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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	Chub Mackerel (<i>Scomber japonicus/colias</i>) FAO 34 Morocco
Date	October 2019
Assessor	Jim Daly

Application details and summary of the assessment outcome				
Name: Laayoune Protein				
Address:				
Country: Morocco		Zip:		
Tel. No.:		Fax. No.:		
Email address:		Applicant Code:		
Key Contact:		Title:		
Certification Body Details				
Name of Certification Body:		SAI Global Ltd		
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval	Whole fish/ By-product
Jim Daly	Vito Romito	0.5	Re-approval	By-product
Assessment Period	2019			

Scope Details			
Management Authority (Country/State)		Ministre de l'Agriculture et de la Pêche maritime (Maroc); FAO	
Main Species		Chub mackerel <i>Scomber japonicus/colias</i>	
Stock:		FAO 34	
Fishery Location		Eastern Central Atlantic	
Gear Type(s)		Purse seine	
Outcome of Assessment			
Overall Outcomes:		Outcome	Clause(s) failed
1	Chub mackerel <i>Scomber japonicus</i>	PASS	NONE
Peer Review Evaluation		APPROVE	
Recommendations		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. 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 an IFFO-RS raw material.

Fishery removals of Chub mackerel (*S. japonicus/colias*) in the assessment area are considered so the stock **PASSES** Clause C1.1.

Bcur/BBmsy is estimated at 107%. The most recent estimated spawning stock biomass (SSB) is above Blim; therefore, Chub mackerel (*S. japonicus/colias*) in the assessment area **PASSES** Clause C1.2.

In order to be approved, each stock assessed must pass both Clause C1.1 and C1.2; therefore: Chub mackerel (FAO 34) **is approved for use** as by-product under the IFFO-RS Standard v 2.0

Peer Review Comments

Catch data used by the Working Group were the total catch series for the period 1999-2016. Fishery removals of Chub mackerel (*S. japonicus/colias*) in the assessment area are considered so the stock **PASSES** Clause C1.1.

Bcur/BBmsy is estimated at 107%. The most recent estimated spawning stock biomass (SSB) is above Blim; therefore, Chub mackerel (*S. japonicus/colias*) in the assessment area **PASSES** Clause C1.2.

The Peer Reviewer agrees that Chub mackerel (FAO 34) **should be approved for use** as by-product under the IFFO-RS Standard v 2.0

Notes for On-site Auditor

[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.

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
Chub mackerel	<i>Scomber japonicus/colias</i>	FAO 34	n/a	Ministre de l’ Agriculture et de la Pêche maritime (Maroc). FAO	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		Chub mackerel <i>Scomber japonicus/colias</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

C1.1:

The latest report to be published (2018) if from the FAO WORKING GROUP is from the 2017 fishery. The assessment covers Coastal areas of Northwest Africa:

