no more than 5% reduction in long-term yield compared with MSY	ICES (2023a)

Table 2. Gulf of Riga herring in ICES subdivision 28.1 (Gulf of Riga) reference points, values, and their technical basis. Weight in tonnes (ICES 2025).

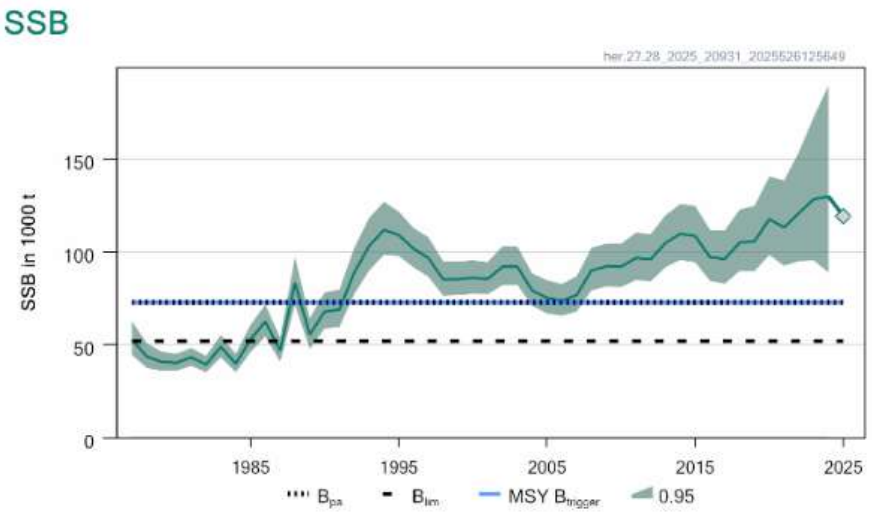

Figure 2. Gulf of Riga herring in ICES subdivisions 28.1 (Gulf of Riga) spawning-stock size above MSY $B_{trigger}$, B_{pa}, and B_{lim} (ICES 2025).

References

ICES (2025). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

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

The ICES advice annually provides an indication of the volume of fishery removals which is appropriate for the current stock status in the form of recommended catches in the upcoming year. The latest catch advice indicates that when the EU multiannual plan (MAP) for the Baltic Sea is applied, the catches in 2026 that correspond to the F ranges in the plan are between 23,962t and 35,643t. According to the MAP, catches higher than those corresponding to F_{MSY} (30,913t) can be taken only under conditions specified in the plan, while the entire range is considered precautionary when applying the ICES advice rule (ICES 2025).

The stock assessment produces recommendations for the appropriate level of fishery removals, and A2.3 is met.

References

ICES (2025). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

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

Rationale

The Guide to the ICES Advisory Framework and Principles (ICES 2023) outlines the process by which ICES conducts scientific activities and provides fisheries management advice. When the results of the assessments are agreed by the ICES groups, they are sent to the ICES Advice Drafting Group, which consists of National Experts, who review them, and they are finally reviewed by the Advisory Committee (ACOM), which delivers the ICES advice. The ACOM advice is grounded on 10 principles to support ecosystem-based management advice. This ensures that the advice is based on the best available science and data, considered legitimate by both authorities and stakeholders, and relevant and operational to the policy or management challenge in question (ICES 2023).

Principle 7 states that the process undergoes a peer review phase to ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice. All analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests, through one-off reviews (ICES 2023). The herring stock assessment was most recently benchmarked in 2023; thus, it was subject to peer review (ICES 2025).

Figure 3. ICES advice principles, Principle 7 states that the process undergoes a peer review phase. (ICES 2023).

The assessment is peer reviewed, and A2.4 is met.

References

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

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

A2.5	**A2.5 The assessment is made publicly available.**
Outcome	*Pass*

Rationale

All the stock assessment information used to produce this MarinTrust assessment report was publicly available. Specifically, information is published in the WGBFAS report (ICES 2023a) and the catch advice (ICES 2025). 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 2023b).

The stock assessment is publicly available, and A2.5 is met.

References

ICES (2023a) Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 5:58. 606 pp. https://doi.org/10.17895/ices.pub.23123768

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

ICES (2025). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

A3 Harvest strategy

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

Rationale

Total fishing mortality is restricted through the use of a TAC, which is generally based on the ICES advice which in turn is based on the Baltic Sea MAP (Regulation (EU) 2016/1139 as amended). TACs have been set within the range recommended by ICES since the implementation of the MAP in 2018, and the TAC appears to be an effective mechanism for limiting catches as total removals from the Gulf of Riga stock have similarly been within the recommended range since that time. The TAC is set for the Gulf of Riga geographically, with the knowledge that some herring taken will belong to the Central Baltic stock, and also that some herring taken under the Central Baltic TAC will belong to the Gulf of Riga stock. In practice this has led to total catches from the Gulf of Riga herring stock being below the total Gulf of Riga herring TAC since it was first set, in 2003.

There is an effective mechanism in place by which total fishing mortality is restricted, and A3.1 is met.

References

EU (2016). 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. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R1139-20240710.

A3.2	**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.**
Outcome	*Pass*

Rationale

Removals of Gulf of Riga herring have been below the upper boundary of the ICES advice range since the MAP was implemented in 2018. As noted in A3.1 above, a TAC is set for herring catches in the Gulf of Riga as a whole. In recent years, 4% - 11% of herring catch in the Gulf of Riga has been taken from the Central Baltic stock, meaning the TAC can be set higher than the advice, which is specific to the Gulf of Riga herring stock. Despite this, the TAC has consistently been set within the range recommended by ICES, and – as expected due to catches being taken from two stocks – removals from the Gulf of Riga herring stock have consistently been below the TAC. This has been

effective in maintaining the Gulf of Riga herring spawning-stock size above the B_{pa} and B_{lim} reference points (ICES 2025).

Total fishery removals of Gulf of Riga herring have not exceeded the scientific advice since the MAP was put in place in 2018, and A3.2 is met.

Year	ICES advice	Catch from stock corresponding to advice	Agreed TAC for Gulf of Riga	Catches of Gulf of Riga herring stock
2018	Multiannual plan (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 30 382 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	41 117
2023	Management plan	43 226 (range 33 519–50 079)	45 643	42 800
2024	Management plan	35 902 (range 27 696–41 370)	37 959	31 152
2025	Management plan	39 233 (ranges 30 394–45 235)	41 635	
2026	Management plan	30 913 (ranges 23 962 – 35 643)		

Table 3. ICES advice, TAC and catches of Gulf of Riga herring stock from the Gulf of Riga. All weights are in tonnes. (ICES 2025)

References

ICES (2025). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

A3.3	**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).**
Outcome	*Pass*
Rationale	

The MAP requires that fishing opportunities are fixed in such a way that there is a less than 5% probability of the spawning stock biomass falling below B_{lim}. When scientific advice indicates that the spawning stock biomass of the stock is below B_{lim}, further remedial measures shall be taken to ensure rapid return of the stock to levels above the level capable of producing MSY. Those remedial measures may include suspending the targeted fishery for the stock and the adequate reduction of fishing opportunities (EU 2016).

Fishery removals are likely to be prohibited if the stock biomass falls below the limit reference point, and A3.3 is met.

References

EU (2016). 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. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R1139-20240710.

A4 Stock status

A4.1	**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.**
Outcome	*Pass*	

Rationale

The most recent catch advice states that "spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES 2025). As the stock is currently estimated to be substantially above the target reference point, the first clause of A4.1 is met.

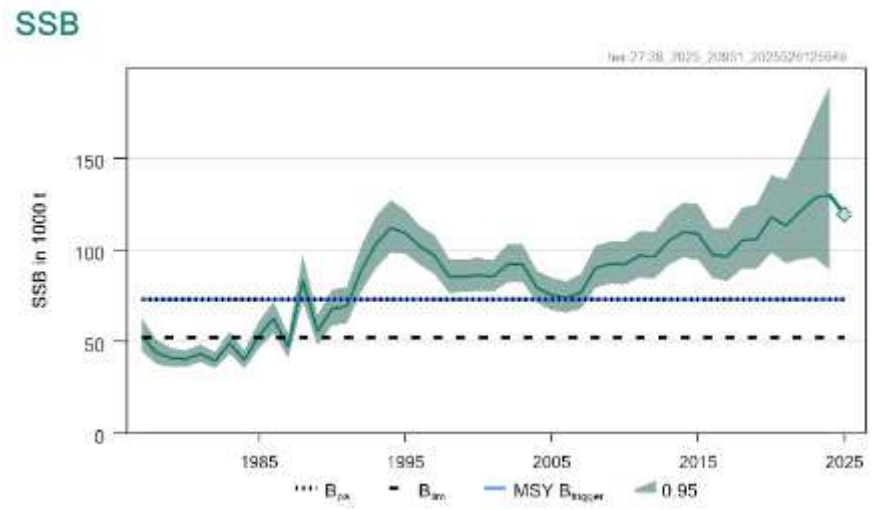

Figure 4. Gulf of Riga herring in ICES subdivision 28.1 (Gulf of Riga) spawning-stock size relative to current MSY $B_{trigger}$, B_{pa}, and B_{lim} (ICES 2025)

References

ICES (2025). Herring (*Clupea harengus*) in Subdivision 28.1 (Gulf of Riga). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202620.v1

Sprat - *Sprattus sprattus*

A1 Data collection

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

Rationale

The EU Fisheries Control System, through the Fisheries Control Regulation (EC Regulation No 1224/2009), requires that each vessel record data on catches (target species and bycatch) in logbooks and complete a landing declaration indicating specifically all quantities of each species landed. Information should be transmitted to the competent authority of each member state, who then provide it to the Commission (EC 2009).

Russia does not report landing information to ICES; however, the Baltic Fisheries Assessment Working Group (WGBFAS) estimates catches based on information available on the Russian Federation's official websites, providing a comprehensive overview of the fishery removals (ICES 2025a). Uncertainty around the accuracy of this catch data is factored into the stock assessment

process.

The total catch of sprat in the Baltic Sea in 2024 was 239,888t (ICES 2025b)

Landings data are collected and A1.1 is met.

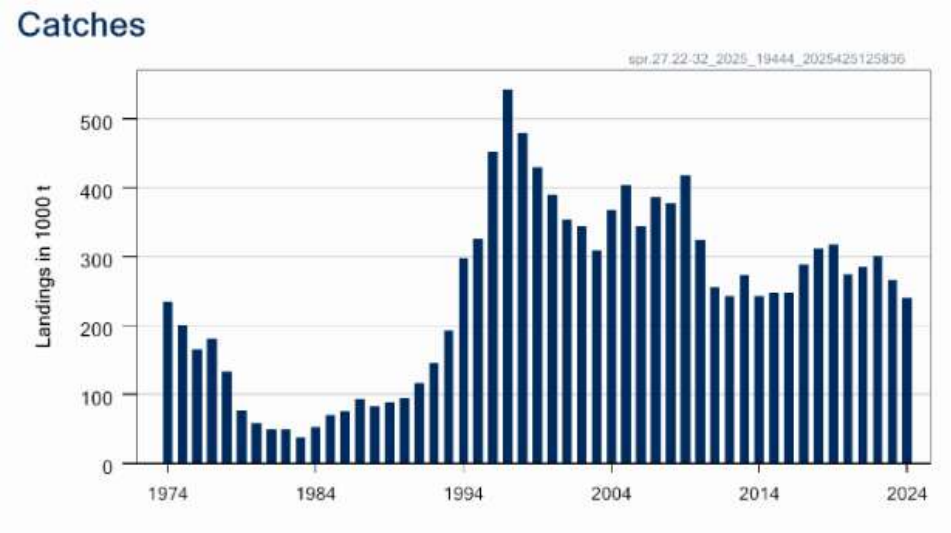

Figure 5. Sprat catches from 1974 to 2024 in ICES subdivisions 22–32, Baltic Sea (ICES 2025b).

