



MarinTrust Standard V2

By-product Fishery Assessment

Mackerel in ICES Subareas 1-8 & 14, and Division 9.a (Norway)

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Mackerel (<i>Scomber scombrus</i>)
	Geographical area:	ICES Subareas 1-8 and 14, and Division 9a
	Country of origin of the product:	Norway
	Stock:	Mackerel in the Northeast Atlantic and Adjacent Waters
Date	January 2023	
Report Code	NOR01	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Norway	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Karmsund Protein AS; TripleNine Vedde AS; Prima Protein AS; Pelagia AS			
Country: Norway			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Kate Morris	0.2	Re-approval
Assessment Period	January 2023 – January 2024		

Scope Details	
Main Species	Mackerel (<i>Scomber scombrus</i>)
Stock	Mackerel in the Northeast Atlantic and Adjacent Waters
Fishery Location	ICES Subareas 1-8 and 14, and Division 9a
Management Authority (Country/ State)	EU, UK, Norway
Gear Type(s)	Pelagic trawl, purse seine, others
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
<p>Mackerel has been categorised by the IUCN Red List as a species of Least Concern, and it does not appear in the CITES appendices. Mackerel in the Northeast Atlantic and adjacent waters are managed using annual quotas relative to established reference points and therefore was assessed under Category C.</p> <p>This mackerel stock is subject to an annual stock assessment by ICES, the most recent of which was conducted in 2022. This assessment incorporated landings data and discard estimates and concluded that SSB is currently substantially above the target and limit reference points. Therefore, this by-product meets the MT requirements and should be re-approved for use as a raw material.</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment here is the Atlantic Mackerel (<i>Scomber scombrus</i>) fishery, pursued by fishing vessels in FAO fishing area 27, ICES area 1-4, 9a and 14. Mackerel is managed to species-specific reference points, so for this assessment, mackerel is assessed as a category C species. Mackerel meets the requirements detailed in C1.</p> <p>All species scoring tables have been completed by the auditor with sufficient evidence presented to support their final determination.</p> <p>The peer review supports the auditor’s recommendation to PASS the ICES 1-8, 9a and 14, mackerel stock under the Marin Trust IFFO RS v2.0 by-fishery standard to produce fishmeal and fish oil.</p>
Notes for On-site Auditor

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 a 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	<i>Scomber scombrus</i>	Northeast Atlantic and Adjacent Waters	Yes	C	Least Concern ³	No

