MarinTrust Standard V2

By-product Fishery Assessment

Red Mullet (*Mullus surmuletus*), FAO 27, ICES 4, 7.d and 3.a (North Sea, Eastern English Channel, Skagerrak and Kattegat)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Red mullet (*Mullus surmuletus*)
	Geographical area:	FAO 27 – Northeast Atlantic
	Country of origin of the product:	France
	Stock:	ICES 4, 7.d and 3.a (North Sea, Eastern English Channel, Skagerrak and Kattegat)
Date	July 2024	
Report Code	FRA49	
Assessor	Blanca Gonzalez	
Country of origin of the product - PASS	France	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Concarneau			
Country: France			
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	Surveillance 1
Assessment Period	July 2024 – July 2025		

Scope Details	
Main Species	Red mullet (*Mullus surmuletus*)
Stock	ICES 4, 7.d and 3.a (North Sea, Eastern English Channel, Skagerrak and Kattegat)
Fishery Location	FAO 27 – Northeast Atlantic
Management Authority (Country/ State)	EU
Gear Type(s)	Danish seine, Otter trawl, Others
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	PASS

Table 2. Assessment Determination

Assessment Determination
Red mullet (*Mullus surmuletus*) was assessed as a category D species considering that it is a Data Deficient species by the IUCN, it is not in included in any CITES Appendixes, and no reference points are defined for this stock. In the Productivity-Susceptibility Analysis (PSA) the red mullet awarded an average productivity score of 1.42 and an average susceptibility score of 2.5 passing against Table D3, indicating that the stock is not vulnerable to the fisheries in North Sea, Eastern English Channel, Skagerrak and Kattegat. The red mullet by-product meets the Marin Trust requirements and it should be remained approved for use as a raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that this red mullet stock should be assessed under Category D. The assessor has completed the PSA correctly and the peer reviewer agrees that the assigned scores result in a PASS outcome on Table D3. For this reason, the byproduct should remain approved for use as a raw material.
Notes for On-site Auditor
There are no concerns that requires attention from the on-site assessor

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]
Red mullet	*Mullus surmuletus*	ICES 4, 7.d and 3.a (North Sea, Eastern English Channel, Skagerrak and Kattegat)	No	D	Data Deficient[3]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
3 https://www.iucnredlist.org/species/198674/45143890

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		**NA**	
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.	
	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.	
			Clause outcome:

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.

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.

References

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

Red mullet (*Mullus surmuletus*)

Productivity Attribute	Value	Score
Average age at maturity (years)	3.2 [1]	1
Average maximum age (years)	12.9 [1]	2
Fecundity (eggs/spawning)	19,640-83,448 [2]	1
Average maximum size (cm)	40 [1]	1
Average size at maturity (cm)	20.6 [1]	1
Reproductive strategy	Broadcast spawner [1]	1
Mean trophic level	3.5 [1]	3
	Average Productivity Score	**1.42**
Susceptibility Attribute	**Value**	**Score**
Availability (area overlap)	<10% overlap	1
Encounterability (the position of the stock/species within the water column relative to the fishing gear)	High overlap	3
Selectivity of gear type	Individuals < size at maturity are frequently caught	3
Post-capture mortality	Retained	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

Availability: Red mullet distributes in Eastern Atlantic: Western Norway, English Channel (rare in North Sea) to Dakar, Senegal and the Canary Islands, including the Mediterranean and the Black Sea [1], and the ICES 3.a, 4 and 7.d regions (Skagerrak and Kattegat, Southern and Central North Sea, Eastern English Channel) only overlaps with less than 10% of the species distribution (figure 1).

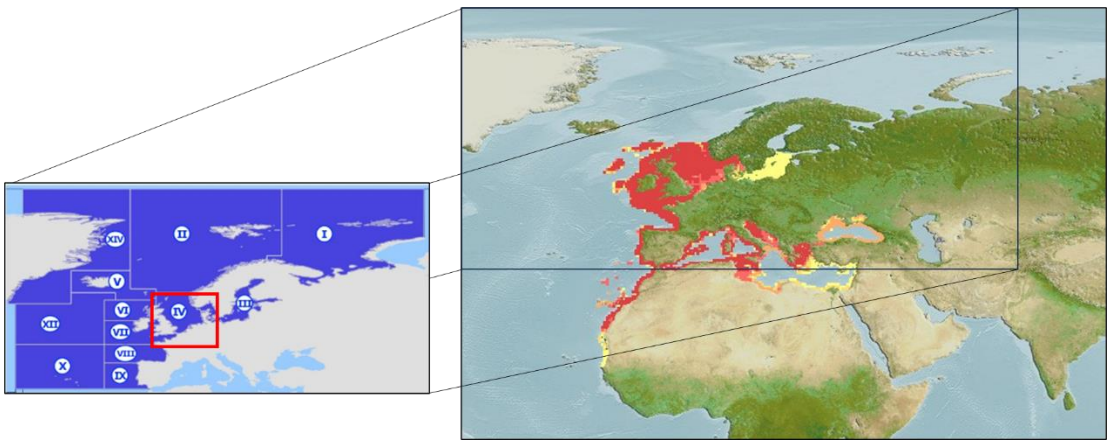

Figure 1. Red mullet distribution [1] and in red square the ICES 3.a, 4 and 7.d regions under assessment [3].

	Encounterability: red mullet is a target species [4]. **Selectivity of gear type:** The French fishery targeting striped red mullet is conducted by bottom trawlers using a mesh size of 70–99 mm in the eastern English Channel and in the southern North Sea [4]. **Post-capture mortality**: Retained [4].

References

1 https://fishbase.se/summary/Mullus-surmuletus.html

2 Amin, A. M., Madkour, F. F., Abu-El-Regal, M. A., & Moustafa, A. A. (2016). Reproductive biology of Mullus surmuletus (Linnaeus, 1758) from the Egyptian Mediterranean Sea (Port Said). Int. Journal of Env. Science and Engineering (IJESE), 7, 1-10

3 https://fish-commercial-names.ec.europa.eu/fish-names/fishing-areas/fao-area-27_en

4 ICES (2023). Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22643143.v1

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	NA	
	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