References

EC (2009). Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the common fisheries policy. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009R1224-20241011.

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

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

Rationale

In addition to commercial catch data, the stock assessment carried out annually by the ICES Baltic Fisheries Assessment Working Group (WGBFAS) utilises two acoustic survey indices (the Baltic Acoustic Spring Survey (BASS) and the Baltic International Acoustic Survey (BIAS)); and natural mortalities from the ICES multispecies model (ICES 2025). The model assumes discards and bycatch are negligible. During surveys, sampling is done with echo sounders and pelagic trawls. All fish species in the catch are measured in length, and biological samples, including age, are taken on the

target species, herring and sprat. The Baltic Sea countries meet in the Baltic International Fish Survey Working Group (WGBIFS), and the results from each country are compiled in a common database (SLU 2025, ICES 2024).

The 2025 catch advice includes a section covering the quality of the assessment, which notes that misreporting of herring and sprat is an ongoing problem which is challenging to quantify, and which introduces an unquantifiable level of uncertainty into the assessment. However, efforts are underway to estimate the levels of misreporting (ICES 2025).

Sufficient additional information is collected to enable an indication of stock status to be estimated, and A2.1 is met.

References

ICES (2024). Baltic International Fish Survey Working Group (WGBIFS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.25922290.v1

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

SLU (2025). Sveriges lantbruksuniversitet (Swedish University of agricultural Sciencces). BIAS – Baltic International Acoustic Survey. https://www.slu.se/en/environment/statistics-and-environmental-data/environmental-data-catalogue/bias/.

A2 Stock assessment

A2.1	**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.**
Outcome	*Pass*

Rationale

Sprat in the Baltic Sea, is subjected to an annual stock assessment carried out by the ICES Baltic Fisheries Assessment Working Group (WGBFAS). The stock was benchmarked in 2023 (ICES, 2023a), and outcomes were implemented in the last assessment published in 2025 (ICES, 2025). The benchmarking process ensures the stock assessment recognises the most recent available scientific understanding of the species, the stock, the fishery, and the ecosystems within which they occur. The stock assessment is conducted as a whole following the ICES methodology (ICES, 2023b).

The data used for the stock assessment included landing and catch data from all countries exploiting the stock, as well as biological data such as age composition, mean weights at age, maturity at age, and natural mortality. Additionally, fishery-independent information from the Baltic International Acoustic Survey (BIAS) and the Baltic Spring Survey (BASS) were also utilized. (ICES, 2025).

An annual stock assessment is conducted and A2.1 is met.

References

ICES. (2023a) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

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

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

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

Rationale

The WGBFAS stock assessment indicates the status of the stock relative to target and limit reference points. These reference points were updated in 2023 as a result of the full benchmarking of the stock (ICES 2023a). The reference points are listed in the table below. Key amongst these for the purpose of this Marin Trust assessment are the management plan target reference point (MAP MSY $B_{trigger}$ = 541,000t) and limit reference point (MAP B_{lim} = 459,000t) (ICES 2025).

The 2025 stock assessment predicted that SSB at spawning time in 2025 would be 601,856t, and the 2025 catch advice states that "Spawning-stock size is above MSY $B_{trigger}$, B_{PA}, and B_{lim}" (ICES 2025).

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

Framework	Reference point	Value	Technical basis	Source
Maximum sustainable yield (MSY) approach	MSY $B_{trigger}$	541 000	B_{PA}	ICES (2023a)
	F_{MSY}	0.34	Stochastic simulations with Beverton–Holt and segmented regression stock-recruitment model	ICES (2023a)
Precautionary approach	B_{lim}	459 000	Biomass that produces half of the maximal recruitment in the Beverton–Holt stock-recruitment relationship	ICES (2023a)
	B_{PA}	541 000	$B_{lim} \times \exp(1.645 \times \sigma)$, where $\sigma = 0.1$	ICES (2023a)
	F_{PA}	0.35	F_{P05}; the F that leads to SSB ≥ B_{lim} with 95% probability	ICES (2023a)
Management plan	Multiannual plan (MAP) MSY $B_{trigger}$	541 000	MSY $B_{trigger}$	ICES (2023a)
	MAP B_{lim}	459 000	B_{lim}	ICES (2023a)
	MAP F_{MSY}	0.34	F_{MSY}	ICES (2023a)
	MAP target F_{lower}	0.26	Consistent with the ranges that result in a ≤ 5% reduction in long-term yield compared with MSY	ICES (2023a)
	MAP target F_{upper}	0.35	Consistent with the ranges that result in a ≤ 5% reduction in long-term yield compared with MSY, constrained by F_{P05}	ICES (2023a)

Table 4. Sprat in ICES subdivisions 22-32 (Baltic Sea) reference points, values, and their technical

basis. Weight in tonnes (ICES 2025).

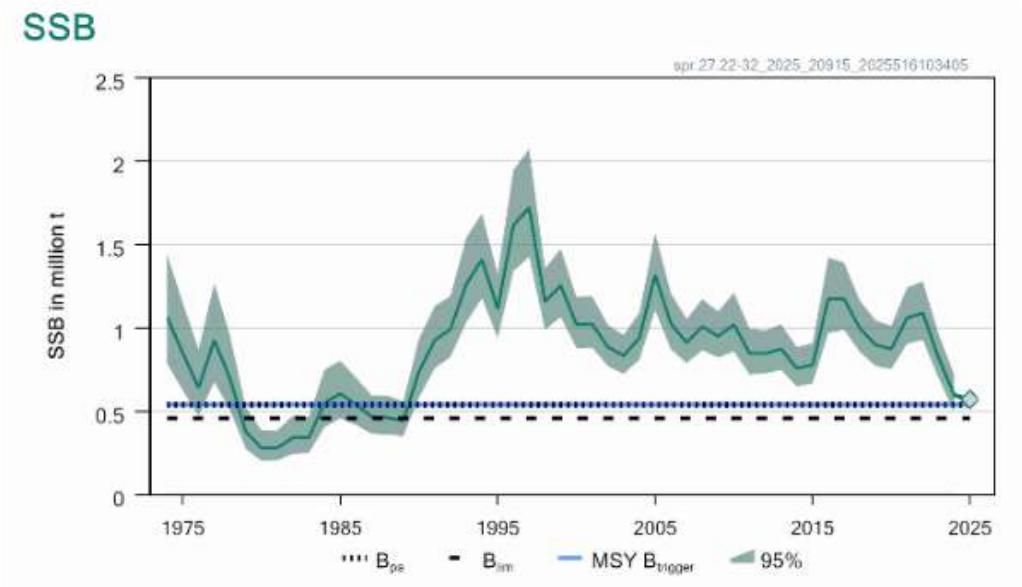

Figure 6. Sprat in ICES subdivisions 22-32 (Baltic Sea) spawning-stock size above MSY $B_{trigger}$, B_{pa}, and B_{lim} (ICES 2025).

References

ICES (2023) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

ICES (2025). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

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

Rationale

The annual ICES advice provides an indication of the volume of fishery removals which is appropriate for the current stock status in the form of recommended catches in the upcoming year.

The latest advice indicates that when the EU multiannual plan (MAP) for the Baltic Sea is applied, catches in 2026 that correspond to the F ranges in the plan are between 176,056t and 230,518t. According to the MAP, catches higher than those corresponding to FMSY (224,616t) can only be taken under conditions specified in the plan, while the entire range is considered precautionary when applying the ICES advice rule (ICES 2025)

The stock assessment provides an indication of an appropriate level of fishery removals, and A2.3

is met.

References

ICES (2025). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

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

Rationale

The Guide to the ICES Advisory Framework and Principles (ICES 2023) outlines the process by which ICES conducts scientific activities and provides fisheries management advice. When the results of the assessments are agreed by the ICES groups, they are sent to the ICES Advice Drafting Group, which consists of National Experts, who review them, and they are finally reviewed by the Advisory Committee (ACOM), which delivers the ICES advice. The ACOM advice is grounded on 10 principles to support ecosystem-based management advice. This ensures that the advice is based on the best available science and data, considered legitimate by both authorities and stakeholders, and relevant and operational to the policy or management challenge in question (ICES 2023).

Principle 7 states that the process undergoes a peer review phase to ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice. All analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests, through one-off reviews. (ICES 2023). The sprat stock assessment was most recently benchmarked in 2023; thus, it was subject to peer review (ICES 2025).

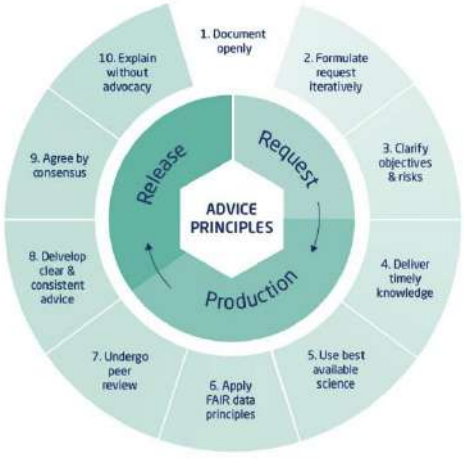

Figure 7. ICES advice principles, Principle 7 states that the process undergoes a peer review phase. (ICES 2023).

The assessment is peer reviewed, and A2.4 is met.

References

ICES. (2023). Guide to ICES advisory framework and principles. In Report of the ICES Advisory

Committee, 2023. ICES Advice 2023, section 1.1. https://doi.org/10.17895/ices.advice.22116890

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

A2.5	**A2.5 The assessment is made publicly available.**
Outcome	*Pass*

Rationale

All the stock assessment information used to produce this MarinTrust assessment report was publicly available. Specifically, information is published in the WGBFAS report (ICES 2023a) and the catch advice (ICES 2025). 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 2023b).

The stock assessment is publicly available, and A2.5 is met.

References

ICES (2023a) Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 5:58. 606 pp. https://doi.org/10.17895/ices.pub.23123768

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

ICES (2025). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

A3 Harvest strategy

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

Rationale

Total fishing mortality is restricted through the use of a TAC, which is generally based on the ICES advice, which in turn is based on the Baltic Sea Multiannual Plan (Regulation (EU) 2016/1139 as amended) (EU 2016). In Russia, the federal law on Fisheries and Protection of Aquatic Biological Resources mandates the establishment of Total Allowable Catch (TAC) levels for various fish stocks to ensure the conservation of aquatic biological resources (FAF 2021).

