MarinTrust Standard V2

By-product Fishery Assessment Report Template

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Skipjack tuna, *Katsuwonus pelamis*
	Geographical area:	FAO Areas 77 Pacific Eastern Central & 87 Pacific Southeast
	Country of origin of the product:	Ecuador
	Stock:	Eastern Pacific Ocean skipjack
Date	7 April 2021	
Report Code	BP40	
Assessor	Geraldine Criquet	
Country of origin of the product - PASS	Ecuador	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Name:			
Address:			
Country: Ecuador		Zip:	
Tel. No.:		Fax. No.:	
Email address:		Applicant Code:	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Geraldine Criquet	Sam Dignan	0.5	Surveillance 2
Assessment Period	April 2021		

Scope Details	
Main Species	Skipjack tuna, *Katsuwonus pelamis*
Stock	Eastern Pacific Ocean skipjack
Fishery Location	FAO Areas 77 Pacific Eastern Central & 87 Pacific Southeast
Management Authority (Country/ State)	Inter-American Tropical Tuna Commission (IATTC) Ecuador Ministry of Agriculture and Livestocks
Gear Type(s)	Purse seine, longline, pole & line
Outcome of Assessment	
Peer Review Evaluation	Agree with assessment outcome based on evidence provided
Recommendation	APPROVED

Table 2. Assessment Determination

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 MARINTRUST raw material. Skipjack tuna (*Katsuwonus pelamis*) is not listed as Endangered or Critically Endangered on IUCN's Red List, nor it is listed in CITES appendices; therefore, Eastern Pacific Ocean skipjack tuna is eligible for approval for use as MARIN TRUST by-product raw material. The Eastern Pacific Ocean (EPO) skipjack tuna is managed at the international level by the IATTC through a multi-year conservation plan. IATTC conducts stocks assessments. Skipjack tuna is a difficult species to assess. A conventional stock assessment method for EPO skipjack is not possible due to the lack of age-composition data and tagging data. Neither biomass- nor fishing mortality-based reference points are available for EPO skipjack. Simple stock, status indicators (SSIs) based on relative quantities have been investigated by Maunder and Deriso (2007). In addition, a Productivity and Susceptibility Analysis (PSA) for EPO tropical tuna fisheries indicated that skipjack and bigeye have the same susceptibility to purse seine and that skipjack is much more productive than bigeye. Taking the risk analysis for bigeye as a reference IATTC infers the status of skipjack from the status of bigeye. The stock is classified as Category C. Fishery removals of the stock are considered in the various stock assessment processes so the stock **PASSES** Clause C1.1. In the most recent stock assessment, the stock is considered to have a biomass above the proxy for the limit reference point, the stocks **PASSES** Clause C1.2. In order to be approved, the stock under assessment must pass both Clauses C1.1 and C1.2. Eastern Pacific Ocean skipjack tuna passes both Clauses C1.1 and C1.2, and therefore is APPROVED by the assessor for the production of fishmeal and fish oil under the current Marin Trust v.2.0 by-product Standard.
Fishery Assessment Peer Review Comments
Agree with assessment outcome based on evidence provided.
Notes for On-site Auditor

Species Categorisation

NB: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as an MARINTRUST raw material.

IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category[1]	CITES Appendix 1[2]
Skipjack tuna	*Katsuwonus pelamis*	Eastern Pacific Ocean skipjack	Inter-American Tropical Tuna Commission (IATTC)/Ecuador	C	LC	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php

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.

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. Where a species fails this Clause, it should be assessed as a Category D species instead.

Species Name		
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 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.

Data to support the stock assessment is derived from commercial catches: relative catches in weight, relative catch per set and relative average length of catch. Total catches (retained plus discards) are shown in Figure 1. Therefore, the stock **PASSES** Clause C1.1.

