MarinTrust Standard V2

By-product Fishery Assessment

ECU14

Skipjack Tuna *(Katsuwonus pelamis)*

in FAO 71 - Western Central Pacific

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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 71 (Western Central Pacific)
	Country of origin of the product:	Ecuador Flag countries: Taiwan, Solomon Islands, Kiribati, Vanuatu, Tuvalu, Nauru
	Stock:	Skipjack tuna in the western and central Pacific Ocean
Date	June 2024	
Report Code	ECU14	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	Ecuador Flag countries: Taiwan, Solomon Islands, Kiribati, Vanuatu, Tuvalu, Nauru	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): NIRSA S.A., Borsea			
Country: Ecuador Flag countries: Taiwan, Solomon Islands, Kiribati, Vanuatu, Tuvalu, Nauru			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		NSF / Global Trust Certification Ltd.	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval
Ana Elisa Almeida Ayres	Léa Lebechnech	0.5	Surveillance 1
Assessment Period	June 2024 – June 2025		

Scope Details	
Main Species	Skipjack tuna (*Katsuwonus pelamis*)
Stock	Skipjack tuna in the western and central Pacific Ocean
Fishery Location	FAO 71 (Western Central Pacific)
Management Authority (Country/ State)	Western and Central Pacific Fisheries Commission (WCPFC)
Gear Type(s)	Longline, Purse seine, Pole-and-line, and others
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 Union for Conservation of Nature's Red List of Threatened Species - IUCN's Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as Marin Trust raw material. Skipjack tuna *(Katsuwonus pelamis)* is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, skipjack tuna *(Katsuwonus pelamis)* is eligible for approval for use as Marin Trust by-product raw material. Fishery removals of the stock are considered in the Western and Central Pacific Ocean Fisheries Commission - WCPFC stock assessment process and the latest assessment of stock status considers the stock being above the limit reference points, so the stock PASSES Clauses C1.1 and C1.2. Therefore, skipjack tuna *(Katsuwonus pelamis)* in FAO 71 - Western Central Pacific is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.
Fishery Assessment Peer Review Comments
The assessor correctly classified the western central Pacific Ocean skipjack tuna under category C, as the stock is managed and reference points are defined to assess the stock status against. Fishery removals from the stock are considered in the stock assessment process, and the most recent stock assessment shows that the stock is considered to have a biomass well above the limit reference point. Consequently, the fishery passes both clauses C1.1 and C1.2. Therefore the western central Pacific Ocean skipjack tuna in FAO 71 is **APPROVED** for the production of fishmeal and fish oil under the current MarinTrust V2.0 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]
Skipjack tuna	*Katuswonus pelamis*	Skipjack tuna in the western and central Pacific Ocean	Yes	C	LC[3]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
[3] https://www.iucnredlist.org/species/170310/46644566

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 (*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**

Note: this report is based on the same stock assessment as last year's report.

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.

Since 2000 (Bigelow et al., 2000), assessments for skipjack in the Western and Central Pacific Ocean (WCPO) have been conducted regularly. Fishery removals of the stock in the fishery under assessment are included in the Western and Central Pacific Ocean Fisheries Commission - WCPFC stock assessment process. Consistent with previous assessments, the 2022 assessment (WCPFC-SC18-2022/SA-WP-01) is conducted using the MULTIFAN-CL (MFCL) stock assessment software. Data used consist of catch, effort and length frequencies for the fisheries defined in the analysis and tag-recapture data. The time period covered by the assessment was 1972–2021. Total annual catches by major gear categories for the WCPO are shown in Figure 1. Total catch in 2021 was 1,547,945t, a 10% decrease from 2020 and a 14% decrease from the 2016-2020 average.

One of the key reference point for the species is F_{recent}/F_{MSY} , which is the estimated average fishing mortality at the full assessment area scale over a recent period of time, divided by the fishing mortality producing Maximum Sustainable Yield - MSY which is a product of the yield analysis. Recent (2017-2020) median fishing mortality was F_{recent}/F_{MSY} = 0.32 (80 percentile range 0.18-0.45).

