



MarinTrust Standard V2

By-product Fishery Assessment Herring (*Clupea harengus*) in FAO 27.3, subdivisions 20-24 (Western Baltic herring)

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Herring, <i>Clupea harengus</i>
	Geographical area:	FAO Area 27, Northeast Atlantic
	Country of origin of the product:	Flag country: Denmark, Poland
	Stock:	FAO 27.3, subdivisions 20-24 (Western Baltic herring)
Date	7 October 2022	
Report Code	DNK35	
Assessor	Léa Lebechnech	
Country of origin of the product - PASS	Denmark (Flag country: Denmark, Poland)	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Scanbio Ingredients AS			
Country: Denmark			
Email address: pal.rostad@scanbio.com		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Léa Lebechnech	Matthew Jew	0,5 days	Surveillance 1
Assessment Period	To October 2022		

Scope Details	
Main Species	Herring, <i>Clupea harengus</i>
Stock	Herring (<i>Clupea harengus</i>) in subdivisions 20-24 (Western Baltic herring)
Fishery Location	FAO 27, Northeast Atlantic
Management Authority (Country/ State)	European Commission (EC), Danish Directorate of Fisheries (<i>Fiskeristyrelsen</i>), and Polish Fisheries Department (Department <i>Rybołówstwa</i>)
Gear Type(s)	Pelagic trawls and purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination of approval
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin Trust raw material. Western Baltic herring (<i>Clupea harengus</i>) is neither listed as Endangered or Critically Endangered on IUCN's Red List ("least concern"), nor listed in CITES appendices; therefore, herring is eligible for approval for use as Marin Trust by-product raw material.</p> <p>An EU Baltic Sea multiannual plan (MAP; EU, 2016) was established in 2016 and updated in 2019 (MAP; EU, 2019). It applies to herring in subdivisions 22–24, which is part of the distribution area of the WBSS stock. This plan is not adopted by Norway and thus not used as basis of the advice for this shared stock.</p> <p>As there is a management plan and reference points are defined for the stock, it has been assessed under Category C.</p> <p>Removals of the species are taken into consideration in the 2022 stock assessment, so it PASSES clause C1.1. However, the biomass is below B_{lim} reference point, and removals from Poland and Denmark are not negligible, so the stock FAILS clause C1.2.</p> <p>As per guidance when a stock fails category C, it is required to be assessed under category D and a PSA analysis was performed. With an average susceptibility score of 2.5 and average productivity of 1.71, the stock has passed the PSA.</p> <p>Therefore, Herring (<i>Clupea harengus</i>) in FAO 27.3, subdivisions 20–24, Western Baltic, is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified herring in Division 27.3, subdivisions 20-24 as Category C, the stock is subject to a specific management regime and reference points are defined.</p> <p>Fishery removals are considered in the stock assessment process. However, in its most recent stock assessment, the SSB is below $MSY B_{trigger}$, B_{pa}, and B_{lim}. Therefore, the stock does not pass Category C and the assessor correctly pursued a PSA analysis under Category D.</p> <p>The stock passes the PSA analysis with a productivity score of 1.71 and susceptibility score of 2.</p> <p>Herring in Division 27.3, subdivisions 20-24 passes and therefore should be approved under the MarinTrust Standard v.2.</p>
Notes for On-site Auditor
N/A

Species Categorisation

NB: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as an MarinTrust raw material.

IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category ¹	CITES Appendix 1 ²
Herring	<i>Clupea harengus</i>	ICES subdivisions 20-24, Western Baltic	European Commission (EC), Danish Directorate of Fisheries (<i>Fiskeristyrelsen</i>) and Polish Fisheries Department (Department <i>Rybołówstwa</i>)	D (Failed C)	LC	No

¹ <https://www.iucnredlist.org/>

² <https://cites.org/eng/app/appendices.php>

CATEGORY C SPECIES

In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

Clause C1 should be completed for each Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. Where a species fails this Clause, it should be assessed as a Category D species instead.

Species Name		Herring (<i>Clupea harengus</i>)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Yes
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	No
Clause outcome:			FAIL

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.

ICES advises that when the MSY approach and precautionary considerations are applied, there should be zero catch in 2023. This advice applies to the catch of western Baltic spring-spawning herring (WBSS) in subdivisions 20–24 and the eastern part of Subarea 4.

The most recent stock advice uses an age-based analytical assessment, multi-fleet SAM (ICES, 2022) that uses catches by fleet in the model and forecast. The input data used in the last stock assessment were the following: Two acoustic, two trawl, and indices from one larval survey (HERAS [A5092], GerAS/BIAS [A1588], IBTS/BITS Q1 [G1022/G2916], IBTS/BITS Q3–4 [G2829/G8863], and N20 [I2308, I7165]); catch statistics and corrections for historical area misreporting; including split for North Sea herring (NSAS)/WBSS in catches, HERAS, and IBTS, and split for Central Baltic Herring (CBH)/WBSS in GerAS. Discarding is considered to be negligible (Figure 1).

Catches

Ice:27.20-24_2022_17172_202255153901

Year	Catches in 1000 t
1991	190
1992	195
1993	185
1994	175
1995	155
1996	125
1997	115
1998	105
1999	100
2000	120
2001	105
2002	105
2003	80
2004	75
2005	90
2006	90
2007	70
2008	65
2009	70
2010	45
2011	30
2012	40
2013	45
2014	40
2015	40
2016	55
2017	45
2018	40
2019	25
2020	20
2021	15

Figure 1. Catches of Herring in FAO division 27.3, subdivisions 20-24, spring spawners.
Source ICES 2022.

