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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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Fishery Under Assessment	Pacific chub mackerel FAO 87 (<i>Scomber japonicus</i>)
Date	October 2019
Assessor	Jim Daly

Application details and summary of the assessment outcome

Name: Sarval				
Address:				
Country: Spain		Zip:		
Tel. No.:		Fax. No.:		
Email address:		Applicant Code		
Key Contact:		Title:		
Certification Body Details				
Name of Certification Body:		SAI Global Ltd		
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval	Whole fish/ By-product
Jim Daly	Vito Romito	0.5	Surveillance 2	By-product
Assessment Period	2019			

Scope Details

Management Authority (Country/State)	Subsecretaría de Recursos Pesqueros of the Ministry of Foreign Commerce, Industrialization, Fisheries and Competitiveness (formerly Ministerio de Recursos Naturales y Energéticos).
Main Species	Pacific chub mackerel
Fishery Location	Eastern & Central Pacific (ECP) FAO 87
Gear Type(s)	Purse seine
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	N/A
Peer Review Evaluation	Agree
Recommendation	Pass

Assessment Determination

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. Pacific chub mackerel (*Scomber japonicus*) does not appear as Endangered or Critically Endangered on the IUCN Red List, nor does it appear in the CITES appendices; therefore, the species is eligible for approval for use as IFFO-RS raw material.

No stock assessment has been conducted since 2000 and there is currently no information on stock status. Three acoustic surveys have been recently conducted (March and November 2018, March 2019), providing information on abundance and biomass. Reported removals from the fishery (total of 80,000t annually in recent years) have been of predominantly sexually mature individuals. A total biomass (Pacific chub mackerel) was estimated (Nov 2018 (acoustic survey)) of 999,507t. Fishery removals of Pacific chub mackerel (*S. japonicus*) in the assessment area are considered so the stock **PASSES** Clause C1.1.

The most recent estimated spawning stock biomass (SSB) is above Blim; therefore, Pacific chub mackerel (*S. japonicus*) in the assessment area **PASSES** Clause C1.2.

A recent report (INAPESCA 2019) advised a minimum landing size of 28 cm (fork length) and a modification of the fishing ban season. The new proposed fishing ban period will be from 17.02 – 23.03 and from 01.10-30.11.

In order to be approved, each stock assessed must pass both Clause C1.1 and C1.2; therefore: Pacific chub mackerel (FAO 87) is approved for use as by-product under the IFFO-RS Standard v 2.0

Peer Review Comments

Biomass estimates for all small pelagic species (Nov 2018 data) was calculated at 1,490,713t corresponding to 6.8 billion fish, an increase on figures reported from the March 2018 survey. Pacific chub mackerel was the dominant species with an estimated biomass (Nov 2018 data) of 999,507t; representing 67% of total biomass for all pelagic fish.

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, the species passes Clause C 1.1.

The species is considered, in its most recent stock assessment, to have a biomass above limit reference point (or proxy) and passes Clause C1.2.

The peer reviewer agrees that Pacific chub mackerel (FAO 87) should be approved for use as by-product under the IFFO-RS Standard v 2.0

Notes for On-site Auditor

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)
Category C	Pacific chub mackerel (<i>Scomber japonicus</i>)	N/A	PASS

HOW TO COMPLETE THIS ASSESSMENT REPORT

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

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
Pacific Chub Mackerel	<i>Scomber japonicus</i>	Pacific Ocean (East, Central)	N/A	Subsecretería de Recursos Pesqueros	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		Pacific chub mackerel <i>Scomber japonicus</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
C1.1	The National Institute of Fisheries of Ecuador (INP or INAPESCA) assessed the stock (acoustic survey) in 2019 within the assessment area (Figure 1):		

