MarinTrust Standard V2

By-product Fishery Assessment

Ecuador Skipjack Tuna (FAO Areas 77 Pacific Eastern Central & 87 Pacific Southeast)

MarinTrust Programme
Unit C, Printworks
22 Amelia Street
London
SE17 3BZ
E: standards@marin-trust.com
T: +44 2039 780 819

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	March 16, 2022	
Report Code	BP42	
Assessor	Ivan Mateo	
Country of origin of the product - PASS	Ecuador	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Negocios Industrial Real N.I.R.S.A S.A, Productos Pesqueros S.A Produpes, Tadel S.A			
Country: Ecuador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ivan Mateo	Vito Romito	0.5	Re-Approval
Assessment Period	To March 2022		

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	Approve
Recommendation	Approve

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
The stock has been correctly classified as a category C stock and ICCAT has assessed it last in 2022. The methodology used for the assessment taken into account catches and estimates fishing mortality for the stock. Fishing below F limit would logically lead to a stock biomass above Blim. Given that there is a low probability (5-6%) that Flim has been exceeded, the current fishing mortality estimate is a reasonable proxy for the stock being above the Blim reference point. Accordingly, Eastern Pacific Ocean skipjack tuna passes both Clauses C1.1 and C1.2, and shall be APPROVED for the production of fishmeal and fish oil under the current Marin Trust v.2.0 by-product Standard.
Notes for On-site Auditor
NA

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.

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

Species Name		**Skipjack tuna**	
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.

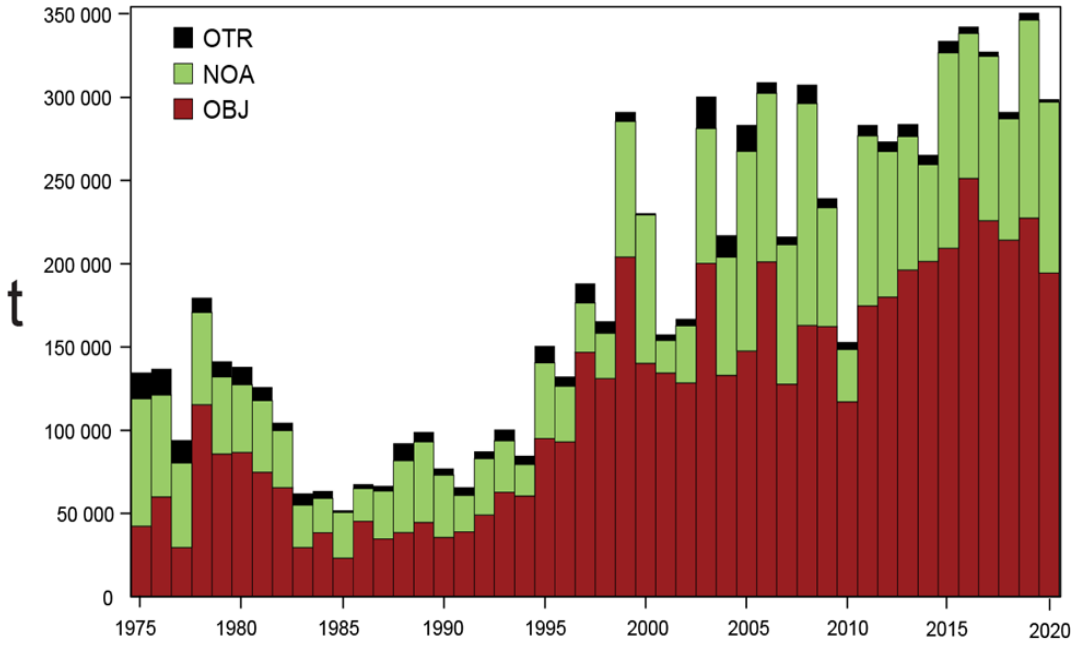

Figure 1. Total catches (retained catches plus discards) for the purse-seine fisheries, by set type (NOA, OBJ) and retained catches for the other (OTR) fisheries, of skipjack tuna in the eastern Pacific Ocean, 1975 - 2020. The purse-seine catches are adjusted to the species composition estimate obtained from sampling the catches. The 2020 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 conduct stock assessments. Traditional stock assessment models for EPO skipjack are not possible due to the lack of age-composition data and tagging data. Furthermore, biomass- and fishing mortality-based reference points are no 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.