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process, so it PASSES clause C1.1.

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.

Fishing pressure on the stock is below F_{MSY} and spawning-stock size is below $MSY B_{trigger}$, B_{pa} , and B_{lim} (Figure 2).

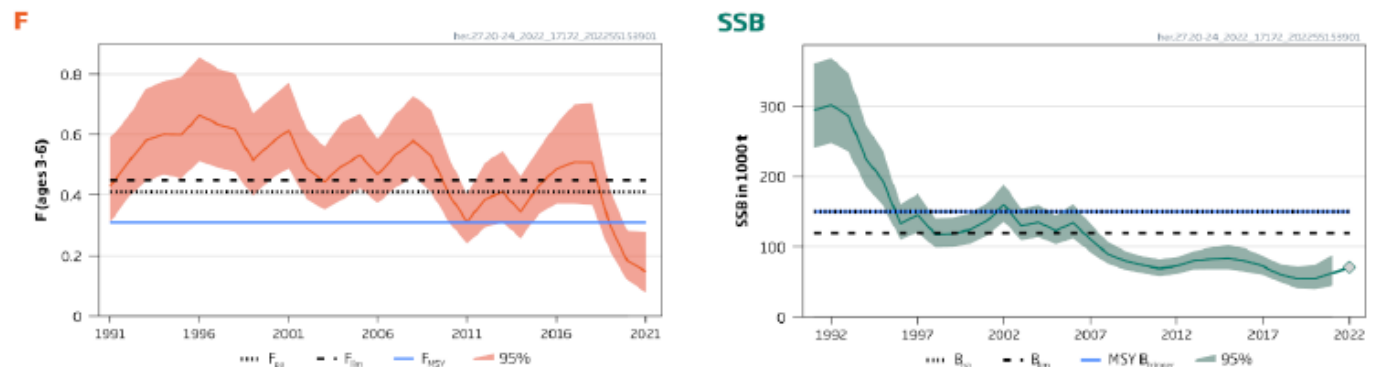


Figure 2. Herring in subdivisions 20–24, spring spawners. Left panel: Long-term fishing pressure (F) trends with target (F_{MSY} and F_{pa}) and limit reference points (F_{lim}). Right panel: Long-term spawning stock biomass (SSB) trends at spawning time is predicted for 2022.

Source: ICES 2022

Therefore, the species is considered, in its most recent stock assessment, to have a biomass below the limit reference point (or proxy), so it **FAILS** clause C1.2.

Catches from Poland and Denmark have not been negligible in the last 5 years, therefore the stock **FAILS**.

Consequently, as per guidance, it has been assessed under category D.

References

Lorance, P., Nedreaas, K., Fernandes, P., Kjellén, N. & Florin, A. 2015. *Clupea harengus*. The IUCN Red List of Threatened Species 2015: e.T155123A45074983: <https://www.iucnredlist.org/species/155123/45074983>

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

Links

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

CATEGORY D SPECIES

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

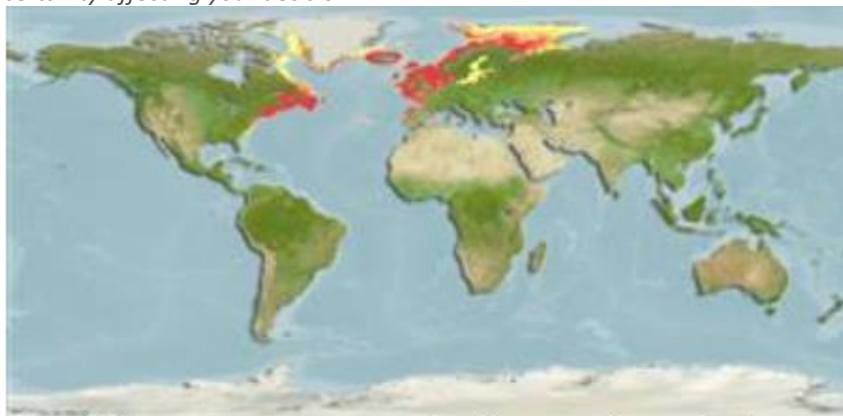
D1	Species Name	Herring (<i>Clupea harengus</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	2.5	2
	Average maximum age (years)	10.1	2
	Fecundity (eggs/spawning)	13,000-65,403	1
	Average maximum size (cm)	45	1
	Average size at maturity (cm)	20.5	1
	Reproductive strategy	Demersal Spawners	2
	Mean trophic level	3.4	3
	Average Productivity Score		1.71
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	Less than 25% of the stock occurs in the area fished	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Brackish benthopelagic; oceanodromous; depth 0-364 m, usually 0-200 m	3
	Selectivity of gear type	Species 1 to 2 times mesh size	3
	Post-capture mortality	Most dead or retained trawl tow >3 hours	3
	Average Susceptibility Score		2.5
	PSA Risk Rating (From Table D3)		Pass
	Compliance rating		PASS
	Further justification for susceptibility scoring (where relevant)		
	For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision		
			
This map was computer-generated and has not yet been reviewed. <i>Clupea harengus</i> AquaMaps Data sources: GBIF OBIS			
References			
Fish base. <i>Clupea harengus</i> Linnaeus, 1758. Atlantic herring: https://fishbase.mnhn.fr/Summary/SpeciesSummary.php?ID=24&AT=herring			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

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

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

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

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