There is a mechanism in place to restrict total fishing mortality, and A3.1 is met.

References

EU (2016). 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. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R1139-20240710.

FAF (2021). Federal Agency for Fisheries. Federal Law of 20.12.2004 N 166-FZ "On Fisheries and Conservation of Aquatic Biological Resources" https://fish.gov.ru/wp-content/uploads/documents/documenty/federalnye_zakony/Federalnyj-zakon_166-FZ_ot_20-12-2004.pdf. Translated by Google.

A3.2	**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.**
Outcome	*Pass*

Rationale

Since 2018, ICES has provided a range of potential catch recommendations to reflect the specifics of the Baltic Sea MAP (see A2.3). The total international quota – i.e. the sum of the EU TAC and the Russian autonomous quota – is generally within the boundaries of the ICES advice, although in the past it has sometimes exceeded the upper boundary of the advice. However, this did not occur between 2020 and 2024. In 2025 the total international TAC has been set around 9% higher than the maximum recommended catch; it remains to be seen whether this will lead to landings significantly above the advice.

SSB has been estimated to be well above the limit reference point since the 90s. Since 2021 catch estimations have not exceeded the top end of the range of advice provided by ICES.

Catches rarely exceed the advice by more than 10%, and SSB has been above the current target reference point for over 30 years. A3.2 is met; however, future assessments should review this conclusion if stock biomass falls below the target reference point.

Year	ICES advice	Catch corresponding to advice	Agreed TAC	ICES catch
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**	312 200
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**	317 700
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**	274 100
2021	Management plan	247 952 (range 181 567–316 833)	268 458**	284 900
2022	Management plan	291 745 (range 214 000–373 210)	295 300**	301 409^,§
2023	Management plan	249 237 (range 183 749–317 905)	269 200**	265 900^
2024	Management plan	241 604 (range 191 075–247 704)	245 200**	239 888^
2025	Management plan	164 947 (range 130 195 – 169 131)	183 700**	
2026	Management plan	224 616 (range 176 056-230 518)		

* EU autonomous quota and does not include Russian Federation catches.
** TAC is calculated as EU + Russian Federation autonomous quotas.
^ Russian Federation landings were not officially reported to ICES, but an estimate is included.
§ Russian Federation landings were updated in 2024 by the Baltic Fisheries Assessment Working Group (WGBFAS).

Table 5. Sprat in subdivisions 22-32 (Baltic Sea) ICES advice, total allowable catches (TACs), and catches. All weights are in tonnes (ICES 2025)

References

ICES (2025). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

A3.3	**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).**
Outcome	*Pass*

Rationale

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

measures may include suspending the targeted fishery for the stock and the adequate reduction of fishing opportunities. (EU 2016)

Fishery removals are likely to be prohibited if the stock biomass falls below the limit reference point, and A3.3 is met.

References

EU (2016). 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 nnes 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. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R1139-20240710.

A4 Stock status

A4.1	**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.**
Outcome	*Pass*	

Rationale

The most recent ICES catch advice states that "Spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim}" (ICES 2025). Therefore, the fishery meets the first option of this clause, and A4.1 is met.

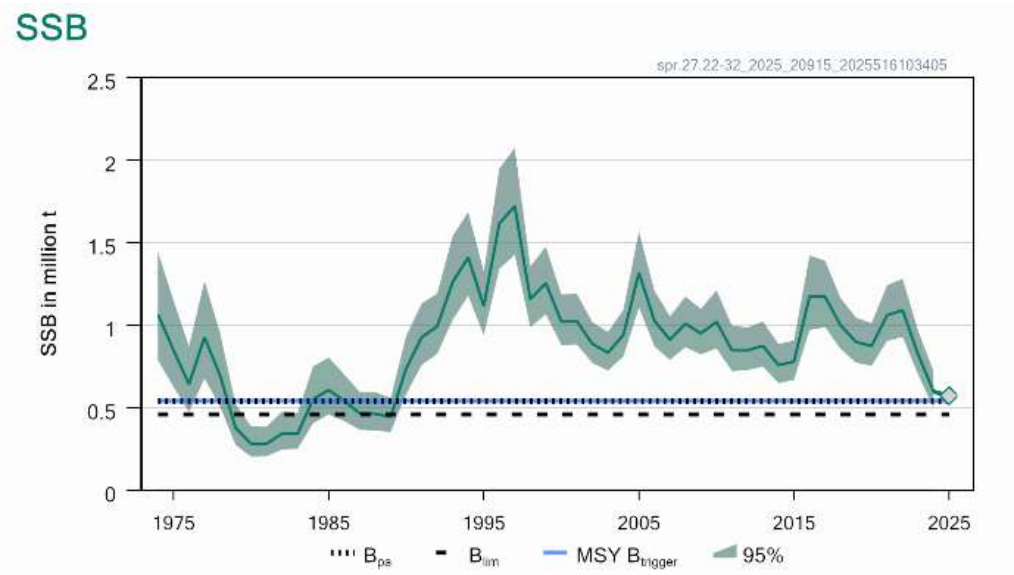

Figure 8. Sprat in ICES subdivisions 22-32 (Baltic Sea) spawning-stock size above MSY $B_{trigger}$, B_{pa}, and B_{lim}. (ICES 2025)

References
ICES (2025). Sprat (*Sprattus sprattus*) in subdivisions 22-32 (Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202893.v1

Central Baltic Herring - *Clupea harengus*

A1 Data collection

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

Rationale

The EU Fisheries Control System, through the Fisheries Control Regulation (EC Regulation No 1224/2009), requires that each vessel record data on catches (target species and bycatch) in logbooks and complete a landing declaration indicating specifically all quantities of each species landed. Information should be transmitted to the competent authority of each member state, who then provide it to the Commission. (EC 2009).

Russia does not report landing information to ICES; however, the Baltic Fisheries Assessment Working Group (WGBFAS) estimates catches based on information available on the Russian Federation's official websites, providing a comprehensive overview of the fishery removals (ICES 2025a). Uncertainty around the accuracy of this catch data is factored into the stock assessment process.

Total catches in the Central Baltic (excluding Gulf of Riga) of herring in 2024 were 75,236t (ICES 2025b)

Landings data are collected and A1.1 is met.

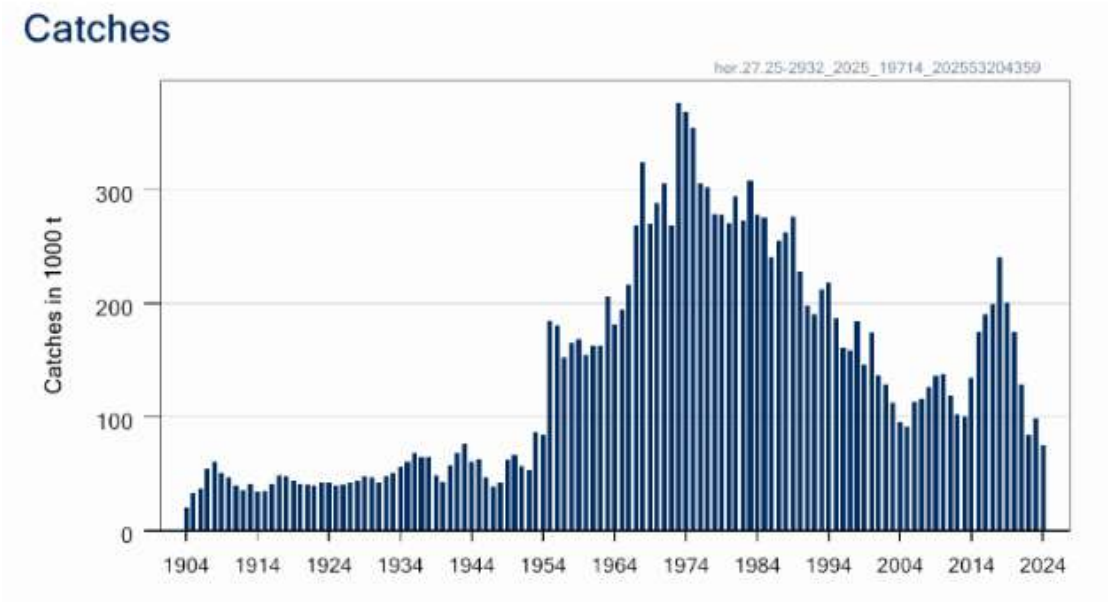

Figure 9. Herring catches from 1904 to 2024 in ICES subdivisions 25–29 and 32, excluding the Gulf of Riga. (ICES 2025b)

References

EC (2009). Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006. In force. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009R1224-20241011.

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

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

Rationale

In addition to commercial catch data, the stock assessment carried out annually by the ICES Baltic Fisheries Assessment Working Group (WGBFAS) utilises one acoustic survey indices (the Baltic International Acoustic Survey (BIAS)); and natural mortalities from the ICES multispecies model (ICES 2025a). All fish species in the catch are measured in length, and biological samples, including

age, are taken on the target species, herring and sprat. The Baltic Sea countries meet in the Baltic International Fish Survey Working Group (WGBIFS), and the results from each country are compiled in a common database. (SLU 2025, ICES 2024).

The stock assessment model assumes discards and bycatch are negligible. The 2025 catch advice includes a section covering the quality of the assessment, which notes that misreporting of herring and sprat is an ongoing problem which is challenging to quantify, and which introduces an unquantifiable level of uncertainty into the assessment. However, efforts are underway to estimate the levels of misreporting (ICES 2025b). Additionally, there is uncertainty surrounding information on Russian catch composition in recent years, and recruitment in 2024 and 2025 is also uncertain. However, ICES recognises these uncertainties and takes them into account during the stock assessment process.

Overall, sufficient additional information is collected to enable an indication of stock status to be estimated, and A2.1 is met.

References

ICES (2024). Baltic International Fish Survey Working Group (WGBIFS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.25922290.v1

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

SLU (2025). Sveriges lantbruksuniversitet (Swedish University of agricultural Sciencces). BIAS – Baltic International Acoustic Survey. https://www.slu.se/en/environment/statistics-and-environmental-data/environmental-data-catalogue/bias/

A2 Stock assessment

A2.1	**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.**
Outcome	*Pass*	

Rationale

Herring in the Central Baltic Sea, excluding the Gulf of Riga, is subjected to an annual stock assessment carried out by the ICES Baltic Fisheries Assessment Working Group (WGBFAS). The stock was benchmarked in 2023 (ICES, 2023a), and outcomes were implemented in the last assessment

published in 2025 (ICES, 2025). The benchmarking process ensures the stock assessment recognises the most recent available scientific understanding of the species, the stock, the fishery, and the ecosystems within which they occur. The stock assessment is conducted as a whole following the ICES methodology (ICES 2023b).