Many of the indicator's 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.

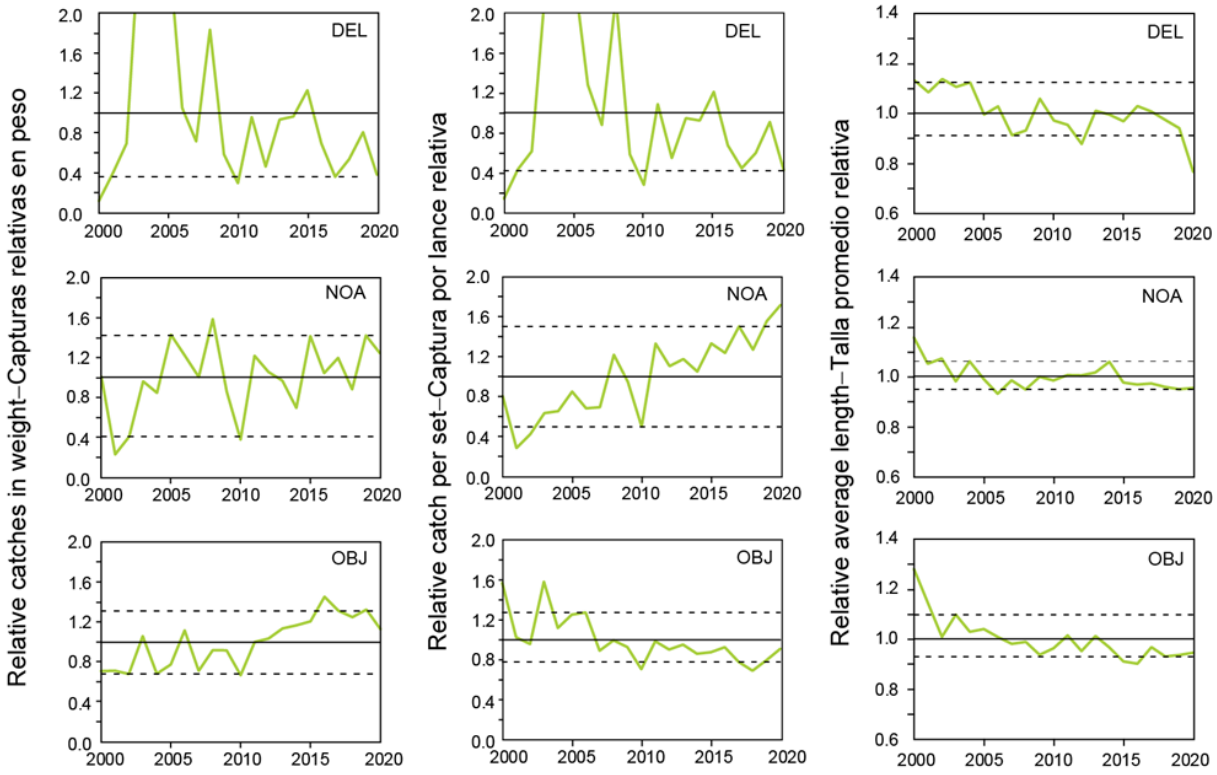

Figure 2. Indicators of stock status for skipjack tuna in the eastern Pacific Ocean. OBJ: floating-object fishery; NOA: unassociated fishery; DEL: dolphin associated fishery. All indicators are scaled so that their average equals one.

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 50% probability that *F*MSY has been exceeded (P(*F*>*F*MSY)<50%), and a less than 53% probability that *S*cur is below *S*MSY (P(*S*<*S*MSY)<53%)
- There is less than 5% probability that *F*LIMIT has been exceeded (P(*F*>*F*LIMIT)<5%), and less than 6% probability that *S*LIMIT has been breached (P(*S*>*S*LIMIT)<6%).

Fishing below F limit would logically lead to a stock biomass above Blim. Given that there is a low probability (5-6%) that Flim has been exceeded, the current fishing mortality estimate is a reasonable proxy for the stock being above the Blim reference point. 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 2022. Reports on the Tuna fishery, stocks, and ecosystem in the Eastern Pacific Ocean in 2020. 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