IFFO RS Limited

T: +44 (0) 2030 539 195
E: Standards@iffors.com
W: www.iffors.com

Unit C, Printworks | 22 Amelia Street
London, SE17 3BZ | United Kingdom

Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	**Skipjack tuna (*Katsuwonus pelamis*) Pacific Eastern Central, South East**
Date	March 2020
Assessor	Jim Daly
Stock Pass	FAO 77, 87
Stock Fail	

Application details and summary of the assessment outcome				
Name: Tadel				
Address:				
Country: Ecuador		**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	SURV 1	By-product
Assessment Period	2020			

Scope Details	
Management Authority (Country/State)	Inter-American Tropical Tuna Commission (IATTC)
Main Species	Skipjack tuna (*Katsuwonus pelamis*)
Stock:	FAO 77, 87
Fishery Location	Pacific Eastern Central, Pacific South East
Gear Type(s)	Purse seine, longline, pole & line, artisanal
Outcome of Assessment	
Peer Review Evaluation	**AGREE**
Recommendation	**APPROVE**

Assessment Determination
If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as IFFO RS raw material. Skipjack tuna does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices; therefore, Skipjack tuna is eligible for approval for use as IFFO RS by-product raw material. One stock forms part of this assessment: 1) FAO 77, 87: Pacific Eastern Central, Pacific South East Fishery removals of the stock are considered in the various stock assessment processes so the stock **PASSES** Clause C1.1. It is likely that there is a continuous stock throughout the Pacific Ocean with some exchange of individuals occurring at local level. Since stock assessments and reference points for skipjack in the assessment area are so uncertain, developing alternative methods to assess and manage species that are robust to these uncertainties would be beneficial. Maunder and Deriso (2007) investigated some simple indicators of stock status (including Biomass) based on relative quantities. Biomass has been increasing over the past 20 years and was above the upper reference level (proxy) in 2016. Data and model-based indicators have yet to detect any adverse impacts of the fishery. Skipjack tuna is **APPROVED** by SAI Global assessors in the assessment area for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-products standard.
Peer Review Comments
Based on the Maunder and Deriso assessment method, relative biomass appears to have increased over the past 20 years and is currently located close to the upper reference level. The peer reviewer agrees that skipjack tuna should be approved in the assessment area for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-products standard.
Notes for On-site Auditor

HOW TO COMPLETE THIS ASSESSMENT REPORT

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
Skipjack tuna	*Katsuwonus pelamis*	FAO 77, 87 Eastern Pacific Ocean (Central, South-east)	N/A	IATTC	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		**Skipjack tuna *Katsuwonus pelamis***	
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

Evidence

This assessment covers Skipjack tuna from the IATTC Convention Area **(Figures 1,2):**