The data used for the stock assessment included landing and catch data from all countries exploiting the stock, as well as biological data such as mean weights at age, maturity at age, and natural mortality. Additionally, fishery-independent information from the Baltic International Acoustic Survey (BIAS) was also utilized. (ICES, 2025).

An annual stock assessment is conducted and A2.1 is met.

References

ICES. (2023a) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

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

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

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

Rationale

The WGBFAS stock assessment indicates the status of the stock relative to target and limit reference points. These reference points were updated in 2023 as a result of the full benchmarking of the stock (ICES 2023a), which used to be expressed as absolute values and are now expressed in relative values. Key amongst the reference points for the purpose of this Marin Trust assessment are the management plan target reference point MAP MSY $B_{trigger}$, set at B30% (i.e. 30% of the estimated unexploited biomass); and limit reference point MAP B_{lim}, set at 0.15*B0 (i.e. 15% of the estimated unexploited biomass) (ICES 2023).

The 2025 stock assessment projected that SSB in 2026 would be 79% of the target reference point level, and stated, "spawning-stock size is below MSY $B_{trigger}$, and between B_{PA} and B_{lim}" (ICES 2025).

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

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	$B_{30\%}$	Relative value. Set at 30% of B_0*. Determined through management strategy evaluation with the objective to achieve high sustainable yields without exceeding a 5% probability of SSB falling below B_{lim} in any single year.	ICES (2023a)
	F_{MSY}	$F_{B30\%}$	Relative value. Set as the F which will achieve 30% of B_0. Determined through management strategy evaluation with the objective to achieve high sustainable yields without exceeding a 5% probability of SSB falling below B_{lim} in any single year.	ICES (2023a)
Precautionary approach	B_{lim}	0.15 x B_0	Relative value. Set at 15% of B_0.	ICES (2023b)
	B_{pa}=MSY $B_{trigger}$	$B_{30\%}$	Relative value. Set at 30% of B_0.Determined through management strategy evaluation with the objective to achieve high sustainable yields without exceeding a 5% probability of SSB falling below B_{lim} in any single year.	ICES (2023a)
	F_{pa}	$F_{B25\%}$**= F_{MSY}*1.21	F_{P05}. Relative value. Determined through management strategy evaluation. The F that leads to SSB ≥ B_{lim} with 95% probability.	ICES (2023a)
Management plan	MAP MSY $B_{trigger}$	$B_{30\%}$	MSY $B_{trigger}$	ICES (2023a)
	MAP B_{lim}	0.15 x B_0	B_{lim}	ICES (2023a)
	MAP F_{MSY}	$F_{B30\%}$	F_{MSY}	ICES (2023a)
	MAP target range F_{lower}	$F_{B40\%}$ = F_{MSY}*0.75	Relative value. Determined through management strategy evaluation, consistent with the ranges that result in no more than a 5% reduction in long-term yield compared to MSY.	ICES (2023a)
	MAP target range F_{upper}	$F_{B25\%}$**= F_{MSY}*1.21	Relative value. Determined through management strategy evaluation, consistent with the ranges that result in no more than a 5% reduction in long-term yield compared to MSY. Capped to F_{P05}.	ICES (2023a)

* B_0 is the estimated unexploited spawning biomass at current conditions (average biological parameters for the last 10 years).
** Determined from the management strategy evaluation. To be precautionary, this reference point can only be used with the MSY $B_{trigger}$.

Table 6. Herring in ICES subdivisions 25–29 and 32, excluding the Gulf of Riga, Reference points, values, and their technical basis (ICES 2025a)

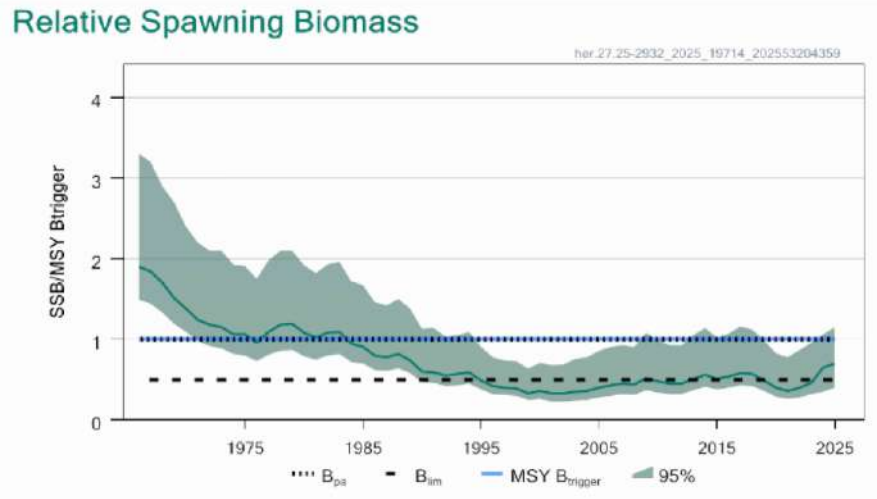

Figure 10. Central Baltic herring, excluding Gulf of Riga, spawning-stock size is below MSY $B_{trigger}$, and between B_{pa}, and B_{lim} (ICES 2025b)

References

ICES. (2023a) Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. https://doi.org/10.17895/ices.pub.23216492

ICES (2025a). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

ICES (2025b). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

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

Rationale

The ICES advice provides annually an indication of the volume of fishery removals which is appropriate for the current stock status in the form of recommended catches in the upcoming year

The latest catch advice indicates that when the EU multiannual plan (MAP) for the Baltic Sea is applied, catches in 2026 that correspond to the F ranges in the plan are between 120,378 (corresponding to $F_{MSY\ lower} \times SSB_{2026}/MSY\ B_{trigger}$) and 157,996t (corresponding to $F_{MSY} \times SSB_{2026}/MSY\ B_{trigger}$). The fishery for central Baltic herring includes fish from Gulf of Riga herring. The above advice corresponds to catches of herring in subdivisions 25–29 and 32 of no more than 154 542t (corresponding to $F_{MSY} \times SSB_{2026}/MSY\ B_{trigger}$) in 2026, assuming the same proportion of the Gulf of Riga herring and central Baltic herring stocks is taken in subdivisions 25–29 and 32 as was estimated for 2020–2024 (ICES 2025).

The stock assessment provides an indication of an appropriate level of fishery removals, and A2.3 is met.

References

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

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

Rationale

The Guide to the ICES Advisory Framework and Principles (ICES 2023) outlines the process by

which ICES conducts scientific activities and provides fisheries management advice. When the results of the assessments are agreed by the ICES groups, they are sent to the ICES Advice Drafting Group, which consists of National Experts, who review them, and they are finally reviewed by the Advisory Committee (ACOM), which delivers the ICES advice. The ACOM advice is grounded on 10 principles to support ecosystem-based management advice. This ensures that the advice is based on the best available science and data, considered legitimate by both authorities and stakeholders, and relevant and operational to the policy or management challenge in question (ICES 2023).

Principle 7 states that the process undergoes a peer review phase to ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice. All analyses and methods are peer reviewed by at least two independent reviewers. For recurrent advice, the review is conducted through a benchmark process; for special requests, through one-off reviews. (ICES 2023). The sprat stock assessment was most recently benchmarked in 2023; thus, it was subject to peer review (ICES 2025).

Figure 11. ICES advises principles, Principle 7 states that the process undergoes a peer review phase. (ICES 2023).

The assessment is peer reviewed, and A2.4 is met.

References

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

ICES (2025). Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.29099786.v1

A2.5	**A2.5 The assessment is made publicly available.**
Outcome	*Pass*

Rationale

All the stock assessment information used to produce this MarinTrust assessment report was publicly available. Specifically, information is published in the WGBFAS report (ICES 2023a) and the catch advice (ICES 2025). 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 2023b).

The stock assessment is publicly available, and A2.5 is met.

References

ICES (2023a) Baltic Fisheries Assessment Working Group (WGBFAS). ICES Scientific Reports. 5:58. 606 pp. https://doi.org/10.17895/ices.pub.23123768

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

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

A3 Harvest strategy

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

Rationale

Total fishing mortality is restricted through the use of a TAC, which is generally based on the ICES advice, which in turn is based on the Baltic Sea Multiannual Plan (Regulation (EU) 2016/1139 as amended) (EU 2016). In Russia, the federal law on Fisheries and Protection of Aquatic Biological Resources mandates the establishment of Total Allowable Catch (TAC) levels for various fish stocks to ensure the conservation of aquatic biological resources (FAF 2021).

A mixture of central Baltic herring (subdivisions 25–27, 28.2, 29, and 32) and Gulf of Riga herring (subdivision 28.1) is caught in the central Baltic Sea. In the assessment and the advice, the central Baltic herring stock is considered to be caught both inside and outside the central Baltic Sea. The total allowable catch (TAC; sum of the EU and Russian Federation autonomous quotas) is set for herring caught in the central Baltic management area; it includes a small amount of Gulf of Riga herring caught in the central Baltic Sea but excludes central Baltic herring caught outside of the central Baltic Sea. (ICES 2025)

There is a mechanism in place to restrict total fishing mortality, and A3.1 is met.

References

EU (2016). 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. In force. https://eur-lex.europa.eu/legal-

content/EN/TXT/?uri=CELEX%3A02016R1139-20240710.

FAF (2021). Federal Agency for Fisheries. Federal Law of 20.12.2004 N 166-FZ "On Fisheries and Conservation of Aquatic Biological Resources" https://fish.gov.ru/wp-content/uploads/documents/documenty/federalnye_zakony/Federalnyj-zakon_166-FZ_ot_20-12-2004.pdf. Translated by Google.

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

A3.2	**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.**
Outcome	*Fail*	

Rationale

Since 2018, ICES has provided a range of potential catch recommendations to reflect the specifics of the Baltic Sea MAP (see A2.3). The total international quota – i.e. the sum of the EU TAC and the Russian autonomous quota – has historically been broadly within the boundaries of the ICES advice. However, while the headline 2023 ICES catch advice called for maximum catches within the range of 41,706t – 52,549t, the total international TAC for 2024 was set at 67,368t, nearly 30% greater than the maximum recommended level (ICES 2025).

An argument could be made that this excess TAC has only occurred in one year, and therefore does not represent removals which “regularly exceed” the level stated in the stock assessment. However, the severity of the excess TAC in 2024 is exacerbated by the conclusion of the 2023 stock assessment that this quota was set at a time when stock biomass was below the limit reference point. Some scientists and management stakeholders – including, originally, the European Commission (EC 2023) – argued that the TAC should be set to zero.

Total fishery removals in 2024 are likely to substantially exceed the range of catch recommendations provided by ICES, and A3.2 is not met.

