MarinTrust Standard V2

By-product Fishery Assessment

Mackerel (*Scomber scombrus*),

FAO 27, ICES 1-8, 14 and 9.a (Northeast Atlantic and Adjacent Waters)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Mackerel (*Scomber scombrus*)
	Geographical area:	FAO 27 – Northeast Atlantic
	Country of origin of the product:	Denmark, Faroe Islands, Greenland, Iceland, Norway, UK, Russia
	Stock:	ICES subareas 1-8,14 and division 9.a (Northeast Atlantic and adjacent waters)
Date	May 2024	
Report Code	DNK25	
Assessor	Blanca Gonzalez	
Country of origin of the product - PASS	Denmark, Faroe Islands, Greenland, Iceland, Norway, UK, Russia	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): FF Skagen A/S, Thyborøn			
Country: Denmark			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Blanca Gonzalez	Sam Peacock	0.5	Re-approval
Assessment Period	May 2024 – May 2025		

Scope Details	
Main Species	Mackerel (*Scomber scombrus*)
Stock	ICES subareas 1-8,14 and division 9.a (Northeast Atlantic and adjacent waters)
Fishery Location	FAO 27 – Northeast Atlantic
Management Authority (Country/ State)	EU
Gear Type(s)	Pelagic trawl and purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with assessment outcome
Recommendation	PASS

Table 2. Assessment Determination

Assessment Determination
Mackerel (*Scomber scombrus)* was assessed as a category C species considering that it is a Least Concern species by the IUCN, it is not in included in any CITES Appendixes, and the stock is managed using annual quotas relative to established reference points. Mackerel in ICES subareas 1-8, 14 and division 9.a (Northeast Atlantic and adjacent waters) is subject to annual stock assessment by ICES Working Group on Widely Distributed Stocks (WGWIDE) The last assessment was published in September 2023 using catches data in the model. Fishing pressure on the stock is above F_{MSY}, but below F_{pa} and F_{lim}, , and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and $B_{lim.}$ Therefore, both clauses in the assessment were met. The mackerel by-product meets the Marin Trust requirements and it should be re-approved for use as a raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that this species is eligible for assessment under the MarinTrust byproduct assessment methodology, and that the stock falls into Category C. The most recent stock assessment was adequate to meet the requirements of C1.1, and biomass is currently estimated to be above the target reference point level, meeting the requirements of C1.2. Overall, the peer reviewer agrees that this stock should be approved as a source of byproduct raw material for MarinTrust certified facilities.
Notes for On-site Auditor
None

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]
Mackerel	*Scomber scombrus*	ICES subareas 1-8,14 and division 9.a (Northeast Atlantic and adjacent waters)	Yes	C	Least Concern[3]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
3 https://www.iucnredlist.org/species/170354/170089639

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

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

The clause is met considering that:

The mackerel in the Northeast Atlantic and adjacent waters (ICES subareas 1-8, 14 and division 9.a) most recent assessment was published in September 2023 by The International Council for exploration of the Sea (ICES) Working Group on Widely Distributed Stocks (WGWIDE). The assessment was carried out using an age-based analytical model (SAM) that uses catch data in the model, along with data from steel tagging data and RFID tagging data, and three survey indices: SSB index from the triennial egg survey, abundance indices from the IBTS survey and from the IESSNS survey. Thus, removals of the species are included in the stock assessment process (ICES 2023) (figure 1).

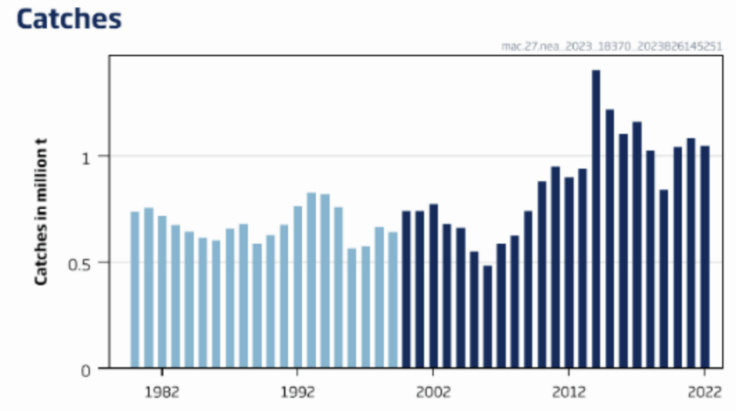

Figure 1. Mackerel in subareas 1-8, 14 and division 9.a (Northeast Atlantic and adjacent waters) since 1980. Catches prior to 2000 (light blue) have been down-weighted in the assessment because of the considerable underreporting suspected to have taken place in this period (ICES 2023).

