MarinTrust Standard V2

By-product Fishery Assessment

Yellowfin tuna (Thunnus albacares) in FAO 77 & 87

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Yellowfin tuna (*Thunnus albacares*)
	Geographical area:	FAO 77 & 87 Eastern Pacific Ocean (Central and Southern)
	Country of origin of the product:	Vietnam (flag states: USA, Cook Islands, Tokelau, Fiji, Vanuatu, Samoa, South Korea)
	Stock:	Eastern Pacific Ocean (EPO) yellowfin tuna
Date	3 May 2023	
Report Code	VNM01	
Assessor	Matthew Jew	
Country of origin of the product - PASS	Vietnam (flag states: USA, Cook Islands, Tokelau, Fiji, Vanuatu, Samoa, South Korea)	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Thien Quynh Co. Ltd, Thien Quynh Khanh Hoa Sole Member Limited Liability Company			
Country: Vietnam			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Matthew Jew	Léa Lebechnech	0.5	Surveillance 1
Assessment Period	Up to May 2023		

Scope Details	
Main Species	Yellowfin tuna (*Thunnus albacares*)
Stock	Eastern Pacific Ocean (EPO) yellowfin tuna
Fishery Location	FAO 77 & 87 Eastern Pacific Ocean (Central and Southern)
Management Authority (Country/ State)	IATTC
Gear Type(s)	Not provided
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination
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 Marin trust raw material. Yellowfin tuna (*Thunnus albacares*) does not appear as Endangered or Critically Endangered on IUCN's Red List, and does not appear in CITES appendices; therefore, *Thunnus albacares* is eligible for approval for use as Marin trust by-product raw material. For assessment and management purposes, two discrete stocks of yellowfin tuna are recognized in the Pacific Ocean differentiated by the 150°W: 1. Western Central Pacific Ocean (WCPO) yellowfin (west of 150°W), managed via the Western and Central Pacific Fisheries Commission (WCPFC). 2. Eastern Pacific Ocean (EPO) yellowfin (east of 150°W), managed by the Inter-American Tropical Tuna Commission (IATTC). Although the western boundary of FAO area 77 is at 175°W, only one stock may be assessed for each by product report, per MarinTrust guidance. For the purposes of this report, the EPO yellowfin tuna stock was assessed for fishing efforts occurring in FAO Areas 77 & 87. As the EPO stock is managed by IATTC and reference points are defined, this stock is assessed under Category C. Fishery removals are included in the stock assessment and it PASSES Clause C1.1. The stock is considered, in its most recent stock assessment, to have biomass above the limit reference point, it PASSES Clause C1.2. Therefore, EPO yellowfin tuna is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust v2.0 by-products.
Fishery Assessment Peer Review Comments
The internal peer reviewer agrees with the assessor's determination, who correctly classified and approved the stock of EPO yellowfin tuna under Category C. Fishery removals are included in the stock assessment and the stock is considered, in its most recent stock assessment, to have biomass above the limit reference point, so it PASSES Clauses C1.1 and C1.2. Therefore, EPO yellowfin tuna is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standards.
Notes for On-site Auditor
N/A

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]
Yellowfin tuna	*Thunnus albacares*	EPO yellowfin tuna	IATTC	C	LC	No

[1] https://www.iucnredlist.org/species/21857/46624561
[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	**Yellowfin tuna (*Thunnus albacares*)**	
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.	Yes
	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.	Yes
	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.

Eastern Pacific yellowfin tuna Catches within the IATTC area of competence are reported to the IATTC and these catches are subsequently included in the IATTC stock assessment process (Figure 1).