Year	ICES advice	Catch corresponding to the advice	Agreed TAC	ICES catch SDs 25–29 and 32	ICES catch
2017	MSY approach (F_{MSY} = 0.22)	≤ 216 000	220 629^^		199 4281
2018	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than F_{MSY} = 0.22 only under conditions specified in MAP	200 236–331 510 but catch higher than 267 745 only under conditions specified in MAP	258 855^^		240 738
2019	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than F_{MSY} = 0.22 only under conditions specified in MAP	115 591–192 787 but catch higher than 155 333 only under conditions specified in MAP	200 260^^		200 956
2020	MAP target F ranges: F_{lower} to F_{upper} (0.16–0.28), but F higher than F_{MSY} = 0.22 only under conditions specified in MAP	130 546–214 553 but catch higher than 173975 only under conditions specified in MAP	182 484^^		174 521
2021	Management plan	111 852 (range 83 971–138 183)	126 051^^		128 961
2022	Management plan	71 939 (range 52 443–87 581)	80 753^^		83 821^^^§
2023	Management plan	95 643 (range 70 130–95 643)	97 822^^		98 696^^^
2024	Management plan	52 549 (range 41 706–52 549)	67 368^^		75 236^^^
2025	Management plan	125 344 (range 95 340–125 344)	110 881^^		
2026	Management plan	157 996 (range 120 378 – 157 996)			

* 1988–2003 including Gulf of Riga herring.
** TAC for subdivisions 22–29S and 32.
*** TAC for subdivisions 25–28.2, 29, and 32.
^ EU TAC for subdivisions 25–28.2, 29, and 32.
^^ TAC is calculated as EU (subdivisions 25–28.2, 29, and 32) + Russian Federation autonomous quotas.
^^^ Russian Federation landings were not officially reported to ICES, but an estimate is included.
§ Russian Federation landings were updated during the Baltic Fisheries Assessment Working Group (WGBFAS) 2024 meeting.

Table7. Herring in subdivisions (SDs) 25–29 and 32, excluding the Gulf of Riga. ICES advice, total allowable catches (TACs), and catches. All weights are in tonnes. (ICES 2025)

References

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

A3.3	**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).**
Outcome	*Fail*

Rationale

The 2023 ICES advice stated that the stock was substantially below the LRP; noted that the MAP requires fishing pressure to be set at a level which reduces the chance of SSB falling below LRP to less than 5%; and stated that the stock will likely remain under LRP even with zero fishing in 2024. However, despite this, the ICES headline catch advice recommended a quota of between 41,706t and 52,549t (ICES 2023), although text included within the advice also noted that "The EU MAP states, "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 B_{lim}" (ICES 2023).

Due to the state of the stock, in August 2023 the European Commission proposed the closure of the targeted central Baltic herring fishery (EC 2023). However, this proposal was not implemented, and the 2024 TAC was eventually set at 40,368t (EC 2023a). The 2024 ICES advice indicates that when combined with the Russian Federation autonomous quota, the total international TAC in 2024 was 67,368t.

In conclusion, despite biomass being below the LRP, the 2024 TAC was set substantially higher than the level recommended by ICES. A3.3 is not met.

References

ICES (2023) Herring (*Clupea harengus*) in subdivisions 25–29 and 32, excluding the Gulf of Riga (central Baltic Sea). Replacing advice provided in May 2023. In Report of the ICES Advisory Committee, 2023. ICES Advice 2023, her.27.25–2932. https://doi.org/10.17895/ices.advice.23310368

ICES (2024). Herring (*Clupea harengus*) in subdivisions 25–29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019276.v1

A4 Stock status

A4.1	**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.**
Outcome	*Fail*	

Rationale

The stock is currently estimated to be above the limit reference point (B_{lim}) but below the target reference points B_{pa} and MSY $B_{trigger}$ (ICES 2025), therefore the first and third statements of this clause are not met.

In order to meet the second statement, there must be evidence that a fall below the limit reference point would result in fishery closure. The 2023 stock assessment concluded that stock biomass was

below the limit reference point level (ICES 2023). However, the fishery remained open in 2024, with a total international TAC of 67,368t, nearly 30% more than the maximum recommended by the ICES advice (52,549t). There is conclusive evidence that the fishery is not closed when biomass falls below the limit reference point, and the second statement is not met.

A4.1 is not met. As per the Marin Trust whole fish assessment guidance, the stock has been further assessed under Category B.

References

ICES (2023). Herring (*Clupea harengus*) in subdivisions 25–29 and 32, excluding the Gulf of Riga (central Baltic Sea). Replacing advice provided in May 2023. ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.23310368.v1

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

Category B species

Category B species are assessed using a risk-based approach.

2.1. The risk matrix in Table B(a) shall be used when assessing a Category B species when estimates of Fishing mortality (F), Biomass (B) and reference points are available.

2.2. The risk matrix in Table B(b) shall be used when assessing a Category B species when no reference points are available.

Central Baltic Herring - *Clupea harengus*

B1	**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).**
Table used B(a) or B(b)	B(a)	
Outcome	*Pass*	

Rationale

Central Baltic herring is managed relative to established target and limit reference points, but fails in Category A assessment; thus information about biomass, fishing mortality, and reference points is available and table B(a) was used. In the last Central Baltic herring stock assessment, it was determined that fishing pressure on the stock is below F_{MSY}, and spawning-stock size is below MSY $B_{trigger}$ and between B_{PA} and B_{lim} (ICES 2025).

Taking into account current estimates of biomass and fishing mortality relative to reference points, and reading off Table B(a), the outcome is that the stock Passes the Category B assessment.

Table B(a) – Biomass/fishing pressure risk assessment.

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

Table 8. Table B(a) risk matrix. In green squares, results for Central Baltic herring are shown.

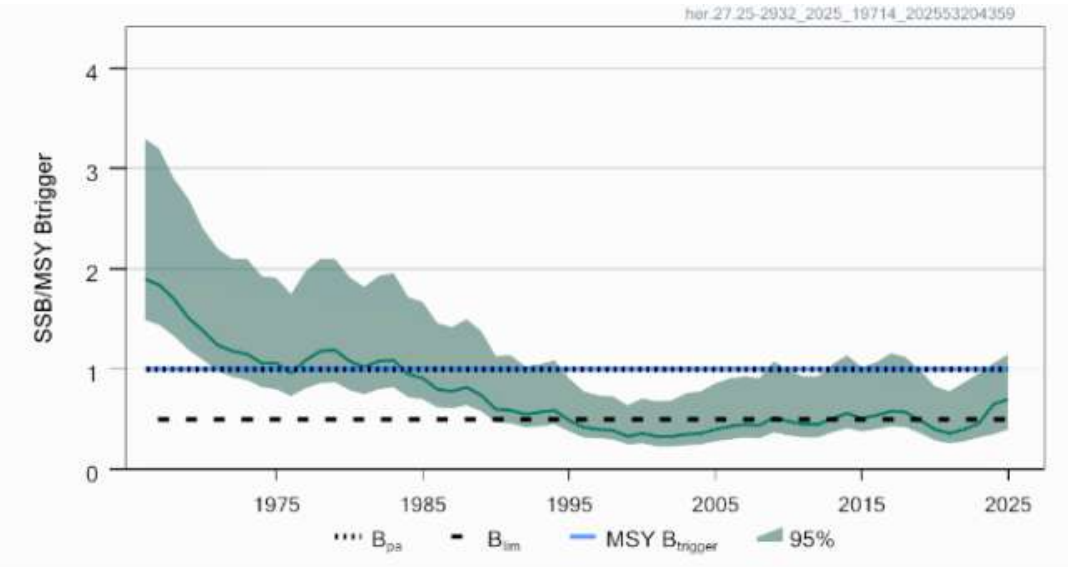

Figure 12. Central Baltic herring, relative spawning biomass and current reference points (ICES 2025).

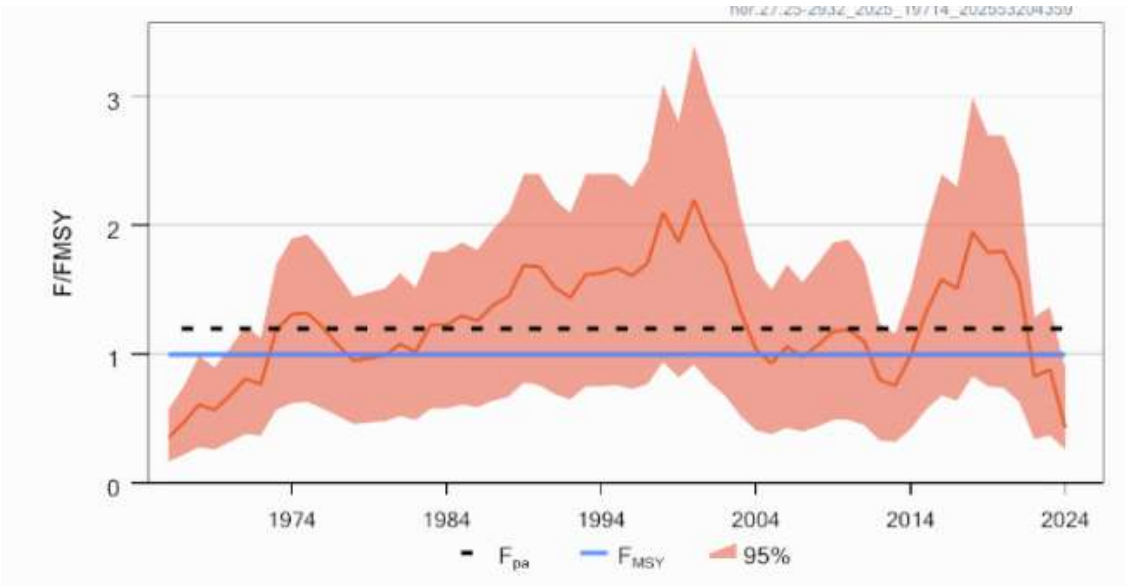

Figure 13. Central Baltic herring, relative fishing pressure (ICES 2025).

References

ICES (2025). Herring (*Clupea harengus*) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.27202617.v1

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.

C1.1	**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.**
Outcome	Choose an item.
Rationale N/A	
References	

C1.2	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.
Outcome	Choose an item.
Rationale N/A	
References	

Category D species

Category D species are assessed against a risk-based approach.

2.1. The Productivity-Susceptibility Analysis (PSA) in Table D(a) shall be used when assessing Category D species.

2.2. Table D(b) shall be used to calculate the overall PSA risk rating for the Category D species.

2.3. Should the PSA indicate a high risk, further assessment shall be completed against the requirements in Table D(C).

Productivity Susceptibility Analysis (PSA) and scores

Table D(a) provides detailed values and scores for the species productivity and susceptibility attributes and attributes, the assessor shall use Table D(a) to the PSA table.
Table D(b) is used to calculate the overall PSA risk rating for the Category D species.