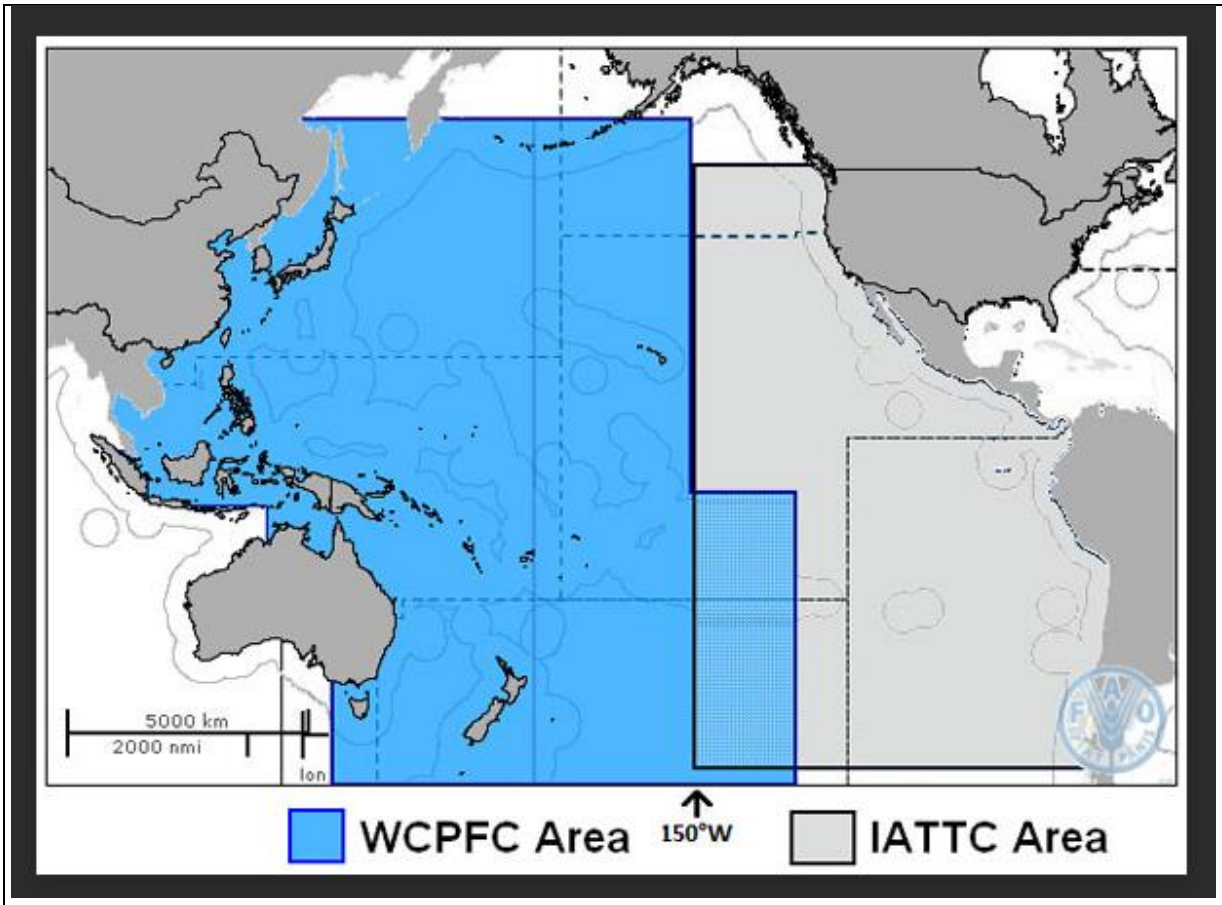

Figure 1: Western and Central Pacific Fisheries Commission (WCPFC) and Inter-American Tropical Tuna Commission (IATTC) Convention Areas **R1**

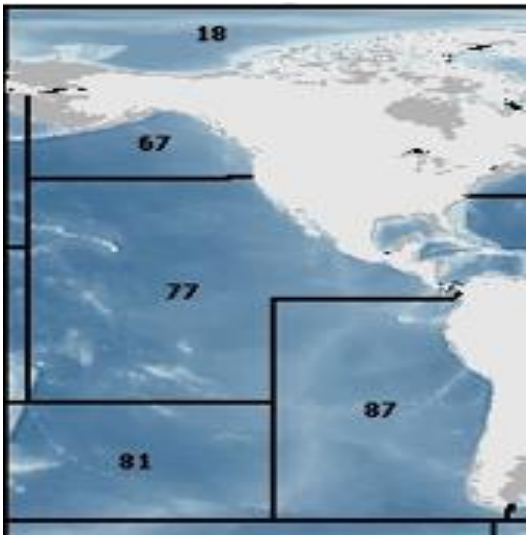

Figure 2: FAO 77,87 Eastern Pacific Ocean **R2**

Eastern Pacific Ocean (EPO) Skipjack are caught by purse seine, longline, pole & line and artisanal vessels. It is likely that there is a continuous stock throughout the Pacific Ocean with some exchange of individuals occurring at local level. Large-scale movements (from Eastern to Western Pacific Ocean) are thought to be rare.

From 2001-2015 annual retained catches in the assessment area (purse-seine) averaged 242,000t (**Figure 3**). Small amounts of skipjack are caught with longlines and other gears:

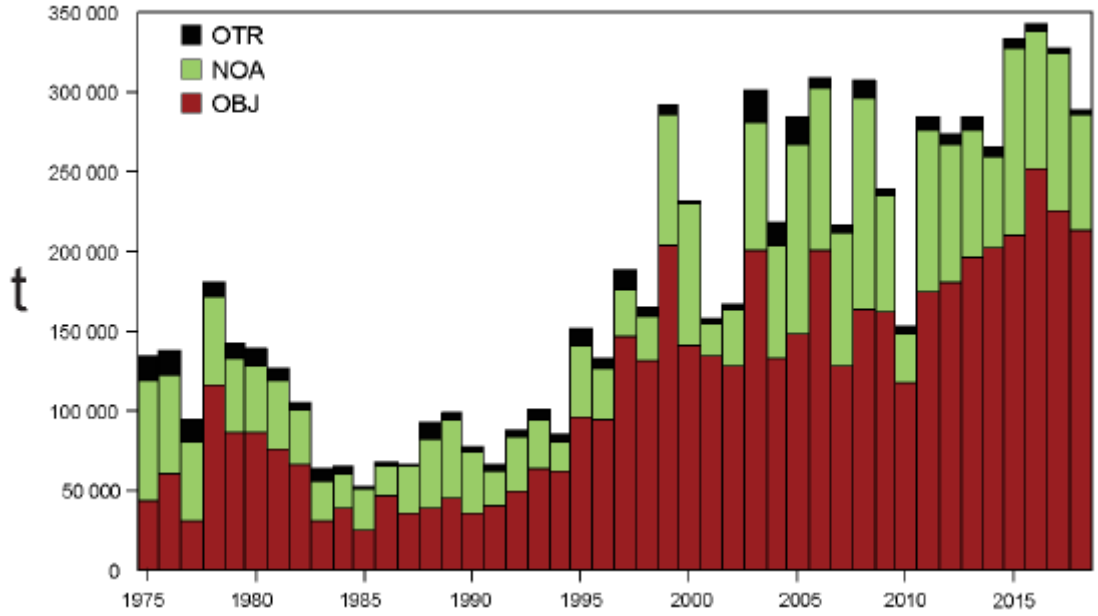

Figure 3: Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (Unassociated (NOA) or free school, Floating-object (OBJ) and retained catches for other (OTR Pole and Line) fisheries 1975-2018. **R3**

Since stock assessments and reference points for skipjack in the Eastern Pacific Ocean are so uncertain, developing alternative methods to assess and manage species that are robust to these uncertainties would be beneficial.

Maunder and Deriso (2007) investigated some simple indicators of stock status (including Biomass) based on relative quantities. Rather than using reference points based on MSY, they compared current values of indicators to the distribution of indicators observed historically. They also developed a simple stock assessment model to generate indicators for biomass, recruitment, and exploitation rate. Results were updated by IATTC based on latest data received in 2018 (**R3**).

C1.2
Evidence

Indicators are based on data from all purse-seine vessels that fished during 2000-2018. Upper and lower reference levels are shown as dotted lines. The biomass indicator is shown in **Figure 4**:

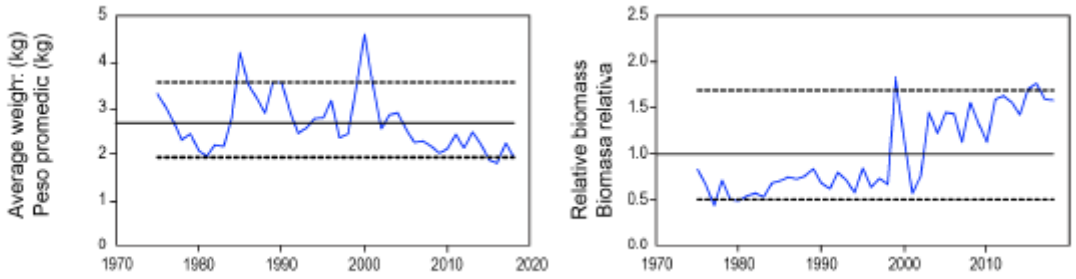

Figure 4: Indicator of stock status (Biomass) for skipjack tuna in the eastern Pacific Ocean. Left panel average fish weight (kg); Right panel Relative biomass (ratio of value for each year compared to historical values). **R3**

The average weight of skipjack has been declining since 2000, and in 2015 and 2016 was below the lower reference level, but increased slightly to above that level in 2017, then fell back to the reference level in 2018 (**Figure 4** Left Panel).

Biomass has been increasing over the past 20 years and was above the upper reference level in 2015 and 2016.

Data and model-based indicators have yet to detect any adverse impacts of the fishery.

References

R1 Government of Canada: Fisheries and Oceans MAP: https://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/pelagic-pelagique/tuna-thon/index-eng.html

R2 FAO 77, 87 (Pacific Eastern Central, Pacific South East) MAP: adapted from Coordinating Working Party on Fisheries Statistics (CWP): Fishing Areas for Statistical Purposes http://www.fao.org/cwp-on-fishery-statistics/handbook/general-concepts/fishing-areas-for-statistical-purposes/en/

R3 IATTC Fisheries Status Report No 17 (2019): Tunas, Billfishes and other pelagic species in the Eastern Pacific Ocean http://www.iattc.org/PDFFiles/FisheryStatusReports/_English/No-17-2019_Tuna%20fishery,%20stocks,%20and%20ecosystem%20in%20the%20eastern%20Pacific%20Ocean%20in%202018.pdf

R4 Maunder and Deriso (2007) El uso de indicadores de condición de población cuando no se dispone de puntos de referencia tradicionales: evaluación y aplicación al atún barrilete en el Océano Pacífico oriental. Comisión Interamericana del Atún Tropical, Informe de Evaluación de Stocks, 8: 229-248