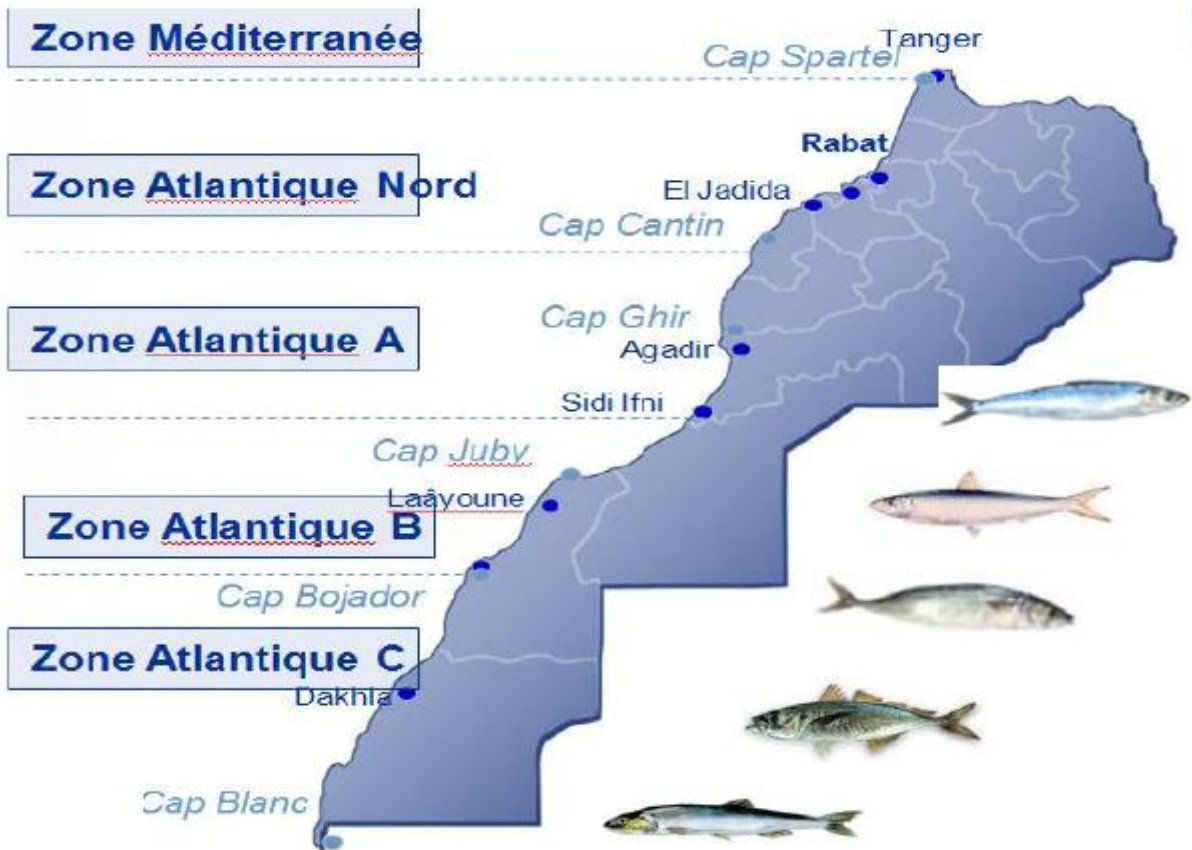


Figure 1 Fishing zones for management purposes off the Moroccan Coast R1

Licensed vessels are required to submit logbooks and landings declarations, and there appear on this basis to be good statistics on catch and effort. There is no evidence of significant problems of fishing by unlicensed vessels. Russian vessels continue to operate in zone C (North of Cape Blanc) under a Morocco-Russia fishing agreement. CPUE data from the Russian fleet was used in the stock assessment (Clause C1.2).

FAO report that the Committee for Eastern Central African Fisheries (CECAF) and INRH (Morocco's Institut National de Recherche Halieutique) use a Schaefer dynamic production model to evaluate stocks. Two acoustic surveys were carried out between November 2016 and January 2017. Biomass and abundance of Chub mackerel were estimated during these and other surveys.

Catch data used by the Working Group were the total catch series for the period 1999-2016.

Therefore, fishery removals are included in the stock assessment process and the stock does **PASS** Clause C1.1.

C1.2:

Results of fitting the Schaefer dynamic production model to different abundance indices were presented in the FAO Report:

Stock/abundance indices	B_{cur}/B_{MSY}	$B_{cur}/B_{0.1}$	F_{cur}/F_{Scur}	F_{cur}/F_{MSY}	$F_{cur}/F_{0.1}$
Mackerel stock/Biomass index of Russian CPUEs	68%	62%	166%	218%	243%
Mackerel stock/Nansen/AMA biomass index	116%	105%	105%	89%	98%
Mackerel stock/Nansen biomass index without the period 2011-2014	88%	80%	104%	117%	130%
CMSY Method: Catch vs biomass index of Russian CPUEs	42%	38%	---	402%	447%
Baysian Schaefer: Catch vs biomass index of Russian CPUEs	107%	97%	---	130%	144%

B_{cur}/B_{MSY} : Ratio between the estimated biomass for the last year of the series and the biomass corresponding to F_{MSY} .

$B_{cur}/B_{0.1}$: Ratio between the estimated biomass for the last year of the series and the biomass corresponding to $F_{0.1}$.

F_{cur}/F_{Scur} : Ratio between the observed fishing mortality coefficient for the last year of the series and that which would give a sustainable catch for the current biomass.

F_{cur}/F_{MSY} : Ratio between the observed fishing mortality coefficient for the last year of the series and that which would give a maximum sustainable catch over the long term.

$F_{cur}/F_{0.1}$: Ratio between the fishing mortality coefficient observed for the last year of the series and $F_{0.1}$.

Figure 2: Summary of Chub mackerel stock assessment (FAO 2017) **R1**

Fishing mortality is above target level $F_{0.1}$. The Working Group considers that the stock is fully exploited. Using the Baysian Schaefer Catch v biomass index of Russian CPUEs's B_{cur}/B_{MSY} is estimated at 107%.

Therefore, this stock is considered, in its most recent stock assessment, to have a biomass above the limit reference point; the stock does **PASS** C1.2.

References:

R1 FAO WORKING GROUP (2018) ON THE ASSESSMENT OF SMALL PELAGIC FISH OFF NORTHWEST AFRICA 298pp Nouadhibou, Mauritania: Chub mackerel pp 34-48
<http://www.fao.org/3/i8896b/I8896B.pdf>

R2 Fishsource Atlantic Chub Mackerel: https://www.fishsource.org/stock_page/1823

Standard clauses 1.3.2.2