MarinTrust Standard V2

By-product Fishery Assessment, MAR004- *European pilchard (Sardina pilchardus), FAO 34 South zone, Zone C.*

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	European pilchard (*Sardina pilchardus*)
	Geographical area:	FAO 34, Atlantic, Eastern Central
	Country of origin of the product:	Morocco
	Stock:	Zone C

Date	September 2023
Report Code	MAR004
Assessor	Blanca Gonzalez
Country of origin of the product - PASS	Morocco
Country of origin of the product - FAIL	None

Application details and summary of the assessment outcome			
Company Name(s): Cibel I, Cibel II, Copelit, KB Fish, Laayoune, Nouvelle Ougala, Pescasud SARLAU, Protein and Oil Industry, Sovapec, Tantasar			
Country: Morocco			
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	September 2023 – September 2024		

Scope Details	
Main Species	European pilchard (*Sardine pilchardus*)
Stock	Zone C
Fishery Location	FAO 34 – Atlantic, Eastern Central
Management Authority (Country/ State)	Fishery Committee for Eastern Central Atlantic (CECAF), Morocco
Gear Type(s)	Purse seine and pelagic trawl
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	Approve

Table 2. Assessment Determination

Assessment Determination
European pilchard (*Sardina pilchardus*) stock was assessed as a category C species considering that it is a Least Concern species by the IUCN, it is not in included in any CITES Appendixes, and the FAO Working Group on the Assessment of Small Pelagic Fish off Northwest Africa meets annually to update stock assessments and provide advice for management for the main small pelagic species and stocks in the region. The last stock assessment for this species was carried out in 2022 and results indicates that the stock for Zone C is not fully exploited, thus, the stock is in good condition and fishing pressure can be increased without affecting the sustainability. Catches have been recorded since 1990 and this data are included in the stock assessment; meanwhile biomass is above the reference point. The European pilchard Byproduct meets the Marin Trust requirements and it should remain approved for use as a raw material.

Fishery Assessment Peer Review Comments
The report has been conducted correctly and the peer reviewer agrees that the outcome indicates that this 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]
European pilchard	*Sardina pilchardus*	FAO 34 – Atlantic Eastern Central, Zone C	Yes	C	Least Concern [3]	No

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[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
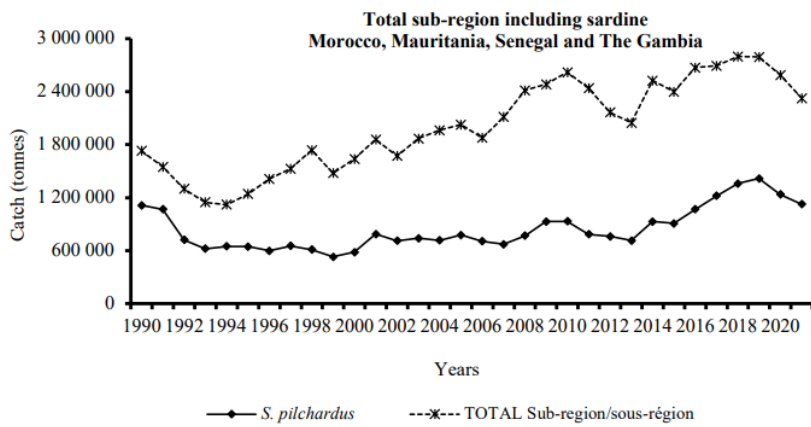[3] https://www.iucnredlist.org/species/198580/15542481

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		European pilchard (*Sardina pilchardus*)	
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

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.

The European pilchard catches have been recorded since 1990 (figure 1). In the last stock assessment carried out in 2022 by the Small pelagic fish Working Group North of the Fishery Committee for the Eastern Central Atlantic (CECAF), about a 9% decrease on sardine catch was detected from 2020 (1.2 million tonnes) to 2021 (1.1 million tonnes). This information was used to run a dynamic version of the Schaefer model, which is the one traditionally applied for the stock assessment. (FAO 2022)

Figure 1. European pilchard catches from 1990 to 2021 in the subregion (FAO 2022)

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.

The stock is considered not full exploited in 2021. Projections show that the stock could sustain an increase in catches since the ratio between the estimated biomass for the last year of the series and the biomass corresponding to the target reference point (F0.1) is 135%. The working group recommends not to exceed a level of 550 000 tonnes. (FAO 2022).

References

FAO 2022. Fishery Committee for the Eastern Central Atlantic. Small pelagic fish Working Group North. https://www.fao.org/3/cc3286b/cc3286b.pdf	
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	NA		
	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) *For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision*			
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		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