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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.



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Fishery Under Assessment	European pilchard/Sardine <i>Sardina pilchardus</i> FAO 37 Mediterranean GSA 7
Date	June 2020
Report Code	2020-260
Assessor	Virginia Polonio
Stock Pass	PASS
Stock Fail	

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

Scope Details	
Management Authority (Country/State)	GFCM & national (Spain and Portugal)
Main Species	European pilchard / Sardine <i>Sardina pilchardus</i>
Fishery Location	FAO 37 Mediterranean GSA 17-18
Gear Type(s)	Purse seiners, Pelagic trawlers
Outcome of Assessment	
Peer Review Evaluation	Agree with determination
Recommendation	APPROVE

Assessment Determination
<p>Stock assessment in the General Fisheries Commission for the Mediterranean (GFCM) area of application is often conducted by management units, based on Geographical Sub Areas (GSAs). This method does not ensure that the whole stock is assessed, since stocks may cover several different management units.</p> <p>In some cases, when there is scientific evidence of a stock spreading through different GSAs, as well as information on species from different GSAs, existing information is combined across GSAs; then defined as a “joint stock assessment of a shared stock”.</p> <p>The assessment covers the areas GSA 17 and 18, even though some genetics different have been identified, if suggests that some of the genetic homogeneity observed could be apparent and the identification of a subtle structuring in sardine population could be limited by technical difficulties and by the incomplete knowledge of molecular mechanisms. In light of these considerations and according to the fact that most of the Italian vessels registered in GSA 18 fish in GSA 17, even though landings occur in GSA18, it was decided to merge the two GSAs and thus carry out an assessment for sardine in GSA 17-18</p> <p>Harvest and exploitation rates have shown increasing trends however, catches are decreasing, biomass is slightly increasing and recruitment is still at low levels but it has shown some stability in its trend. Therefore because of current biomass is above Blim, the fishery achieves a pass in clause C1.1 and C1.2.</p> <p>European pilchard is currently listed as a species of least concern in the Mediterranean assessment and globally on the IUCN Red List (accessed June 2020) and is not currently listed on CITES appendices of threatened species. (R1 & R2).</p> <p>Having said that, Sardine in the area GSA 17-18 is APPROVED 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

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	European pilchard <i>Sardina pilchardus</i>	N/A	PASS	
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
European pilchard/ Sardine	<i>Sardina pilchardus</i>	FAO 37 Mediterranean GSA 17-18 (Adriatic sea)	N/A	Species-specific management regime (EU, GFCM & national)	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		European pilchard / Sardine <i>Sardina pilchardus</i>	
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
Evidence:			
<p>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.</p> <p>Commercial catch data are used in the assessment. Catch numbers at age (in thousands) for the entire GSA17-18 have been included as parameters of the SAM model used in the last stock assessment. Further, catch numbers at age (in thousands) for the acoustic survey in GSA 17 West + GSA 18 West-East were also included as biomass estimations.</p> <p>Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery PASSES clause C1.1. (R3)</p>			
<p>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.</p> <p>Reference points were established in the benchmark of 2015. Reference points related to biomass and fishing mortality have been used in the last stock assessment for this stock where the information correspond to the update dataset; time series: 1975 – 2018. Features: i) Croatia and Albania reported new landings, ii) Italy updated ALK from 2002 to 2014, iii) Model parameters refined to obtain best fit. The revised sardine dataset scenario was not run due to lack of time. The group agreed to use the updated assessment mentioned as the basis of the advice, pending the final closure of the new benchmark.</p> <p>Therefore, Blim was set up at 125,318 and Bpa at 250,636 th. tonnes. Current biomass has been calculated at 157,251th. tonnes. Related fishing mortality, exploitation rate (E) was set at 0.4 following Paterson model. The current fishing mortality was estimated at 1.529 and E was above the limit being calculated as 0.683 and so the stock status was considered in overexploitation with relative intermediate biomass.</p> <p>However, current biomass is above Blim and consequently the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). (R3)</p> <p>Therefore, the species is considered, in its most recent stock assessment, to be above reference point (or proxy) and the fishery PASSES clause C1.2.</p>			
References			
<p>R1. Di Natale, A., Molinari, A., Oral, M., Kada, O. & Golani, D. 2011. <i>Sardina pilchardus</i>. The IUCN Red List of Threatened Species 2011: e.T198580A9039349. Downloaded on 16 June 2020.</p> <p>R2. Tous, P., Sidibé, A, Mbye, E., de Morais, L., Camara, Y.H., Adeofe, T.A., Munroe, T., Camara, K., Cissoko, K., Djiman, R., Sagna, A. & Sylla, M. 2015. <i>Sardina pilchardus</i>. The IUCN Red List of Threatened</p>			

Species 2015:e.T198580A15542481. <https://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T198580A15542481.en>. Downloaded on 16 June 2020.

R3. Angelini S. et al. 2019. Stock Assessment Form Small Pelagics Reference Year: 2018. Reporting Year: 2019. International Standard Statistical Classification for Aquatic Animals and Plants (ISSCAAP).

Standard clauses 1.3.2.2