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

The Clause is met considering that:

The 2023 mackerel assessment indicates that fishing pressure on the stock is above F_{MSY} but below F_{pa} and F_{lim} (figure 1), and spawning-stock size is above MSY $B_{trigger}$, B_{pa}, and B_{lim} (figure 2). The catch advice is that when the MSY approach is applied, catches in 2024 should be no more than 739,386 tonnes. (ICES 2023).

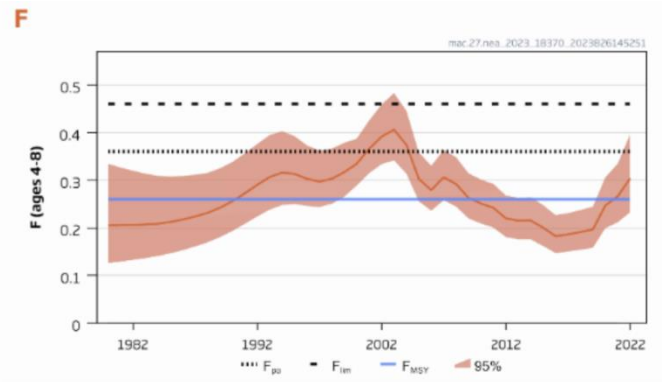

Figure 1. Mackerel in Plaice in in subareas 1-8, 14 and division 9.a (Northeast Atlantic and adjacent waters) fishing pressure above F_{MSY}, but below F_{pa} and F_{lim} (ICES 2023).

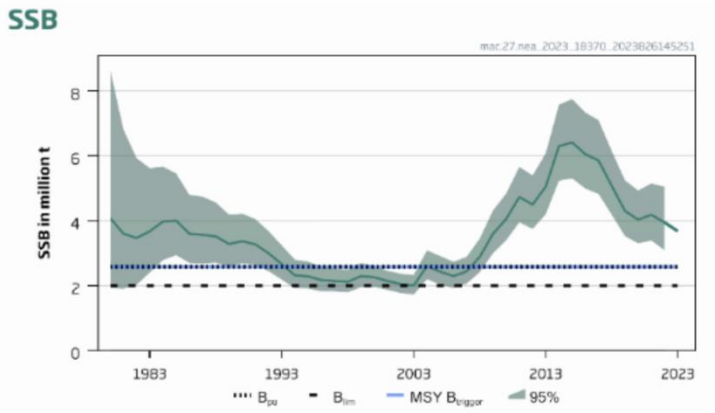

Figure 2. Spawning-stock size above MSY $B_{trigger}$, B_{pa}, and B_{lim} for Mackerel in Plaice in in subareas 1-8, 14 and division 9.a (Northeast Atlantic and adjacent waters) (ICES 2023).

References

ICES (2023). Mackerel (Scomber scombrus) in subareas 1–8 and 14, and in Division 9.a (Northeast Atlantic and adjacent waters). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.21856533.v1

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	NA	
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)		
	Average maximum age (years)		
	Fecundity (eggs/spawning)		
	Average maximum size (cm)		
	Average size at maturity (cm)		
	Reproductive strategy		
	Mean trophic level		
		Average Productivity Score	
	Susceptibility Attribute	**Value**	**Score**
	Availability (area overlap)		
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		
	Selectivity of gear type		
	Post-capture mortality		
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
	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*		
References			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

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

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the 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 with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

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

D4	Species Name		
	Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements		
	D4.1	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.	
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.	
Outcome:			

Evidence

D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

References

Links	
MarinTrust Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01