MarinTrust Standard V2

By-product Fishery Assessment
European sardine (ICES Divisions 8.c, 9.a)

Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	European sardine (*sardina pilchardus*)
	Geographical area:	FAO 27 Northeast Atlantic
	Country of origin of the product:	Portugal and Spain
	Stock:	ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)
Date	March 2022	
Report Code	BP034	
Assessor	Conor Donnelly	
Country of origin of the product - PASS	Portugal and Spain	
Country of origin of the product - FAIL		

Application details and summary of the assessment outcome			
Company Name(s): Marine Ingredients Denmark; FFSkagen, TripleNine			
Country: Denmark			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Conor Donnelly	Geraldine Criquet	0.5	Surveillance 1
Assessment Period	To March 2022		

Scope Details	
Main Species	European sardine (*Sardina pilchardus*)
Stock	ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)
Fishery Location	FAO 27 Northeast Atlantic
Management Authority (Country/ State)	EU (CFP)
Gear Type(s)	Purse seine (99%) and 'other gear types'
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination
Recommendation	**APPROVE**

Table 2. Assessment Determination

Assessment Determination
Note on country of origin of product: Only Portugal and Spain fish this stock so these are identified as the countries of origin of the product.

If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin Trust raw material. Sardine (*Sardina pilchardus*) does not appear as Endangered or Critically Endangered on the IUCN Red List, nor does it appear in the CITES appendices; therefore, sardine (*Sardina pilchardus*) in ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters) is eligible for approval for use as Marin Trust raw material.

There is a species-specific management regime in place for this stock including a stock assessment with reference points defined and a TAC set and therefore, the stock was assessed under Category C.

In the last stock assessment, removals are considered, and the stock is above B_{lim} and MSY $B_{trigger}$, therefore the fishery PASSES clauses C1.1 and C1.2.

Sardine (*Sardina pilchardus*) in ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters) is APPROVED for the production of fishmeal and fish oil under the Marin Trust Standard v.2.

Fishery Assessment Peer Review Comments

The assessor correctly classified sardine (*Sardina pilchardus*) in ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters) as category C, this stock is managed, and reference points are defined.

Fishery removals are considered in the stock assessment process. The most recent stock assessment shows that the stock is above B_{lim} and MSY $B_{trigger}$. Therefore, the stock is considered to have a biomass above the limit reference point.

Sardine (Sardina pilchardus) in ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters) passes both Clauses C1.1 and C1.2 and is therefore approved under the Marin Trust Standard v.2.

Notes for On-site Auditor
None.

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]
Sardine	*Sardina pilchardus*	ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	EU (CFP)	C	NT (Europe)	No

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

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	Sardine (*Sardina pilchardus*) ICES Divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	
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.	Yes
	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.	Yes
	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 stock is assessed through an age-based analytical assessment (Stock Synthesis) that uses catches in the model and in the forecast (ICES, 2021). Input data includes commercial catches; international landings, ages from catch sampling. Fishery removals of the species in the fishery under assessment are included in the stock assessment process and the species **PASSES** clause C1.1.

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.

Biomass reference points are defined for this stock and in its most recent assessment the stock is above its limit reference point, B_{lim}, and also MSY $B_{trigger}$ (see figure below). Therefore, the stock has a biomass above the limit reference point and **PASSES** clause C1.2.
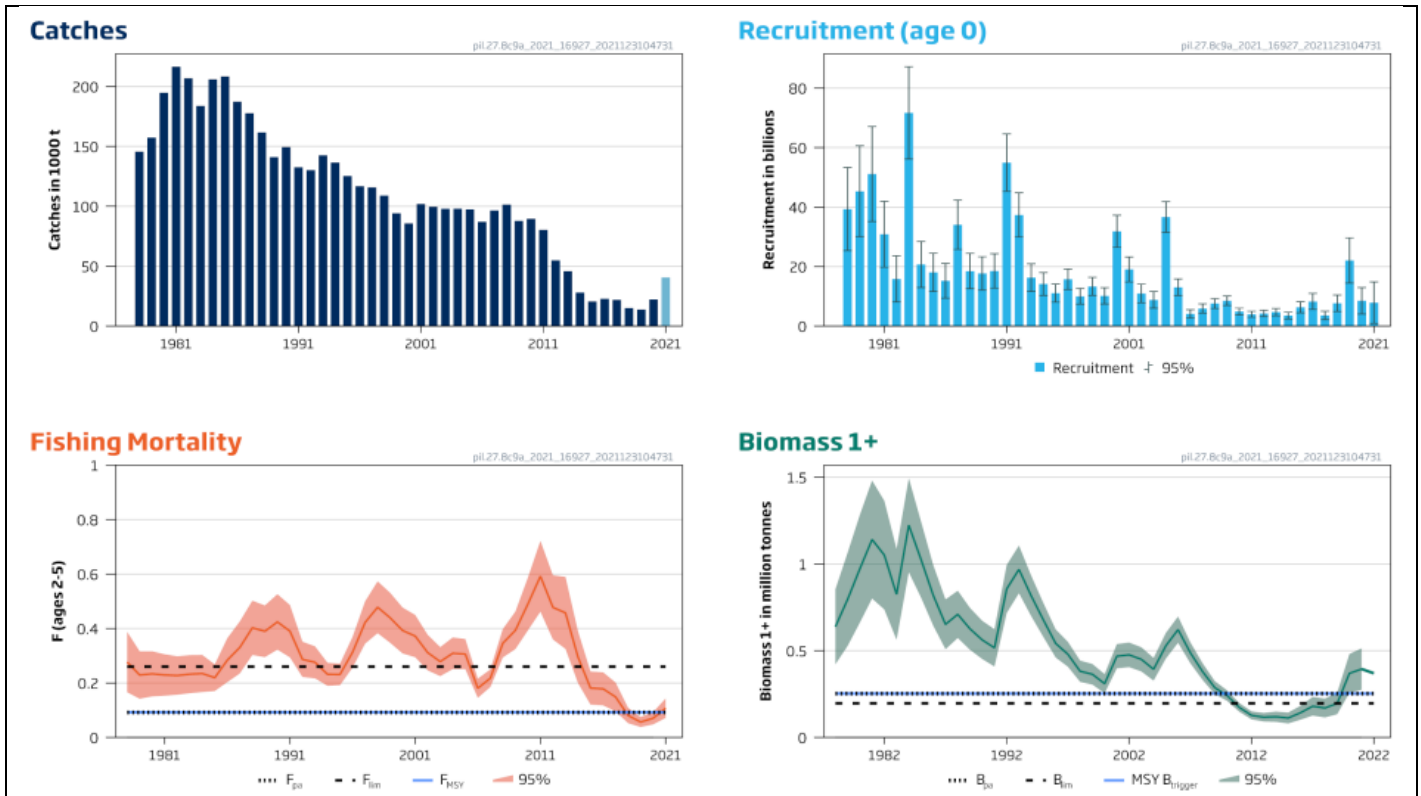
FIGURE 1. SARDINE IN DIVISIONS 8.C AND 9.A. SUMMARY OF THE STOCK ASSESSMENT. IN THE CATCH PLOT THE **2021** LIGHTER BLUE BAR IS A PRELIMINARY ESTIMATION. THE CURRENT REFERENCE POINTS REFLECT THE LOW PRODUCTIVITY REGIME SINCE **2006** (ICES, 2021).

References
ICES. 2021. Sardine (*Sardina pilchardus*) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, pil.27.8c9a. https://doi.org/10.17895/ices.advice.7816

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

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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		
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)			
References			
Standard clauses 1.3.2.2			

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		
	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

Links	
MarinTrust Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01