Species name	Smelt - *Osmerus eperlanus*	
Productivity attributes	**Value**	**Score**
Average age at maturity	4.7 years [1]	1
Average maximum age	18.9 years [1]	2
Fecundity	18,028 [1]	2
Average maximum size	45 cm [1]	1
Average size at maturity	22.1 cm [1]	1
Reproductive strategy	Broadcast spawner [1]	1
Mean Trophic Level (MTL)	3.5 [1]	3
Density dependence (to be used when scoring invertebrate species only)	NA	NA
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort	<10% overlap	1

with a species concentration of the stock	Smelt is distributed in the North Atlantic: the White Sea southward to the western coasts of France, including the Baltic Sea, the southern North Sea, and the British Isles; the Gironde estuary is the southern limit of its distribution. Landlocked populations in lakes of the coastal areas of the North, Baltic, White, and Barents Seas. North to about 68° N in Scandinavia.[1]	
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap [1,2] Smelt can be found up to 50m depth [1], while herring inhabits in a range of 0-364m depth[2.] Since herring is the target species and smelt represents around 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the smelt given the herring wide range of depth.	1
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	3
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	Retained	3
Average productivity score		1.57
Average susceptibility score		2
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

1 https://fishbase.se/summary/Osmerus-eperlanus.html

2 https://www.fishbase.se/summary/Clupea-harengus.html

Species name	Fourhorn sculpin - *Triglopsis quadricornis*	
Productivity attributes	**Value**	**Score**
Average age at maturity	4 years [1]	1
Average maximum age	16.9 years [1]	2
Fecundity	3,776 [1]	2
Average maximum size	60 cm [1]	1
Average size	34.1 cm [1]	1

at maturity		
Reproductive strategy	Guarders/nesters [1]	2
Mean Trophic Level (MTL)	3.9 [1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10% overlap Fourhorn sculpin is distributed in the Atlantic and Arctic: the Baltic coast of Sweden, Finland, Russia, and southwestern to eastern Poland; the western coast of Sweden to the northern coast of Norway, eastward to the White and Barents Sea basins. In Siberia, eastward to about the Anadyr estuary.[1]	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap [1,2] Fourhorn sculpin can be found up to 100m depth [1], while herring inhabits in a range of 0-364m depth[2.] Since herring is the target species and fourhorn sculpin represents around 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the fourhorn sculpin given the herring wide range of depth.	1
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	3
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	Retained	3
Average productivity score		1.71
Average susceptibility score		2
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

1 https://www.fishbase.se/summary/Myoxocephalus_quadricornis.html

2 https://www.fishbase.se/summary/Clupea-harengus.html

Species name	Flounder - *Platichthys flesus*

Productivity attributes	Value	Score
Average age at maturity	3 years [1]	1
Average maximum age	12.4 years [1]	2
Fecundity	894,427 [1]	1
Average maximum size	60 cm [1]	1
Average size at maturity	26.7 cm [1]	1
Reproductive strategy	Broadcast spawner [1]	1
Mean Trophic Level (MTL)	3.3 [1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10% overlap Flounder is distributed in the Eastern Atlantic: coastal and brackish waters of western Europe and from the White Sea to the Mediterranean and the Black Sea[1]	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap [1,2] Flounder can be found up to 100m depth [1], while herring inhabits in a range of 0-364m depth[2.] Since herring is the target species and flounder represents less than 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the flounder given the herring wide range of depth.	1
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	3
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	Retained	3
Average productivity score		1.42
Average susceptibility score		2
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

1 https://www.fishbase.se/summary/Platichthys_flesus.html
2 https://www.fishbase.se/summary/Clupea-harengus.html

Species name	Round goby - *Neogobius melanostomus*	
Productivity attributes	**Value**	**Score**
Average age at maturity	1.5 years [1]	1
Average maximum age	5.7 years [1]	1
Fecundity	1,225 [1]	2
Average maximum size	35 cm [1]	1
Average size at maturity	14.9 cm [1]	1
Reproductive strategy	Guarders: clutch tenders [1]	2
Mean Trophic Level (MTL)	3.3 [1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10% overlap Round goby is distributed in Europe and Asia: Sea of Azov, Black Sea and Caspian basins.[1]	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap [1,2] Round goby can be found up to 30m depth [1], while herring inhabits in a range of 0-364m depth[2]. Since herring is the target species and round goby represents less than 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the round goby given the herring wide range of depth.	1
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	3
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	Retained	3

Average productivity score	1.57
Average susceptibility score	2
PSA risk rating (from Table D(b))	Pass
Compliance rating	Pass

1 https://www.fishbase.se/summary/Neogobius_melanostomus.html

2 https://www.fishbase.se/summary/Clupea-harengus.html

Species name	Three-spined stickleback - *Gasterosteus aculeatus*	
Productivity attributes	**Value**	**Score**
Average age at maturity	0.4 years [1]	1
Average maximum age	1.1 years [1]	1
Fecundity	255 [1]	2
Average maximum size	11 cm [1]	1
Average size at maturity	4.2 cm [1]	1
Reproductive strategy	Guarders: nesters [1]	2
Mean Trophic Level (MTL)	3.3 [1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10% overlap Three-spined stickleback is distributed in circumarctic and temperate regions: Extending south to the Black Sea, southern Italy, Iberian Peninsula, North Africa; in Eastern Asia north of Japan (35°N), in North America north of 30-32°N; Greenland.[1]	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap [1,2] Three-spined stickleback can be found up to 100m depth [1], while herring inhabits in a range of 0-364m depth[2]. Since herring is the target species and three-spined stickleback represents less than 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the three-spined stickleback given the herring wide range of depth.	1
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught	3

	No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	
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	Retained	3
Average productivity score		1.57
Average susceptibility score		2
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

1 https://www.fishbase.se/summary/Gasterosteus_aculeatus.html

2 https://www.fishbase.se/summary/Clupea-harengus.html

Species name	Eelpout - *Zoarces viviparus*	
Productivity attributes	**Value**	**Score**
Average age at maturity	5.1 years [1]	2
Average maximum age	21.9 years [1]	2
Fecundity	30-400 [1]	2
Average maximum size	52 cm [1]	1
Average size at maturity	29 cm [1]	1
Reproductive strategy	bearers: internal live bearers [1]	2
Mean Trophic Level (MTL)	3.5 [1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10% overlap Eelpout is distributed in Northeast Atlantic: White Sea, Cheshskaya Guba and Murmansk coast (Barents Sea) southward to English Channel (River Somme); eastern coasts of Scotland, England, also Irish Sea; the Orkneys, Shetlands and in shallow waters of North Sea and Baltic. [1]	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the	Low overlap [1,2] Eelpout can be found up to 20m depth [1], while herring inhabits in a range of 0-364m	1

position of the stock/species within the habitat relative to the position of the gear	depth[2]. Since herring is the target species and eelpout represents less than 1% of the bycatch species, it was considered that the fishing gear position has a low overlap with the eelpout given the herring wide range of depth.	
Selectivity of gear type: Potential of the gear to retain species	Individuals < size of maturity are frequently caught No information was found about the selectivity of gear type for this stock. However, as a precautionary approach, a high-risk score was used in the assessment.	3
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	Retained	3
Average productivity score		1.85
Average susceptibility score		2
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

1 https://www.fishbase.se/summary/Zoarces_viviparus.html

2 https://www.fishbase.se/summary/Clupea-harengus.html

Further assessment for Category D species

Should the PSA indicate a high risk, further assessment shall be completed against the requirements D1 and D2 – Table D(c).

D1	**D1. The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.**
Outcome	Choose an item.
Rationale N/A	
References	

D2	**D2. There is no substantial evidence that the fishery has a significant negative impact on the species.**
Outcome	Choose an item.
Rationale N/A	
References	

Ecosystem requirements

This section, or module, assesses the impacts that the fishery under assessment may have on key ecosystem components: ETP species, habitat and the wider ecosystem.

3.1. All ecosystem criteria must be met (pass) for a fishery to pass the Ecosystem Requirements.

3.1.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the ecosystem criteria, it is not expected that sub-criteria are assessed independently of the main criterion.

E1 Impact on Endangered, Threatened or Protected species (ETP species)

E1.1	**E1.1 Information on interactions between the fishery and ETP species is collected.** *In reaching a determination for E1.1, the assessor should consider if the following is in place:*
	E1.1.1 ETP species which may be directly affected by the fishery have been identified.
	E1.1.2 Interactions between the fishery and ETP species are recorded and reported to management organisations.
	E1.1.3 Collection and analysis of ETP information is adequate to provide a reliable indication of the impact the fishery has on ETP species.
Outcome	*Pass*

Rationale

The Working Group on Bycatch of Protected Species (WGBYC) was established in 2007 and collates and analyses information from across the Northeast Atlantic and adjacent sea areas (Baltic, Mediterranean and Black Seas) related to the bycatch of protected, endangered and threatened (PET) species, including marine mammals, seabirds, turtles and sensitive fish species in commercial fishing operations. (ICES 2024)

There are several legislative instruments in ICES Member Countries, Regional Fisheries Management Organisations (RFMOs) and other European Union law concerning bycatch of PET species and their record. ICES obtains data on PETS bycatch through an annual data call. These data are primarily collected during at-sea observations conducted for fisheries monitoring purposes in accordance with the EU Data Collection Framework Regulation 2017/1004 (DCF). While the

collection of protected species bycatch data through the DCF as part of the Multiannual Plan (DC-/EU-MAP) may facilitate targeted sampling of métiers of concern. (ICES 2024)

Through the 2024 data call, 23 countries out of 25 responded and submitted data on fishing and sampling effort, and 22 for bycatch observations for 2023. Estonia and Latvia have been participating in data submissions to ICES WGBYC regarding fishing effort, observer effort, and bycatch records since 2019 (ICES 2024).

At the time of writing, the Gulf of Riga herring and sprat fishery is MSC certified. The fourth surveillance Report (Bureau Veritas 2024) states that there are no recorded interactions between the Gulf of Riga pelagic trawl fleet and ETP species in the last 10 years.

References

Bureau Veritas (2024). NZRO Gulf of Riga herring and sprat trawl fishery. Fourth surveillance report. November 2024. https://fisheries.msc.org/en/fisheries/nzro-gulf-of-riga-herring-and-sprat-trawl-fishery/@@assessments

ICES (2024a). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.27762723.v6

E1.2	**E1.2 The fishery has no significant negative impact on ETP species.** *In reaching a determination for E1.2, the assessor should consider if the following is in place:* E1.2.1 The information collected in relation to E1.1.3 indicates that the fishery does not have a significant negative impact on ETP species.
Outcome	*Pass*

Rationale

In the Baltic Sea ecoregion, 218 marine mammals (7 species), 390 birds (21 species), 3 elasmobranchs (1 species), 79530 teleost individuals (3 species), 23 chondrosteians (2 species) and 40 lamprey (1 species) were recorded from 129,904 days at sea (ICES 2024a). However, in table 9 are the most recent WGBYC reported by catch species by the fisheries in the Gulf of Riga, and none of them is an ETP species, indicating that interactions with ETP species in this area of the Baltic Sea are rare.