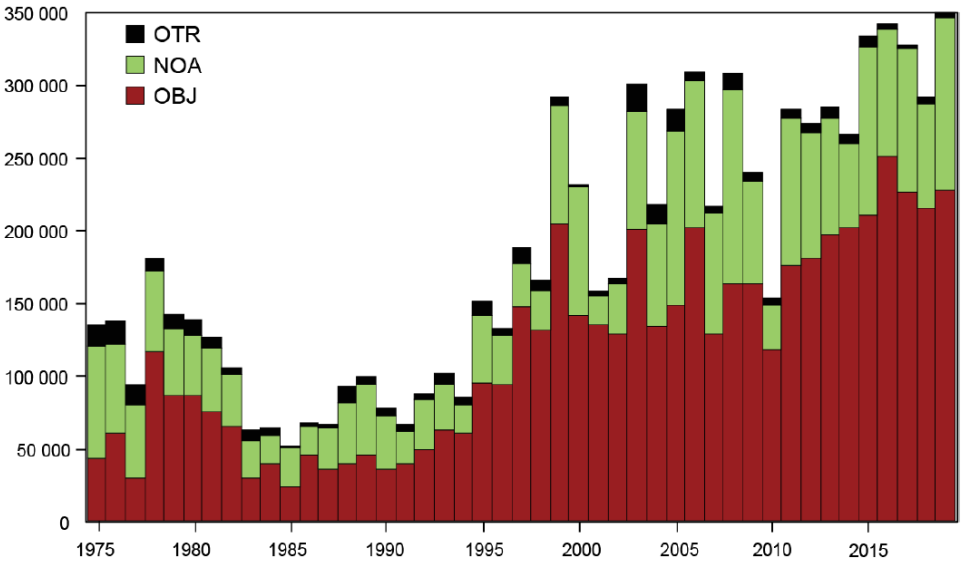

Figure 1. Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (NOA, OBJ) and retained catches for the other (OTR) fisheries, of skipjack tuna in the eastern Pacific Ocean, 1975- 2019. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. The 2019 catch data are preliminary.

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.

Skipjack tuna is a difficult species to assess. A conventional stock assessment method for EPO skipjack is not possible due to the lack of age-composition data and tagging data. Neither biomass- nor fishing mortality-based reference points are available for EPO skipjack. Simple stock, status indicators (SSIs) based on relative quantities have been investigated by Maunder and Deriso (2007). The current SSIs include relative catches in weight, relative catch per set and relative average length (Figure 2).

Many of the indicators value for recent years are near their reference levels. Most of the floating-object fishery SSIs suggest that the skipjack has potentially been subject to increased fishing mortality.