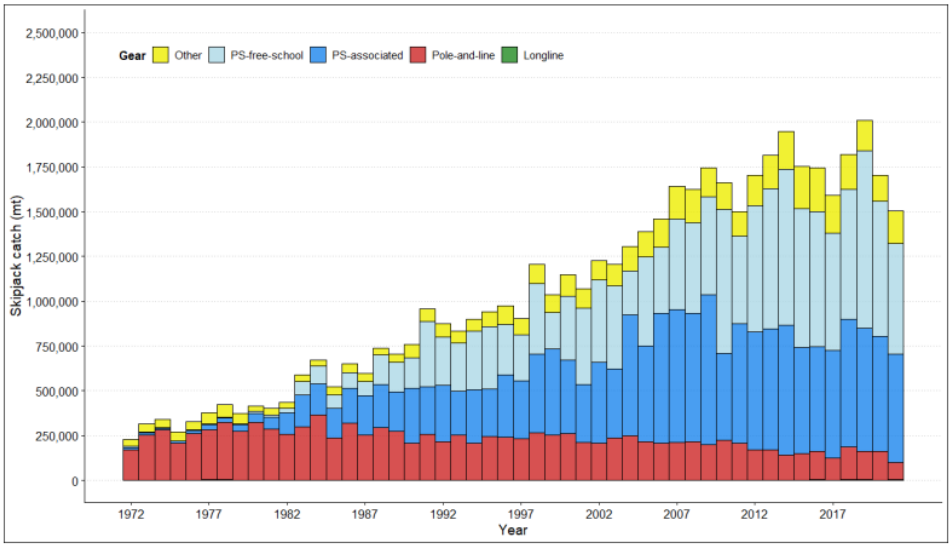

Figure 3: Annual catches of skipjack by gear type in the WCPO area covered by the assessment.

Figure 1. Source: WCPFC-SC18-2022/SA-WP-01.

Therefore, fishery removals are incorporated into the stock assessment process and therefore C1.1 is met.

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.

WCPFC-SC18-2022/SA-WP-01 adopted the 2022 assessment and a structural uncertainty grid was used to develop management advice. The overall spawning biomass for a recent period (2018–2021) relative to the average spawning biomass predicted to occur in the absence of fishing for the period 2011–2020 ($SB_{recent}/SB_{F=0}$) was 0.509 (80th percentile 0.43-0.64), which is close to the interim target reference point (TRP) of 0.50 indicated in CMM 2021-01. No grid models were below the limit reference point (LRP) of 0.20 $SB_{F=0}$. The 2022 stock assessment of skipjack tuna for the WCPO, indicated that, according to WCPFC reference points, the stock is not overfished, nor undergoing overfishing (Figure 2). In August 2023, there was a follow up work on 2022 skipjack assessment recommendations, where $SB_{recent}/SB_{F=0}$ changed to 0.503 (Figure 3)[Castillo-Jordán et al (2023)].