Table 9. WCBYC bycatch species for the Gulf of Riga (ICES 2024b)

Species	Common name	IUCN Category	Total specimens
Halichoerus grypus	Grey seal	Least Concern	3
Phalacrocorax carbo	Great cormoran	Least Concern	19
Alosa fallax	Twaite shad	Least Concern	20
Gavia stellata	Red-throated Loon	Least Concern	1

Lampetra fluviatilis	European river lamprey	Least Concern	33

The low probability of ETP interactions is also indicated by the MSC fourth surveillance report for the fishery, which notes there are no recorded interactions with any potentially ETP species (Bureau Veritas 2024). Furthermore, the list of potentially impacted ETP species provided within the report includes only one, which falls within the Marin Trust definition of an ETP species: the Baltic Sea sub-population of the harbour porpoise (Phocoena phocoena, IUCN Critically Endangered (Hammond et al, 2008)). The report states that the harbour porpoise does not occur regularly in the Gulf of Riga, and no interactions with the pelagic trawl fishery in the Gulf of Riga have been recorded (Bureau Veritas 2024) .

References

Bureau Veritas (2024). NZRO Gulf of Riga herring and sprat trawl fishery. Fourth surveillance report. November 2024. https://fisheries.msc.org/en/fisheries/nzro-gulf-of-riga-herring-and-sprat-trawl-fishery/@@assessments

Hammond, P.S., Bearzi, G., Bjørge, A., Forney, K.A., Karczmarski, L., Kasuya, T., Perrin, W., Scott, M.D., Wang, J.Y. , Wells, R.S. & Wilson, B (2008). Phocoena phocoena (Baltic Sea subpopulation) (errata version published in 2016). The IUCN Red List of Threatened Species 2008: e.T17031A98831650. https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T17031A6739565.en
ICES (2024a). Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.27762723.v6

ICES (2023b). https://github.com/ices-eg/wg_WGBYC/blob/master/2024/WGBYC2TAF/output/TOR_A_long_table_bycatch_only.xlsx

E1.3	**E1.3 There is an ETP management strategy in place for the fishery.** *In reaching a determination for E1.3, the assessor should consider if the following is in place:*	
	E1.3.1	There are measures applied to the fishery which are designed to manage the impacts of the fishery on ETP species.
	E1.3.2	The measures are considered likely to achieve the objectives of regional, national and international legislation relating to ETP species.
Outcome	*Pass*	

Rationale

As noted in E1.2, there is no evidence of interactions between the fishery and any species which fall within the Marin Trust definition of ETP. Despite this, throughout the Baltic Sea, measures are in place to minimise fishing-related ETP mortality. These include area closures (e.g. offshore from the mouth of the Oder), a ban on fishing in inshore areas in certain locations, monitoring requirements, marine protected areas designated for ETP species, and ban on capture of ETP and, where this

occurs, their prompt release.
References N/A

E2 Impact on the habitat

E2.1	**E2.1**	**Information on interactions between the fishery and marine habitats is collected.** *In reaching a determination for E2.1, the assessor should consider if the following is in place:*
	E2.1.1	Habitats which may be directly affected by the fishery have been identified, including any habitats which may be particularly vulnerable.
	E2.1.2	Information on the scale, location and intensity of fishing activity relative to habitats is collected.
	E2.1.3	Collection and analysis of habitat information is adequate to provide a reliable indication of the impact the fishery has on marine habitats.
Outcome	*Pass*	

Rationale

The pelagic trawl gears used in this fishery are not intended to make contact with the seabed, and in order to avoid damage, vessels will attempt to prevent such interactions wherever possible (Seafish 2025, FAO 2025). 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". However, for fisheries in the region that interact with seabed habitats, measures are in place to manage and mitigate impacts through mechanisms such as the HELCOM Baltic Sea Action Plan (BSAP), the requirements associated with Natura 2000 sites, and the technical measures outlined in EU regulations.

References

Seafish. (2025). Pleagic trawl. https://www.seafish.org/responsible-sourcing/fishing-gear-database/gear/pelagic-pair-trawl/#:~:text=As%20all%20pelagic%20trawls%20are,the%20bottom%20of%20the%20trawl.

FAO. (2025). Fishing Gear types Trawls.Technology Fact Sheets. In:*Fisheries and Aquaculture*. [Cited Wednesday, August 13th 2025]. https://www.fao.org/fishery/en/geartype/103/en

HELCOM (2023). Baltic Sea Action Plan 2021 update. https://helcom.fi/baltic-sea-action-plan/

E2.2	**E2.2 The fishery has no significant impact on marine habitats.** *In reaching a determination for E2.2, the assessor should consider if the following is in place:*	
	E2.2.1	The information collected in relation to E2.1.3 indicates that the fishery does not have a significant negative impact on marine habitats.
Outcome	*Pass*	

Rationale

Pelagic trawl gears are not designed to make contact with the seabed. Such contact is likely to be minimal, and consequently, the impact of this gear on benthic habitats and seabed structures is considered minimal, if any. (Seafish 2025, FAO 2025)

References

Seafish. (2025). Pleagic trawl. https://www.seafish.org/responsible-sourcing/fishing-gear-database/gear/pelagic-pair-trawl/#:~:text=As%20all%20pelagic%20trawls%20are,the%20bottom%20of%20the%20trawl.

FAO. (2025). Fishing Gear types Trawls.Technology Fact Sheets. In:*Fisheries and Aquaculture*. [Cited Wednesday, August 13th 2025]. https://www.fao.org/fishery/en/geartype/103/en

E2.3	**E2.3 There is a habitat management strategy in place for the fishery.** *In reaching a determination for E2.3, the assessor should consider if the following is in place:*	
	E2.3.1	There are measures applied to the fishery which are designed to manage the impact of the fishery on marine habitats.
	E2.3.2	The measures are considered likely to prevent the fishery from having a significant negative impact on marine habitats.
Outcome	*Pass*	

Rationale

Pelagic gears, such as those used in this fishery, are highly unlikely to cause significant habitat disruption (Seafish 2025, FAO 2025); therefore, no habitat management strategy is necessary, nor are there any measures to mitigate the impact of the fishery on marine habitats.

References

Seafish. (2025). Pleagic trawl. https://www.seafish.org/responsible-sourcing/fishing-gear-database/gear/pelagic-pair-trawl/#:~:text=As%20all%20pelagic%20trawls%20are,the%20bottom%20of%20the%20trawl.

FAO. (2025). Fishing Gear types Trawls.Technology Fact Sheets. In:*Fisheries and Aquaculture*. [Cited Wednesday, August 13th 2025]. https://www.fao.org/fishery/en/geartype/103/en

E3 Impact on the ecosystem

E3.1	**E3.1**	**Information on the potential impacts of the fishery on marine ecosystems is collected.** *In reaching a determination for E3.1, the assessor should consider if the following is in place:*
	E3.1.1	The main elements of the marine ecosystems in the area(s) where the fishery takes place have been identified.
	E3.1.2	The role of the species caught in the fishery within the marine ecosystem is understood, either through research on this specific fishery or inferred from other fisheries.
	E3.1.3	Collection and analysis of ecosystem information is adequate to provide a reliable indication of the impact the fishery has on marine ecosystems.
Outcome	*Pass*	

Rationale

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. Article 3 Clause 3 of the MAP states, “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 minimised”. Article 8 empowers the European Commission to adopt technical measures to “minimise the negative impact of fishing gears and fishing activities on the ecosystem”.

ICES conducts Ecosystem Overviews, which utilize risk-based methods to identify the primary human pressures and explain how these pressures affect key ecosystem components in each ICES ecoregion. This overview provides information on trends in the ecosystem over recent years and plays a crucial role, providing the context for ecosystem-based management (ICES, 2025). The most recent Workshop for the revision of the Ecosystem Overview of the Baltic Sea Ecoregion (WKBALEO) was carried out in 2024, where experts worked to synthesize the knowledge that underpins the revision of the ICES Baltic Sea Ecosystem Overview, aiming to determine the main human activity sectors that cause pressures impacting the ecosystem components. WKBALEO experts have evaluated the links between sectors, pressures, and ecosystem components using a linkage framework and pressure assessment process that examines and scores all direct pressures and human activities for the Baltic Sea ecoregion following the ICES technical guidelines methodology and using the most up-to-date scientific knowledge. (ICES 2024)

Herring and sprat are key forage fish in the Baltic Sea, transferring energy from zooplankton to

higher predators such as cod, seabirds, and marine mammals. Since both species are zooplanktivores, their population fluctuations influence zooplankton abundance, which in turn affects phytoplankton blooms and overall ecosystem health by exerting stronger zooplankton grazing pressure and potentially enhancing eutrophication through trophic cascades. Also, variations in sprat stocks have been linked to changes in the fledgling mass of common guillemots (seabirds) (Casini et al. 2004, Österblom 2006).

The specific roles of herring and sprat in the Gulf of Riga ecosystem are taken into account in the development of the stock assessment process, since the objectives of the 2023 benchmarking workshop, which aimed to update the stock assessment methodology included the following: "As part of the assessment methods workshop, knowledge about environmental drivers, including multispecies interactions, and ecosystem impacts should be integrated in the methodology" (ICES 2023).

The benchmarking workshop report provides evidence that ecosystem knowledge was indeed factored into discussions. The Gulf of Riga herring section includes an extensive discussion of "Ecosystem drivers", stating for example that "the year-class strength of Gulf of Riga herring strongly depends on the severity of winter" (ICES 2023).

References

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:32016R1139

ICES (2023). Benchmark Workshop on Baltic Pelagic stocks (WKBBALTPEL). ICES Scientific Reports. 5:47. 350 pp. https://doi.org/10.17895/ices.pub.23216492

ICES (2024). Workshop for the revision of Ecosystem Overviews of the Baltic Sea Ecoregion (WKBALEO). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.27203316.v1

ICES (2025). Ecosystem Overviews. https://www.ices.dk/advice/ESD/Pages/Ecosystem-overviews.aspx

Casini, M., Cardinale, M., & Arrhenius, F. (2004). Feeding preferences of herring (*Clupea harengus*) and sprat (*Sprattus sprattus*) in the southern Baltic Sea. *ICES Journal of Marine Science*, *61*(8), 1267-1277. https://ui.adsabs.harvard.edu/abs/2004ICJMS..61.1267C/abstract

Österblom, H., Casini, M., Olsson, O., & Bignert, A. (2006). Fish, seabirds and trophic cascades in the Baltic Sea. *Marine Ecology Progress Series*, *323*, 233-238. https://www.int-res.com/abstracts/meps/v323/meps323233

E3.2	**E3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.** *In reaching a determination for E3.2, the assessor should consider if the following is in place:* E3.2.1 The information collected in relation to E3.1.3 indicates that the fishery does not have a significant negative impact on marine ecosystems.
Outcome	*Pass*

Rationale

In the most recent Ecosystem overview for the Baltic Sea, results indicate that the most prevalent pressures in the Baltic Sea are related to nutrient discharge from multiple sources, as well as impacts from species extraction, e.g. fishery including bycatch and substrate disturbance. Furthermore, contaminants and litter, mainly due to their persistence and widespread prevalence, were identified as significant pressures in the Baltic Sea (ICES 2024).

The most significant potential ecosystem impacts of the fishery arise from the removal of herring and sprat biomass; however, while fishing is the main activity impacting the ecosystem via selective extraction of species, agriculture and forestry, together with wastewater discharge, pose the major pressure on the ecosystem through nutrient and organic enrichment (ICES 2024).

