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IFFO RS  
Global Standard for Responsible Supply  
of Marine Ingredients

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# Global Standard for Responsible Supply of Marine Ingredients Fishery Assessment Methodology and Template Report V2.0



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<b>Fishery Under Assessment</b>	<b>Sardine (European pilchard) <i>Sardina pilchardus</i> FAO 27 ICES Divisions 8c &amp; 9a</b>
<b>Date</b>	June 2020
<b>Report Code</b>	2020-85
<b>Assessor</b>	<b>Virginia Polonio</b>
<b>Stock Pass</b>	<b>PASS</b>
<b>Stock Fail</b>	

<b>Application details and summary of the assessment outcome</b>				
<b>Name:</b> Sarval				
<b>Address:</b>				
<b>Country:</b> Spain		<b>Zip:</b>		
<b>Tel. No.:</b>		<b>Fax. No.:</b>		
<b>Email address:</b>		<b>Applicant Code</b>		
<b>Key Contact:</b>		<b>Title:</b>		
<b>Certification Body Details</b>				
<b>Name of Certification Body:</b>		SAI Global Ltd		
<b>Assessor Name</b>	<b>Peer Reviewer</b>	<b>Assessment Days</b>	<b>Initial/Surveillance/Re-approval</b>	<b>Whole fish/ By-product</b>
Virginia Polonio	Geraldine Criquet	0.5	SURV 2	By-product
<b>Assessment Period</b>	To June 2020			

Scope Details	
Management Authority (Country/State)	EU and Spain
Main Species	Sardine (European pilchard) <i>Sardina pilchardus</i>
Fishery Location	FAO 27 ICES Divisions 8c & 9a
Gear Type(s)	Pelagic trawl and purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with determination
Recommendation	<b>APPROVED</b>

Assessment Determination
<p>The stock status in the ICES areas 8c and 9a has been above limits in previous years. National quotas and effort limitations have contributed to a reduction in fishing mortality of 90% since 2011. In 2020, the sardine fishery was closed until 3 May in Spain and until 31 May in Portugal. ). According to a bilateral agreement between Portugal and Spain (Despacho 5713-A/2020 [Ministério do Mar, 2020]; BOE-A-2020-4947 [Ministerio de Agricultura, Pesca y Alimentación, 2020]) the fishery will be managed in 2020 according to the harvest control rule, HCR12. The forecast for 2021 uses the assumption that catch in 2020 corresponds to 19,106 tonnes, the value given by the application of harvest control rule HCR12.</p> <p>The biomass of age 1 and older fish (biomass 1+ or B1+) is above MSY Btrigger for the first time since 2009. Recruitment in 2019 is the highest since 2004 and above the long-term geometric mean. Fishing mortality has been declining since 2012 and is the lowest in the time-series, but still above <math>F_{MSY}</math>.</p> <p>Sardine (NE Atlantic, European stock) is listed as near threatened on the IUCN Red list (accessed June 2020) and is not currently listed by CITES.</p> <p>Therefore, Sardine in the area ICES Divisions 8c and 9a is <b>APPROVED</b> by SAIG assessor for the production of fishmeal and fish oil under the IFFO-RS v 2.0 by-products standard.</p>
Peer Review Comments
APPROVED
Notes for On-site Auditor

Note: This table should be completed for whole fish assessments only.

### Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	<i>Sardina pilchardus</i>	N/A	<b>PASS</b>	
Category D				

[List all Category A and B species. List approximate total % age of landings which are Category C and D species; these do not need to be individually named here]

## HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

### Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

### By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The ‘% landings’ column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

## SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the ‘target’ or ‘main’ species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the ‘bycatch’ or ‘minor’ species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

**Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).**

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The ‘stock’ column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The ‘management’ column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: 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 an IFFO RS raw material. This applied to whole fish as well as by-products.

**TYPE 1 SPECIES (Representing 95% of the catch or more)**

**Category A:** Species-specific management regime in place.

**Category B:** No species-specific management regime in place.

**TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)**

**Category C:** Species-specific management regime in place.

**Category D:** No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Sardine / Pilchard	<i>Sardina pilchardus</i>	FAO 27 ICES Divisions 8c & 9a	N/A	EU/Spain	C

## CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment. 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. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		Sardine (European pilchard) <i>Sardina pilchardus</i>	
C1	<b>Category C Stock Status - Minimum Requirements</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.	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
<b>Clause outcome:</b>			<b>PASS</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>Commercial catches (international landings, ages from catch sampling); annual acoustic spring survey indices (ages from PELAGO and PELACUS [1996-2019]), triennial spawning-stock biomass (SSB) indices (PT DEPM and SP-DEPM); triennial stock weights and maturity data from DEPM (PT-DEPM and SPDEPM [1997-2017]), interpolated for other years; natural mortalities based on the Gislason formula have been included in the stock assessment model.</p> <p>Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and consequently the fishery <b>PASSES</b> clause C1.1</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> <p>The biomass of age 1 and older fish (biomass 1+ or B1+) is above MSY Btrigger for the first time since 2009. Recruitment in 2019 is the highest since 2004 and above the long-term geometric mean. Fishing mortality has been declining since 2012 and is the lowest in the time-series, but still above FMSY. (R2).</p>			
<p><b>Figure. 1 .</b> Sardine in divisions 8.c and 9.a. Summary of the stock assessment. Fishing mortality and biomass are indicated with 95% confidence intervals. The current reference points reflect the low productivity regime since 2006. (R2)</p>			

ICES assesses that fishing pressure on the stock is above  $F_{MSY}$ , but below  $F_{pa}$  and  $F_{lim}$ . The biomass 1+ is above  $MSY$   $B_{trigger}$ ,  $B_{pa}$ , and  $B_{lim}$ .

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy) and consequently the fishery **PASSES** clause C1.2.

#### References

**R1.** Cook, R., Fernandes, P., Florin, A., Lorance, P. & Nedreaas, K. 2015. *Sardina pilchardus*. The IUCN Red List of Threatened Species 2015: e.T198580A45075369. Downloaded on 18 June 2020.

**R2.** ICES. 2020. Sardine (*Sardina pilchardus*) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, pil.27.8c9a. <https://doi.org/10.17895/ices.advice.6064>.

*Standard clauses 1.3.2.2*