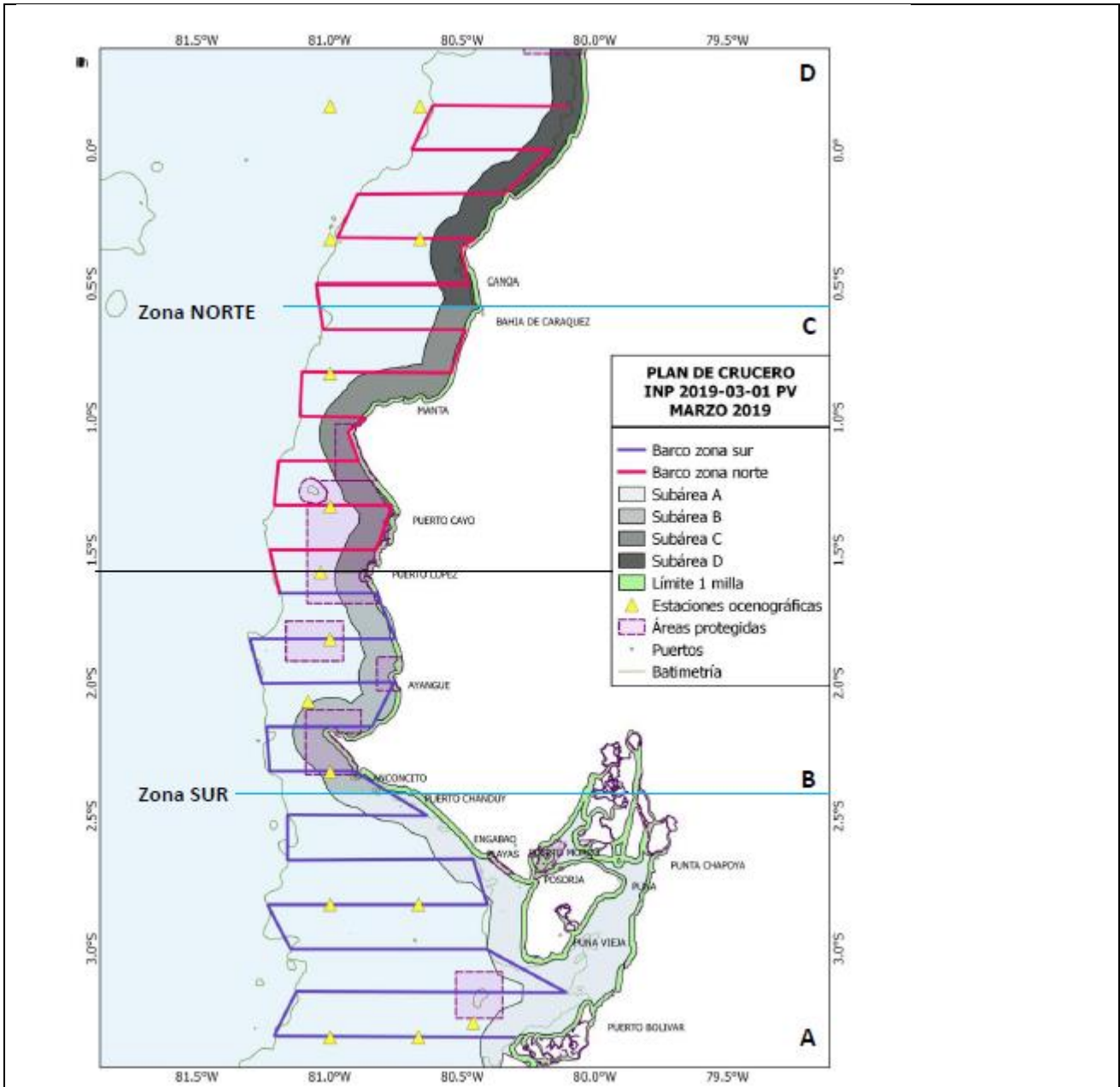


Figure 1 Small pelagic acoustic survey area (INP 2019) **R4**

The final report for the acoustic survey conducted in 2019 has not been published at the time of writing this report. Two acoustic surveys conducted in March and November 2018 yielded the following estimates:

Table 1: Pacific chub mackerel results of 2018 acoustic surveys (INAPESCA 2018) **R2**

Date	Biomass (t)	Abundance (millions)
March	265,714	556
November	999,507	2,800

Biomass estimates for all small pelagic species (Nov 2018 data) was calculated at 1,490,713t corresponding to 6.8 billion fish, an increase on figures reported from the March 2018 survey. Pacific chub mackerel was the dominant species with an estimated biomass (Nov 2018 data) of 999,507t; representing 67% of total biomass for all pelagic fish.

Other information on fishery removals is collected by INP and includes data on landings and biological parameters from samples taken (size, sex, length, weight, age).

Fishery removals of the species in the fishery under assessment are included in the stock assessment process, the species passes Clause C 1.1.

C1.2

No stock assessment has been conducted since 2000. The 2000 stock assessment used a virtual population analysis (VPA) with catch data by age, fishing mortality in the last year and natural mortality (estimated using the equation of Pauly and the equation of Beverton-Holt). No information about uncertainty was provided in the 2000 assessment report.

Previous reports on stock status (2014) noted Spawning Stock Biomass (SSB) as being below the reference point proxy. INP has since corresponded with stakeholders on findings following publication of the 2018 acoustic survey results:

‘Recent captures of this stock have been around 80,000t of sexually mature (28-32cm) individuals. These captures are the result of improved recruitment to the fishery and are probably the result of the stock recovering from a period (prior to 2014) of overfishing coupled with improved environmental conditions.’

INP also state that:

‘as a small pelagic species, Chub mackerel, like others, is vulnerable to adverse environmental changes (availability of food, water temperature, chlorophyll levels) that accompany El Niño and other ocean events. These parameters affect distribution of stocks and their availability in the fishery.’

The species is considered, in its most recent stock assessment, to have a biomass above limit reference point (or proxy) and passes Clause C1.2.

References

R1 Fishsource Pacific chub mackerel Distribution https://www.fishsource.org/stock_page/2280

R2 INAPESCA 2018: Estimacion hidroacustica de la abundancia y biomasa de los principales peces pequeños pelagicos en el Ecuador y su distribucion geoespacial. Marzo 2018 <http://www.institutopesca.gob.ec/wp-content/uploads/2018/01/CRUCERO-18-03-01PV-RESULTADO-FINAL.pdf>

R3 INAPESCA. 2019a. COMPORTAMIENTO REPRODUCTIVO DE LAS ESPECIES PELÁGICAS PEQUEÑAS. Proceso de Investigación de Recursos Acuáticos y su Ambiente. http://www.institutopesca.gob.ec/wp-content/uploads/2018/01/Reporte_Biologico_Veda.pdf

R4 INAPESCA 2019: Crucero de Prospeccion Hidroacústico y Pesca Comprobatoria con Barcos Pesqueros Comerciales INP Informe No. 2019-03-01: <http://www.institutopesca.gob.ec/wp-content/uploads/2018/01/Plan-de-Crucero-Marzo-2019-final.pdf>

R5 Fishsource Pacific Chub Mackerel Ecuador: https://www.fishsource.org/stock_page/2280