Although the understanding of the Baltic Sea ecosystem is relatively advanced compared to other marine regions, significant knowledge gaps remain on the cumulative effects of pressures on ecosystem components. For instance, key areas of uncertainty include the mechanistic understanding of how changes in the diet composition of important species alter their trophic positions within the food web, particularly under the influence of human activities (such as fishing) and climate change. This type of information is currently fragmented, yet essential for thoroughly assessing the impacts of anthropogenic pressures and climate-driven shifts on ecosystem dynamics. Therefore, when evaluating the state of the environment in the Baltic Sea, there is a lack of indicators for foodweb status, and threshold values have not yet been defined (ICES 2024).

The Ecosystem Overview of the Baltic Sea states that since the late 1980's "the open-sea system has been dominated by small pelagic fish, such as sprat and herring" (ICES 2024). Additionally, despite the knowledge gaps, ICES catch recommendations – which, as noted in Section A, are broadly followed – are calculated with the ecosystem considerations listed in E3.1 to minimize fisheries ecosystem impacts. No other evidence was encountered during the completion of this report to indicate that the fishery has a significant negative impact on the marine ecosystem.

References

ICES (2024). Workshop for the revision of Ecosystem Overviews of the Baltic Sea Ecoregion (WKBALEO). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.27203316.v1

E3.3	**E3.3 There is an ecosystem management strategy in place for the fishery.** *In reaching a determination for E3.3, the assessor should consider if the following is in place:*	
	E3.3.1	There are measures applied to the fishery which are designed to manage the impacts of the fishery on marine ecosystems.
	E3.3.2	The measures are considered likely to prevent the fishery from having a significant negative impact on marine ecosystems.
Outcome	*Pass*	

Rationale

As described in E3.1, the fishery is managed according to a Multi-Annual Plan (MAP), which aims to implement an ecosystem-based approach to fisheries management to minimize the negative impacts of fishing activities on the marine ecosystem. Additionally, as documented through this report, the herring and sprat fisheries in the Gulf of Riga are subject to management measures aimed at mitigating their impact on the marine ecosystem, such as the establishment of TACs, technical regulations, regionalization, request of scientific advice, and enforcement and monitoring activities, all designed to ensure sustainable fishing practices and protect the broader ecosystem.

References

N/A

Annex 1: External Peer Review report

Assessment and determination summary

Fishery name	**Denmark - Clupea harengus - Herring and Sprattus sprattus - Sprat - FAO 27, ICES 3.d.28.1 (Gulf of Riga)**
MarinTrust report code	**WF07**
Type 1 species (common name, Latin name)	*Herring (Clupea harengus) and sprat (Sprattus sprattus)*
Fishery location	*FAO 27, ICES 3.d.28.1 (Gulf of Riga)*
Gear type(s)	*Pelagic Trawl*
Management authority (country/state)	*EU, Estonian government, Latvian government*
Certification Body recommendation	*Approved*
FAPRG reviewer recommendation	Agree with CB determination

Summary of peer review outcomes

Summary *Provide any information about the fishery that the reviewers feel is significant to their decision. This summary is used by the Certification Body in the Fishery Assessment Report.*
The report is well-written, and are provided throughout to support scoring descions, all links to references are uptodate and working. Some comments are made below, where further clarification could be provided or explination for discrepensies. Peer review also reviewed the harmonisation pdf provided by MT which was completed as this whole assessment overlaps with a number of other fisheries. Some of the comments made here may not have been picked up on in a previous whole fishery assessment for this stock so should be recorded and incorporated at the next available review *if still relevant.
General comments on the draft report provided to the peer reviewer
There are a couple of gramatical errors, or formatting, editing errors - i.e., missing spaces, missing braket.

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

1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	See notes

2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	See notes
3. Are the scores in the following sections consistent with the MarinTrust requirements (i.e. do the scores reflect the evidence provided)?	Yes
Section M – Management Requirements	See notes
Category A Species	See notes
Category B Species	Yes
Category C Species	n/a
Category D Species	Yes
Section E – Ecosystem Impacts	Yes

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. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	Yes
Yes, the scoring within the report is consistent with the Marin Trust V3 standard for whole fishery assessment. The report is well-written, with references, accessible web links, and relevant figures and tables provided throughout to support scoring. Very few minor comments are made below, where further clarification could be provided. In regards to the MT methodology and associated guidance, the peer review believes stronger justification is needed to address MT guidance 1.2 specifically - "The approval of the fishery under assessment, in combination with the controls in place at a certified marine ingredients facility will together to mitigate the risk of sourcing IUU fishery raw material." - as it relates to the missreporting (or unreported) catch of herring and sprat.	
Certification Body response	
The misreporting catch of herring and sprat issue has been discussed for many years in this fishery. However, the assessor is not concern about IUU catch being used as raw material due the following: 1- As explainen in the respective cathegory A species, the uncertaty that the misreporting may cause in the stock assessment is considered in the analysis and the advice. 2-The Baltic Fisheries Assessmente Working Group, states that "In most recent years the	

level of misreporting is gradually decreasing due to scrapping of the fishing vessels and better monitoring system. Thus, in Latvia the trawl fishing fleet is currently almost three times smaller than it used to be, and, therefore it is considered that the fishing capacities now are more or less balanced with the fishing possibilities and no unallocated landings have been assumed since 2011. The level of misreporting in Estonian herring fishery has been estimated to be low "
3-Latvia and Estonia currently hold IUU fishing risk index scores of 1.9 and 2.09, respectively. This index evaluates the likelihood that a country is exposed to, and effectively responds to IUU fishing. It assigns scores ranging from 1 (indicating low risk and strong performance) to 5 (indicating high risk and weak performance). The index enables benchmarking of coastal states based on their vulnerability, the prevalence of IUU fishing, and their enforcement and monitoring responses.
4- The surveillance, control and enforcement section (M2.1) includes information about relevant tools and mechanisms in place to minimise IUU fishing activity, also evidence demostrates that the percentaje of suspected irregularies is very low, vessels are legally required to be tracked, and enforcement and control operations have not detected any unauthorized activity.

Considering all of the above information, assessor belives that the there is no subtancial evidence about IUU being used as raw material in this fishery. However some information has been addedd to the report to make it clearer.

2. Does the species categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	Yes

The species categorisation appears accurate; however, the table 1 catch composition % equal more than 100% - this should be explained as to why
furthermore, the justification provided touches on MT Guidance 1.1 (CITES IUCN etc.,), 1.3 (>0.1% rule), and 1.4 (Type 1 type 2 rules) - it doesn't mention how the assessor has considered 1.2 "No materials from illegal, unreported and unregulated (IUU) fishing activity shall be used as MarinTrust raw material." Given the misreporting of herring and sprat this should be metnioned and at the very least the auditor should direct the reader to relevant scoring where it is demonstrated that the "the controls in place at a certified marine ingredients facility will together to mitigate the risk of sourcing IUU fishery raw material."

Certification Body response

This was an error, numbers in table 1 are not %, there area average catch compositions in tonnes. This has been corrected.

About the misreporting issue, informations has been added to explain misreporting is not a concern about IUU fishing being a source of raw material. .

3. Is the scoring of the fishery consistent with the MarinTrust requirements, and clearly based on the evidence presented in the assessment report?	Yes

It is apparent that the Marin Trust whole fishery v3 assessment methodology and associated guidance have been followed.
Certification Body response
NA

3a. Are the “Category A Species” scores clearly justified?	Yes
Scoring of both Herring stock and Sprat stock is well scored and justified. Central baltic herring failed Catergory A scoring and was re-assessed and passed Catergory B scoring. Missreporting of both herring and sprat are reflected on in scoring A1.2 only, arguable this is better place in A1.1 but the MT guidance is not explicit on this. However there are a number of other places it should have been considered in the scoring but has not (see section M comments).	
Certification Body response	
This was an harmonized score and rationale.	

3b. Are the “Category B Species” scores clearly justified?	Yes
Central baltic herring is scored against Catergory B, having failed A - MT guidance 2.1.1 "If a species fails any of the Category A clauses, it should be re-assessed as a Category B species"	
Certification Body response	
NA	

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

3d. Are the “Category D Species” scores clearly justified?	Yes
The scoring is consistent with the MT guidance, reference are provided throughout and the links provided seem appropriate and up-to-date.	
Certification Body response	

NA

Are the scores in “Section M – Management Requirements” clearly justified?	No
The management scoring is well evidenced, and provides scoring justifications for both the Latvian management system and Estonian. However there is an notable absence of the issue of miss reporting, which here works in conjunction to MT guidance 1.2 to ensure MT scope is met i.e., no catch from IUU. Where the auditor could consider this in more detail is: M2.1. "Checks on the MarinTrust Applicant that they have procedures to identify and avoid catches from IUU vessels" and "An evaluation of the risk of IUU in the fishery and its impact on stock and ecosystem health and management" M2.2 and specifcally M2.2.2 "Determine the extent to which these measures are effective, looking in particular for any reports illustrating examples of failed enforcement." -- in M2.3 you provide examples of inforcement action - yet misreporting does provide some evidence on non-compliance, intentional or not, so why do we have 'faith' that the management systems in place will help discourage misreporting in future? M2.3 - specicially given the issue of misreporting more consideration should have been givien too "The catch recording and reporting system is sufficient for effective traceability of catches per vessel and supports the prevention of IUU fishing." - as it relates to the fishery under assessment, I note that the number of inspections carried out is for the entire baltic area - how many were from herring sprat operations? This paper seems to confirm it is an issue but makes no attempt to assess scale of impact - Using the Newcomb–Benford law to detect species misreporting in mixed pelagic catches | ICES Journal of Marine Science | Oxford Academic	
Certification Body response	
As explained in Section 1 of this report, there is no substantial evidence that IUU-caught fish is being used as raw material in this fishery. However, information on the low IUU fishing risk index for both countries has been added to complement Section M2.1. Regarding the peer reviewer comments on Sections M2.2 and M2.3: while the referenced reports do not provide specific information on this particular fishery, the information presented clearly demonstrates that the management systems in place contain all the key elements necessary for effective fisheries governance. ICES reports acknowledge that misreporting occurred in earlier years, but recent assessments indicate a clear decline in such practices. As noted in Section 1 of this report, Latvia has reported no unallocated landings since 2011, suggesting a strong alignment between reported and actual catches. Similarly, Estonia is reported to have a low level of misreporting, in addition to the low IUU fishing risk index, demostrates that this is not a matter of simply "having faith" that the management systems will deter misreporting in the future, it is evident that these systems are already functioning effectively.	

Are the scores in “Section E – Ecosystem Impacts” clearly justified?	Yes
This fishery is well managed in terms of its impacts on ETP and ecosystems. The gear type, pelagic trawl, doesn't interact with the seabed so habitat management is minimised. Scoring is well presented and referenced. The only suggestion is to revisit this scoring once the ecosystem impacts are better understood by ICES and other research groups, as clearly from longterm stock data, something is not working (either management system or poorly understood environmental drivers, or combination of both).	
Certification Body response	
NA	

Optional: General peer reviewer comments on the draft report
Certification Body response