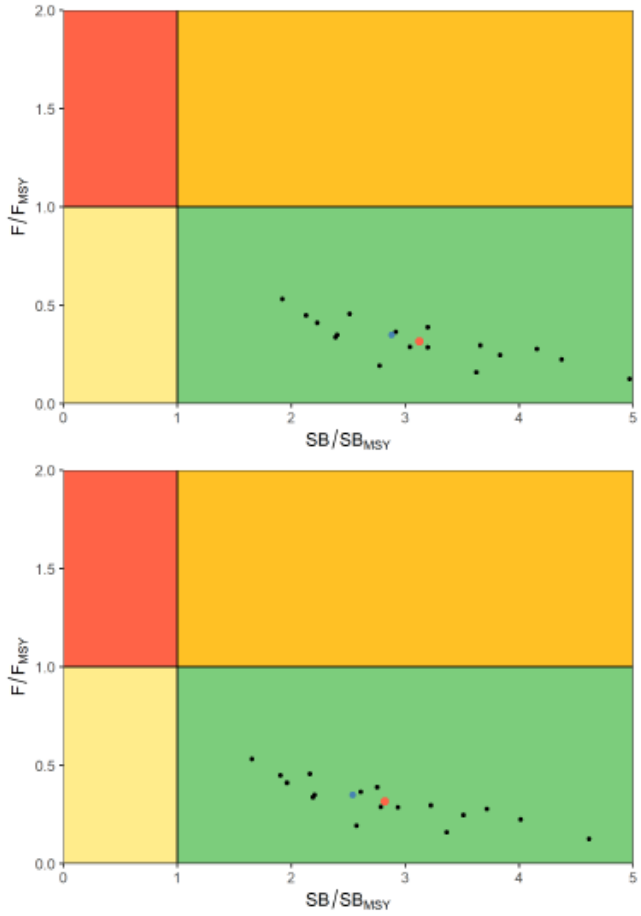

Figure 62: Kobe plots summarising the results for each of the models in the structural uncertainty grid for (Top) recent (2018-2021) and (Bottom) latest (2021) periods. The blue point is the diagnostic case model and red point is the median.

Figure 2. Source: WCPFC-SC18-2022/SA-WP-01.

Table 2. Comparison of reference points for the 2022 diagnostic model and the 2023 follow-up model

Reference point	2022 diagnostic	2023 follow-up	Ratio 2023/2022
Clatest	1,530,207	1,530,207	1
MSY	2,416,000	2,382,400	0.986
$Y_{fcurrent}$	440,600	440,300	0.999
F_{mult}	2.861	2.761	0.965
F_{MSY}	0.244	0.243	0.995
F_{recent}/F_{MSY}	0.350	0.362	1.034
SB_{MSY}	1,073,000	1,116,000	1.040
SB_0	5,686,000	5,742,000	1.009
SB_{MSY}/SB_0	0.189	0.194	1.026
$SB_{F=0}$	6,147,340	6,294,480	1.023
$SB_{MSY}/SB_{F=0}$	0.175	0.177	1.011
SB_{latest}/SB_0	0.479	0.482	1.006
$SB_{latest}/SB_{F=0}$	0.443	0.440	0.993
SB_{latest}/SB_{MSY}	2.539	2.480	0.976
$*SB_{recent}/SB_{F=0}$	0.503	0.509	1.011
SB_{recent}/SB_{MSY}	2.880	2.869	0.996

*2023 follow-up with positive definite Hessian: 95% confidence interval $SB_{recent}/SB_{F=0}$ = 0.490 – 0.528

Figure 3. Source: Castillo-Jordán et al (2023).

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), C1.2 is met.

References

Castillo-Jordán, C., Hampton, J., Teaars, T., Hamer, P. 2023. Follow up work on 2022 skipjack assessment recommendations. WCPFC-2023-SC19/SA-WP-07, Koror, Palau, 16-24 August 2023. https://meetings.wcpfc.int/node/19355

Bigelow, K., Hampton, J., and Fournier, D. A. (2000). Preliminary application of the MULTIFAN CL model to skipjack tuna in the tropical WCPO. SCTB13 Working Paper SKJ-2. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/f0/f01d75839753e8f57efd28483dfe9564.pdf?sv=2015-12-11&sr=b&sig=%2FnsnKH7V0dI7J0ZtXInsfo1f5ACl3bVLv7t4NmDXyfw%3D&se=2023-10-03T01%3A39%3A34Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22SKJ_2.pdf%22

WCPFC-SC18-2022/SA-WP-01 (REV5). Stock assessment of skipjack tuna in the western and central Pacific Ocean: 2022. Scientific Committee Eighteenth Regular Session. 10–18 August 2022. https://meetings.wcpfc.int/node/16242

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