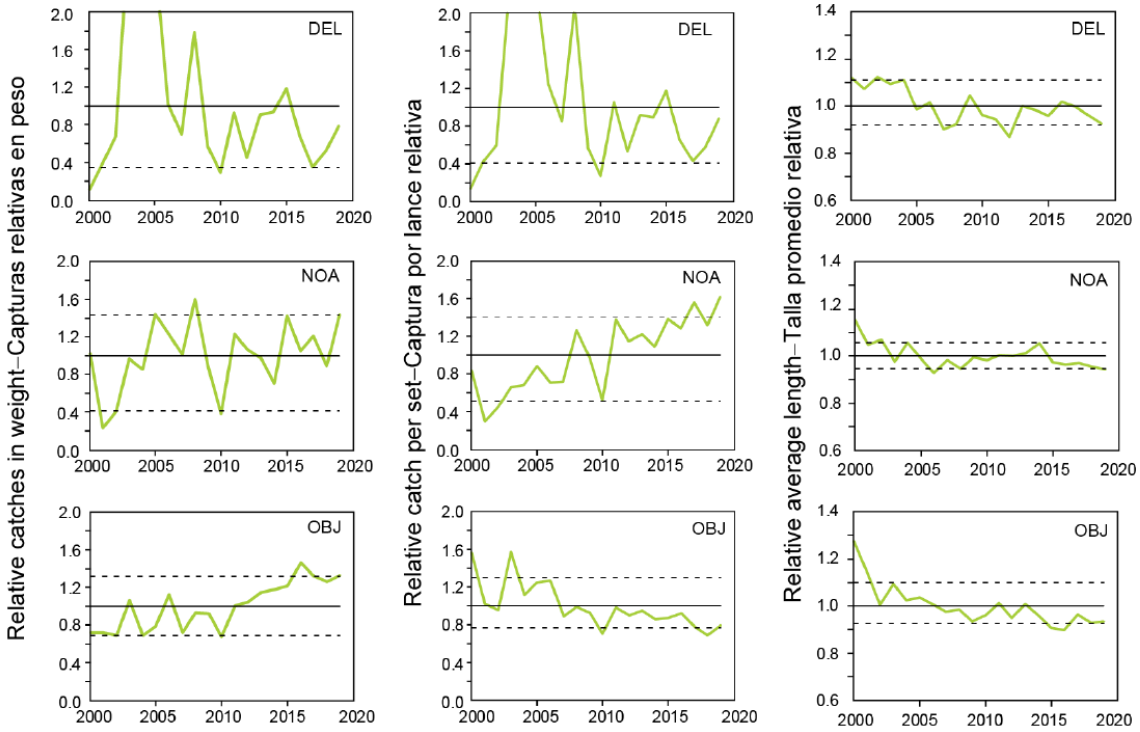

Figure 2. Indicators of stock status for skipjack tuna in the eastern Pacific Ocean. OBJ: floating-object fishery; NOA: unassociated fishery; DEL: dolphin associated fishery. All indicators are scaled so that their average equals one.

In addition, a Productivity and Susceptibility Analysis (PSA) for EPO tropical tuna fisheries indicated that skipjack and bigeye have the same susceptibility to purse seine and that skipjack is much more productive than bigeye. Taking the risk analysis for bigeye as a reference IATTC infers the status of skipjack from the status of bigeye:

- There is less than 53% probability that the current index of spawning biomass (S_{cur}) is below S_{MSY}.
- There is less than 6% probability that S_{cur} is below S_{lim}.

Based on the above evidence, the assessor determines that, the stock is considered to have a biomass above the proxy for the limit reference point, it **PASSES** Clause C1.2.

References

Collette, B., Acero, A., Amorim, A.F., Boustany, A., Canales Ramirez, C., Cardenas, G., Carpenter, K.E., de Oliveira Leite Jr., N., Di Natale, A., Fox, W., Fredou, F.L., Graves, J., Guzman-Mora, A., Viera Hazin, F.H., Juan Jorda, M., Kada, O., Minte Vera, C., Miyabe, N., Montano Cruz, R., Nelson, R., Oxenford, H., Salas, E., Schaefer, K., Serra, R., Sun, C., Teixeira Lessa, R.P., Pires Ferreira Travassos, P.E., Uozumi, Y. & Yanez, E. 2011. *Katsuwonus pelamis*. *The IUCN Red List of Threatened Species* 2011: e.T170310A6739812. https://dx.doi.org/10.2305/IUCN.UK.2011-2.RLTS.T170310A6739812.en.

IATTC 2021. Reports on the Tuna fishery, stocks, and ecosystem in the Eastern Pacific Ocean in 2019. https://www.iattc.org/FisheryStatusReportsENG.htm

Links	
MARINTRUST Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

CATEGORY D SPECIES

Category D species are those which make up less than 5% of landings and are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1	Species Name		
	Productivity Attribute	**Value**	**Score**
	Average age at maturity (years)		
	Average maximum age (years)		
	Fecundity (eggs/spawning)		
	Average maximum size (cm)		
	Average size at maturity (cm)		
	Reproductive strategy		
	Mean trophic level		
		Average Productivity Score	
	Susceptibility Attribute	**Value**	**Score**
	Overlap of adult species range with fishery		
	Distribution		
	Habitat		
	Depth range		
	Selectivity		
	Post-capture mortality		
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
References			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

D3		Average Susceptibility Score		
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4

D4	Species Name		
	Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements		
	D4.1	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.	
	D4.2	There is no substantial evidence that the fishery has a significant negative impact on the species.	
		Outcome:	

Evidence

D4.1: The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.

D4.2 There is no substantial evidence that the fishery has a significant negative impact on the species.

References

Links	
MARINTRUST Standard clause	1.3.2.2, 4.1.4
FAO CCRF	7.5.1
GSSI	D.5.01