¹ <https://www.iucnredlist.org/>

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

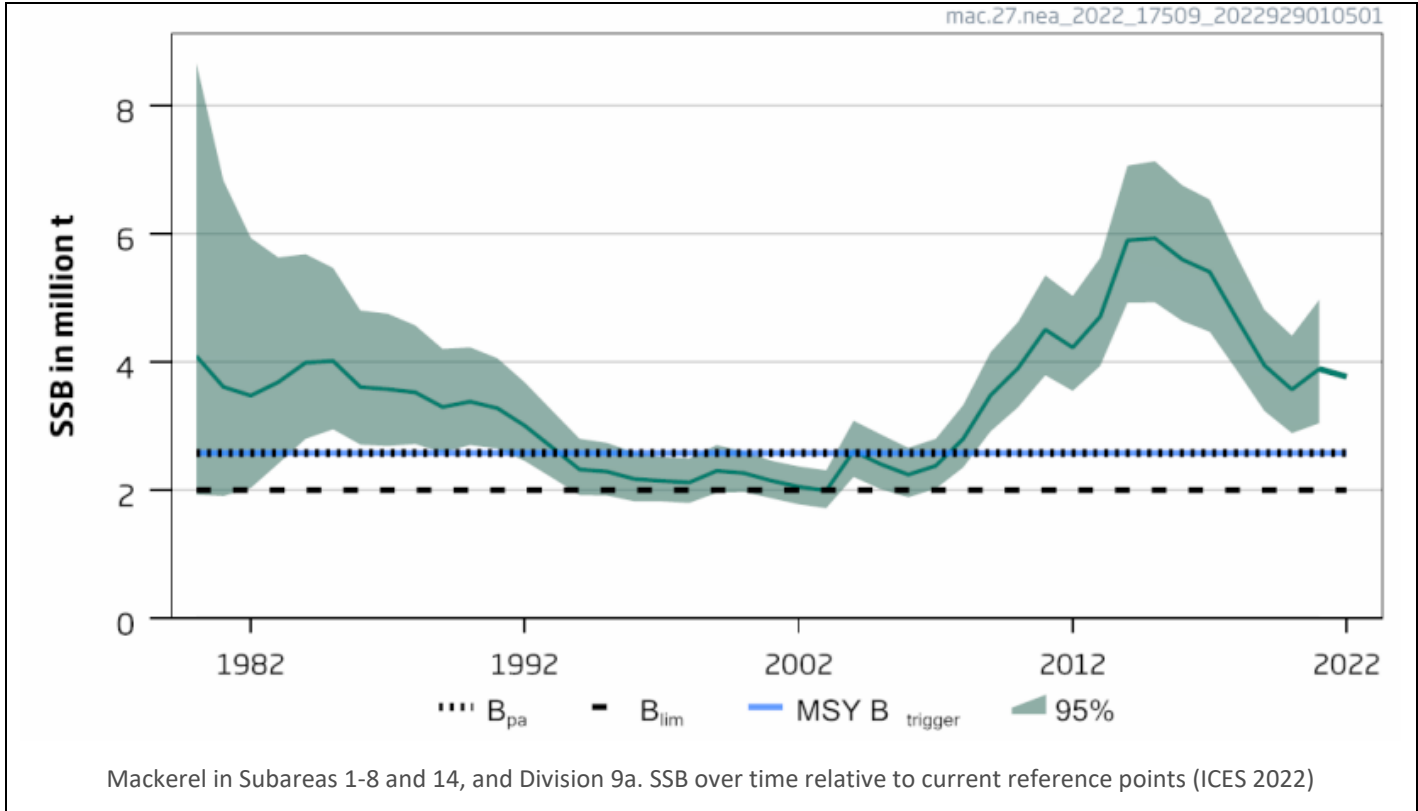
³ <https://www.iucnredlist.org/species/170354/18207463>

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	
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
<p>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.</p> <p>A stock assessment for mackerel in the Northeast Atlantic is conducted annually by the ICES Working Group on Widely Distributed Stocks (WGWIDE). The outcomes of the most recent stock assessment were published in September 2022. The assessment used an age-based analytical model which incorporated catches in both the model and the forecast. Partial discarding estimates were also included, although discards are assumed to be negligible overall. The September 2022 catch advice includes a section discussing the quality of the stock assessment, which noted that only preliminary catch data was available for the Russian Federation, along with some other potential sources of uncertainty (ICES 2022). However, there is no indication that the outcomes of the assessment are likely to be unreliable overall. Fishery removals are included in the assessment and C1.1 is met.</p> <p>C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.</p> <p>The 2022 catch advice provides an indication of the status of the stock relative to established reference points. The target reference points $MSY B_{trigger}$ and B_{pa} are set at 2,580,000t. The limit reference point B_{lim} is set at 2,000,000t. The catch advice projected that SSB at spawning time in 2022 would be 3,769,326t. The advice also notes that “spawning-stock size is above $MSY B_{trigger}$, B_{pa}, and B_{lim}” (ICES 2022). Spawning stock size is therefore estimated to be substantially larger than both the target and limit reference points, and C1.2 is met.</p>			



References

ICES (2022). Mackerel (*Scomber scombrus*) in subareas 1-8 and 14 and division 9.a (the Northeast Atlantic and adjacent waters). In Report of the ICES Advisory Committee, 2022. ICES Advice 2022, mac.27.nea. <https://doi.org/10.17895/ices.advice.7789>

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	n/a	
	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) <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
	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	