



MarinTrust Standard V2

By-product Fishery Assessment

*European sardine, FAO Area 37, GFCM
GSA 22*

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 Area 37, General Fisheries Commission for the Mediterranean (GFCM) Geographical Sub-Area (GSA) 22
	Country of origin of the product:	Spain
	Stock:	GFCM GSA 22
Date	August 2022	
Report Code	ESP10	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Spain	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Sarval Bio-Industries			
Country: Spain			
Email address: maria.mato@sarval.es		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Jose Peiro Crespo	0.25	Surveillance
Assessment Period	August 2022		

Scope Details	
Main Species	European sardine (<i>Sardina pilchardus</i>)
Stock	GFCM GSA 22
Fishery Location	FAO Area 37 GFCM GSA 22
Management Authority (Country/ State)	EU & GFCM
Gear Type(s)	Purse seine & pelagic trawl
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination
Recommendation	Approved

Table 2. Assessment Determination

Assessment Determination
European sardine is categorised on the IUCN Red List as Least Concern and does not appear in the CITES appendices. Sardine in General Fisheries Commission for the Mediterranean (GFCM) Geographical Sub-Area (GSA) 22 has no established biomass-based reference points ¹ , and therefore was assessed under Category D. The stock was awarded a productivity score of 1.14 and a susceptibility score of 2, leading to the stock achieving a Pass on Table D3. As sardine in GFCM GSA 22 meets the MT byproduct requirements, it should be approved for use as a raw material.
Fishery Assessment Peer Review Comments
The assessor correctly classified the Sardine in General Fisheries Commission for the Mediterranean (GFCM) Geographical Sub-Area (GSA) 22 as category D, as no biomass-based reference points have been established for the stock. The stock passes the Productivity Susceptibility Analysis under Category D and is therefore approved under the Marin Trust v 2.0 by-products standard.
Notes for On-site Auditor

¹ See Table 4, Page 47, General Fisheries Commission for the Mediterranean. Report of the twenty-second session of the Scientific Advisory Committee on Fisheries, online, 22–25 June 2021.
<https://www.fao.org/3/cb7622en/cb7622en.pdf>

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 ²	CITES Appendix 1 ³
European sardine	<i>Sardina pilchardus</i>	GFCM GSA 22	No	D	Least Concern ⁴	No

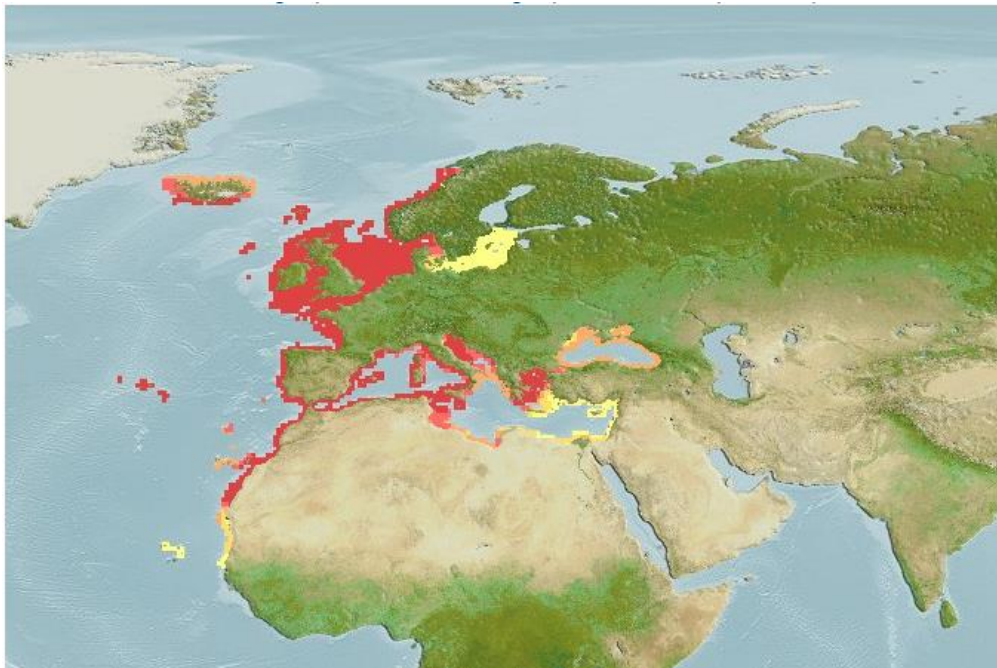
² <https://www.iucnredlist.org/>

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

⁴ <https://www.iucnredlist.org/species/198580/15542481>

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 years	1
	Average maximum age (years)	7 years	1
	Fecundity (eggs/spawning)	50,000 – 490,000	1
	Average maximum size (cm)	27.5cm	1
	Average size at maturity (cm)	11.8cm	1
	Reproductive strategy	Broadcast spawner	1
	Mean trophic level	3.1	2
	Average Productivity Score		1.14
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	<10%	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Targeted – high overlap	3
	Selectivity of gear type	Juveniles rarely caught	1
	Post-capture mortality	Retained	3
	Average Susceptibility Score		2
	PSA Risk Rating (From Table D3)		PASS
	Compliance rating		PASS
	Further justification for susceptibility scoring (where relevant)		
			
	Computer-generated map of European sardine distribution, from Fishbase https://www.fishbase.se/summary/sardina-pilchardus.html		

References	
Fishbase, European sardine. https://www.fishbase.se/summary/sardina-pilchardus.html	
<i>Standard clauses 1.3.2.2</i>	

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

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		n/a	
	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	