



## MarinTrust Standard V2

# By-product Fishery Assessment, FRA49, *Red mullet (Mullus surmuletus), France*

### MarinTrust Programme

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**Table 1 Application details and summary of the assessment outcome**

Fishery Under Assessment	Species:	Red mullet ( <i>Mullus surmuletus</i> )
	Geographical area:	FAO 27, Atlantic Northeast
	Country of origin of the product:	France
	Stock:	ICES 3.a, 4, 7.d (Skagerrak and Kattegat, North Sea, Eastern English Channel)
Date	July 2023	
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): Biocerval			
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	1	Initial
Assessment Period	July 2023-July 2024		

Scope Details	
Main Species	Red mullet ( <i>Mullus surmuletus</i> )
Stock	ICES 3.a, 4, 7.d (Skagerrak and Kattegat, North Sea, Eastern English Channel)
Fishery Location	FAO 27, Atlantic Northeast
Management Authority (Country/ State)	European Parliament and of the Council of the European Union
Gear Type(s)	Danish seine, Otter trawl, others
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	APPROVE

## Table 2. Assessment Determination

Assessment Determination
<p>Red mullet (<i>Mullus surmuletus</i>) was assessed as a category D species considering that it is a Least Concern species by the IUCN, it is not included in any CITES Appendixes, and there is not a species-specific management regime in place.</p> <p>In the Productivity – Susceptibility Analysis (PSA) red mullet was awarded an average productivity score of 1.28 and an average susceptibility score of 3, and it passed against Table D3, indicating that red mullet is not vulnerable to this fishery.</p> <p>The red mullet by-product meets the Marine Trust requirements; therefore, its approval is recommended for use as a raw material.</p>
Fishery Assessment Peer Review Comments
<p>The assessor has correctly categorised and assessed the byproduct under Category D. The scores awarded in the PSA lead to an outcome of Pass, and the peer reviewer agrees that the byproduct should be approved for use as a raw material.</p>
Notes for On-site Auditor
<p>It is important to let the client know that given the high susceptibility of the species to fisheries in the Greater North Sea ecoregion (which includes the three stocks assessed) the International Council for the Exploitation of the Sea (ICES) advises to consider a precautionary approach given the lack of information about the current level of exploitation; thus catches should be no more than 1950 tonnes in each of the years 2022 and 2023, and all catches are assumed to be landed since discarding is considered negligible (ICES 2021).</p> <p>ICES. (2021). Striped red mullet (<i>Mullus surmuletus</i>) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, mur.27.3a47d. <a href="https://ices-library.figshare.com/articles/report/Striped_red_mullet_Mullus_surmuletus_in_Subarea_4_and_divisions_7_d_and_3_a_North_Sea_eastern_English_Channel_Skagerrak_and_Kattegat_/18639065">https://ices-library.figshare.com/articles/report/Striped_red_mullet_Mullus_surmuletus_in_Subarea_4_and_divisions_7_d_and_3_a_North_Sea_eastern_English_Channel_Skagerrak_and_Kattegat_/18639065</a></p>

## 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 <sup>1</sup>	CITES Appendix 1 <sup>2</sup>
Red mullet	<i>Mullus surmuletus</i>	ICES 3.a, 4, 7.d (Skagerrak and Kattegat, North Sea, Eastern English Channel)	No	D	Least concern <sup>3</sup>	No

<sup>1</sup> <https://www.iucnredlist.org/>

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

<sup>3</sup> <https://www.iucnredlist.org/species/198674/42691804>

## 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		
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>	
	<b>C1.1</b>	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.
	<b>C1.2</b>	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.
		<b>Clause outcome:</b>
<p><b>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.</b></p> <p><b>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.</b></p>		
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 ( <i>Mullus surmuletus</i> )	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	3.2 <sup>1</sup>	1
	Average maximum age (years)	6 <sup>3</sup>	1
	Fecundity (eggs/spawning)	19,640 – 83,448 <sup>2</sup>	1
	Average maximum size (cm)	27 <sup>1</sup>	1
	Average size at maturity (cm)	16.1 <sup>1</sup>	1
	Reproductive strategy	Spawner <sup>1</sup>	1
	Mean trophic level	3.5 <sup>1</sup>	3
	<b>Average Productivity Score</b>		<b>1.28</b>
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	>30% <sup>1</sup>	3
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	High overlap with fishing gear <sup>4</sup>	3
	Selectivity of gear type	Individuals < size at maturity are frequently caught <sup>4</sup>	3
	Post-capture mortality	Retain <sup>4</sup>	3
	<b>Average Susceptibility Score</b>		<b>3</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>PASS</b>
	<b>Compliance rating</b>		<b>PASS</b>
	<b>Further justification for susceptibility scoring (where relevant)</b>		
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
<b>References</b>			
1 <a href="https://www.fishbase.se/summary/SpeciesSummary.php?ID=1327&amp;AT=red+mullet">https://www.fishbase.se/summary/SpeciesSummary.php?ID=1327&amp;AT=red+mullet</a>			
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 Kutsyn, D. N. (2022). Age, Growth, Maturation, and Mortality of Red Mullet Mullus barbatus (Mullidae) of Crimea, the Black Sea. Journal of Ichthyology, 62(2), 244-253.			
4 ICES. 2021. Striped red mullet ( <i>Mullus surmuletus</i> ) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, mur.27.3a47d. <a href="https://doi.org/10.178">https://doi.org/10.178</a>			
<i>Standard clauses 1.3.2.2</i>			

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			
<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>			
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.		
<b>Outcome:</b>			
<b>Evidence</b>			
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.			
<b>References</b>			
<b>Links</b>			
MarinTrust Standard clause		1.3.2.2, 4.1.4	
FAO CCRF		7.5.1	
GSSI		D.5.01	