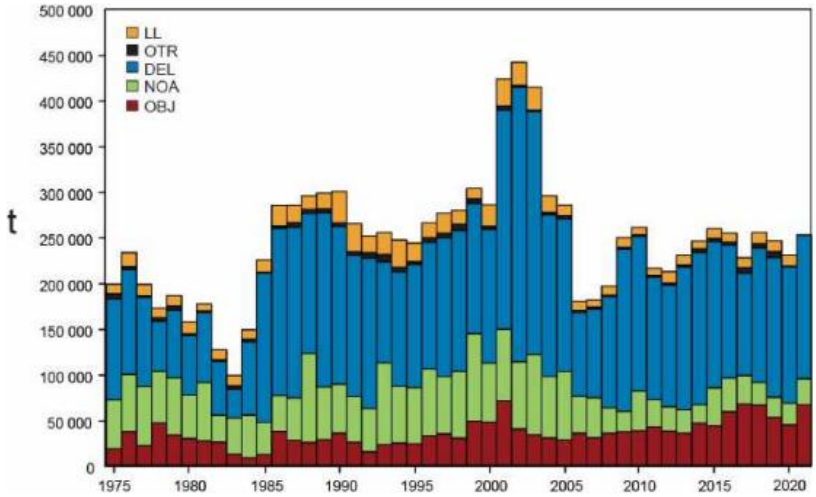

Figure 1. Yellowfin tuna total catch 1975 – 2021 by main fishing gear group in the eastern Pacific Ocean.

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process so the stock PASSES clause C1.1.

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.

In 2020, the IATTC scientific staff completed new benchmark stock assessments for EPO Yellowfin Tuna. These assessments were conducted within a new risk analysis framework instead of the previous "best assessment" approach. The risk analysis framework employs "…a variety of reference models … to represent plausible alternative hypotheses about the biology of the fish, the productivity of the stocks, and/or the operation of the fisheries, thus effectively incorporating uncertainty into the management advice as it is formulated."

The risk analysis, is divided into: (1) an assessment of the current status of the stock; and, (2) an evaluation of the consequences of alternative management actions, specifically modifying the duration of the temporal closure of the purse-seine fishery, currently 72 days.

Current status relative to a reference point was calculated as a weighted average of the point estimates of the ratio from each of the alternative stock assessment models, with weights equal to the relative model probabilities (equal to the expected value under the normal distribution assumption made for each model). The probability of exceeding a reference point was calculated using the cumulative distribution functions for the ratios of Fcur and Scur relative to the reference points for each of the alternative models, which are then combined using the model probabilities.

To be consistent with the probabilistic nature of the risk analysis and the HCR, the black dot on the Kobe plot representing the combined models is based on P(Scur/SMSY<x) = 0.5 and P(Fcur/FMSY>x) = 0.5

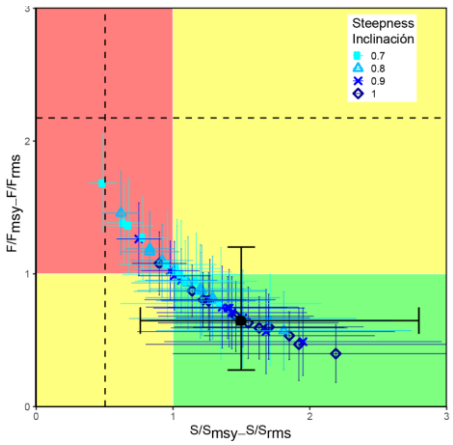

Figure 5. Kobe (phase) plot of the time series of estimates of spawning stock size (S) and fishing mortality (F) of Yellowfin Tuna relative to their MSY reference points. The colored panels are separated by the target reference points (SMSY and FMSY). Limit reference points (dashed lines), which correspond to a 50% reduction in recruitment from its average unexploited level, based on a conservative steepness (h) of 0.75 for the Beverton-Holt stock-recruitment relationship, are merely indicative, since they vary by model and are based on all models combined. The center point for each model indicates the current stock status, based on the average fishing mortality (F) over the last three years; The solid black circle represents all models combined; to be consistent with the probabilistic nature of the risk analysis and the HCR, it is based on P(Scur/SLIMIT<x) = 0.5 and P(Fcur/FMSY>x) = 0.5. The lines around each estimate represent its approximate 95% confidence interval Source: Aires-da-Silva, 2020.

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point so it PASSES clause C1.2.

References

Aires-da-Silva A, M. N. Maunder, H. Xu, C. Minte-Vera, J.L. Valero, C. E. Lennert-Cody 2020 Risk Analysis for Management of the Tropical Tuna Fishery in the Eastern Pacific Ocean IATTC DOCUMENT SAC-11-08 REV. https://iattc.org/GetAttachment/1996b7a3-25aa-443d-9bcc-eee859137394/SAC-11-07_Yellowfin-tuna-benchmark-assessment-2019.pdf

IATTC. 2021. Report on the tuna fishery, stock, and ecosystem in the eastern Pacific Ocean in 2021. https://www.iattc.org/GetAttachment/99dc87b3-cf5f-4b7b-8e6e-f5aa9cab0fce/No-20-2022_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2021.pdf

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