



## MarinTrust Standard V2

# By-product Fishery Assessment European sardine (*Sardina pilchardus*) in FAO 27, ICES 7 (Southern Celtic Sea, English Channel)

**MarinTrust Programme**

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

Fishery Under Assessment	Species:	European sardine ( <i>Sardina pilchardus</i> )
	Geographical area:	FAO 27, ICES 7
	Country of origin of the product:	France
	Stock:	Sardine ( <i>Sardina pilchardus</i> ) in ICES 7 (southern Celtic Seas and the English Channel)
Date	16 October 2023	
Report Code	FRA48	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	PASS	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Bioceval SAS - Concarneau			
Country: France			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification/NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ana Elisa Almeida Ayres	Léa Lebechnech	0.5	Surveillance 2
Assessment Period	October 2023 – October 2024		

Scope Details	
Main Species	European sardine ( <i>Sardina pilchardus</i> )
Stock	Sardine ( <i>Sardina pilchardus</i> ) in ICES 7 (southern Celtic Seas and the English Channel)
Fishery Location	FAO 27, ICES 7
Management Authority (Country/ State)	European Commission (EC) / France Direction des pêches maritimes et de l'aquaculture (DPMA)
Gear Type(s)	Pelagic trawls, purse seine and others
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination
Recommendation	<b>APPROVED</b>

**Table 2. Assessment Determination**

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as MarinTrust raw material. European sardine (<i>Sardina pilchardus</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, European sardine (<i>Sardina pilchardus</i>) is eligible for approval for use as MarinTrust by-product raw material.</p> <p>ICES claims it is not aware of any agreed precautionary management plan for sardine in this area and could not assess the stock, because reference points are undefined<sup>1</sup>. Thus, the stock was assessed under category D.</p> <p>The stock was awarded a Productivity score of 1.00 and a Susceptibility score of 2.5, leading to a "Pass" rating against Table D3 of the Productivity-Susceptibility Analysis – PSA.</p> <p>Therefore, European sardine (<i>Sardina pilchardus</i>) in FAO 27, ICES 7 (southern Celtic Seas and the English Channel) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified European sardine (<i>Sardina pilchardus</i>) in FAO 27, ICES 7 (southern Celtic Seas and the English Channel) as Category D, because the stock does not have defined reference points are defined.</p> <p>With a Productivity score of 1 and a Susceptibility score of 2.5, the species passes the PSA risk-rating (Table D3).</p> <p>In conclusion, European sardine (<i>Sardina pilchardus</i>) in FAO 27, ICES 7 (southern Celtic Seas and the English Channel) should be approved under the MarinTrust Standard v2.3.</p>
Notes for On-site Auditor

<sup>1</sup> [https://ices-library.figshare.com/articles/report/Sardine\\_Sardina\\_pilchardus\\_in\\_Subarea\\_7\\_southern\\_Celtic\\_Seas\\_and\\_the\\_English\\_Channel\\_/19772449](https://ices-library.figshare.com/articles/report/Sardine_Sardina_pilchardus_in_Subarea_7_southern_Celtic_Seas_and_the_English_Channel_/19772449)

## 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>2</sup>	CITES Appendix 1 <sup>3</sup>
European sardine	<i>Sardina pilchardus</i>	Sardine ( <i>Sardina pilchardus</i> ) in ICES 7 (southern Celtic Seas and the English Channel)	European Commission (EC), France Direction des pêches maritimes et de l'aquaculture (DPMA)	D	NT	No

<sup>2</sup> <https://www.iucnredlist.org/>

<sup>3</sup> <https://cites.org/eng/app/appendices.php>

## 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	European sardine ( <i>Sardina pilchardus</i> )	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	2	1
	Average maximum age (years)	7	1
	Fecundity (eggs/spawning)	156,525	1
	Average maximum size (cm)	19	1
	Average size at maturity (cm)	11.8	1
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.1	1
	<b>Average Productivity Score</b>		<b>1</b>
	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)	Target	3
	Selectivity of gear type	Retained	3
	Post-capture mortality	Retained	3
	<b>Average Susceptibility Score</b>		<b>2.5</b>
	<b>PSA Risk Rating (From Table D3)</b>		<b>Pass</b>
	<b>Compliance rating</b>		<b>Pass</b>
	<p><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></p> <p>According to Froese and Pauly (2023), European sardine (<i>Sardina pilchardus</i>) is found in northeast Atlantic: Iceland (rare) and north sea, southward to Bay de Gorée, Senegal; Mediterranean (common in the western part and in Adriatic Sea, rare in the eastern part), Sea of Marmara and Black Sea (Figure 1).</p>		



Computer Generated **Native Distribution Map** for *Sardina pilchardus* (European pilchard), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario

Currently known distribution: Northeast Atlantic: Iceland (rare) and North Sea, southward to Bay de Gor | Oe, Senegal. Mediterranean (common in the western part and in Adriatic Sea, rare in the eastern part), Sea of Marmara and Black Sea.

[Native Range](#) | [Year 2050 Native Range](#) | [Suitable Habitat](#) | [Point Map](#)



Note: Distribution range colours indicate degree of suitability of habitat which can be interpreted as probabilities of occurrence.

<p>Relative probabilities of occurrence</p> <ul style="list-style-type: none"> <li>0.80 - 1.00</li> <li>0.60 - 0.79</li> <li>0.40 - 0.59</li> <li>0.20 - 0.39</li> <li>0.01 - 0.19</li> </ul>	<p><b>Explore:</b></p> <p><a href="#">Native range map</a></p> <p><a href="#">Suitable habitat map</a></p> <p><a href="#">Point map</a></p> <p><a href="#">Show mapping parameters</a></p> <p><a href="#">Create your own map</a></p>	<p><b>Download native range data:</b></p> <p><a href="#">csv format</a></p> <p><a href="#">NetCDF (view in Godiva)</a></p> <p><a href="#">About AquaMaps</a></p>	<p><b>More species info:</b></p> <p><a href="#">List of countries</a></p> <p><a href="#">List of FAO areas</a></p> <p><a href="#">List of ecosystems</a></p> <p><a href="#">Comments &amp; Corrections</a></p>	<p><b>Session no. 56</b></p> <p><a href="#">-Close window-</a></p> <p>Please use <a href="#">-Close window-</a> link just above to exit instead of the browser's X button.</p>
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Figure 1. Distribution of European sardine (*Sardina pilchardus*) [AquaMaps, 2019].

**References**

AquaMaps (2019). Computer generated distribution maps for *Sardina pilchardus* (European pilchard), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. [https://www.aquamaps.org/receive.php?type\\_of\\_map=regular&map=cached](https://www.aquamaps.org/receive.php?type_of_map=regular&map=cached)

Froese, R. and D. Pauly. Editors. 2023. FishBase. World Wide Web electronic publication. <https://www.fishbase.se/summary/sardina-pilchardus.html>

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.

<b>D3</b>		<b>Average Susceptibility Score</b>		
		<b>1 - 1.75</b>	<b>1.76 - 2.24</b>	<b>2.25 - 3</b>
<b>Average Productivity Score</b>	<b>1 - 1.75</b>	PASS	PASS	PASS
	<b>1.76 - 2.24</b>	PASS	PASS	TABLE D4
	<b>2.25 - 3</b>	PASS	TABLE D4	TABLE D4