MarinTrust Standard V2

By-product Fishery Assessment

USA19 – Skipjack tuna, FAO 87

(Eastern Pacific Ocean Skipjack)

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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 87
	Country of origin of the product:	Seychelles, South Africa
	Stock:	Eastern Pacific Ocean (EPO) Skipjack
Date	June 2024	
Report Code	USA19	
Assessor	Vineetha Aravind	
Country of origin of the product - PASS	Seychelles, South Africa	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Indian Ocean Tuna Ltd.			
Country: USA			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body: LRQA			
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Vineetha Aravind	Sam Peacock	0.2	Surveillance 1
Assessment Period	June 2024 – June 2025		

Scope Details	
Main Species	Skipjack tuna (*Katsuwonus pelamis*)
Stock	Eastern Pacific Ocean (EPO) Skipjack
Fishery Location	FAO 87
Management Authority (Country/ State)	Inter American Tropical Tuna Commission (IATTC)
Gear Type(s)	Longline, pole and line, purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with assessment outcome
Recommendation	PASS

Table 2. Assessment Determination

Assessment Determination
To be approved as Marin Trust raw material, the species should not appear as Endangered or Critically Endangered in the IUCN Red list and should not appear in CITES appendices. Skipjack tuna is categorised as Least Concern in the IUCN Red List and, it does not appear in CITES appendices; therefore, it is eligible for approval for use as Marin Trust by-product raw material. The Inter American Tropical Tuna Commission (IATTC) manages Skipjack tuna in the Eastern Pacific Ocean (EPO) with reference points and thus it is assessed under Category C. An interim stock assessment of EPO skipjack was conducted in 2021 and a benchmark assessment of the stock was conducted in 2024. The benchmark assessment reflected major advancements in the assessment methodologies and has incorporated new data sets, including an updated index of relative abundance based on recently developed echosounder buoy data, and an absolute biomass estimate derived from the tagging data collected under the Regional Tuna Tagging Program in the EPO. Though there was substantial uncertainty about several model assumptions, the sensitivity analyses determined that the management advice is robust to the uncertainty. The assessment concludes that the skipjack stock is healthy. Therefore, Skipjack in the EPO meets the MarinTrust byproduct requirement and can be certified as raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that this species is eligible for assessment under the MarinTrust byproduct assessment methodology, and that the stock falls into Category C. The most recent stock assessment was adequate to meet the requirements of C1.1, and biomass is currently estimated to be above the target reference point level, meeting the requirements of C1.2. Overall, the peer reviewer agrees that this stock should be approved as a source of byproduct raw material for MarinTrust certified facilities.
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*	EPO Skipjack	Yes	C	Least Concern[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**	
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

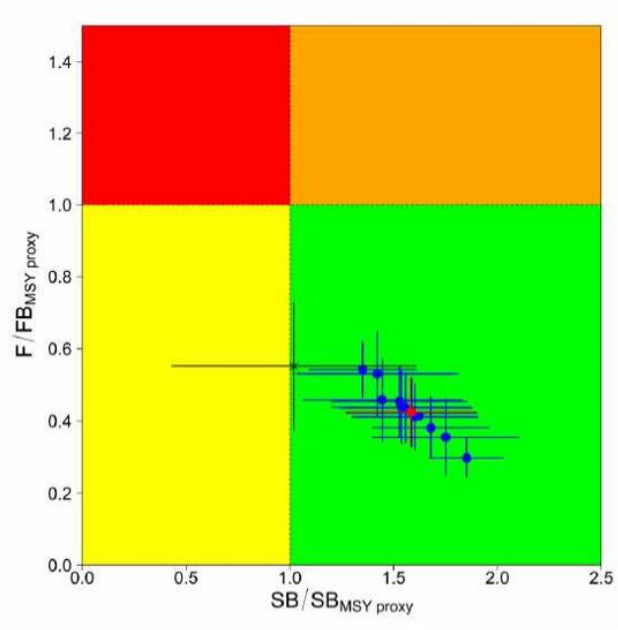
C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.

Regular stock assessments are carried out by IATTC. The Benchmark assessment in 2024 (Rujia Bi et al., 2024) was a significant improvement from the initial interim assessment conducted in 2022 (mark et al., 2022). Advanced assessment methodologies were used with new datasets, including absolute biomass estimate from tagging data. The assessment was based on Stock Synthesis (v3.30.22. beta), an integrated age-structured assessment model. The assessment has incorporated all available data from across the EPO, including catch data, size and age frequency data and other sources. The interim assessment in 2022 used longline catch data sourced from the Fishery Status Report (FSR), whereas the benchmark assessment used longline catch calculated by the product of reported hooks from all available CPCs and nominal CPUE and nominal CPUE derived from observer data from four IATTC Members: China, Chinese Taipei, Japan, and Korea. This makes a comprehensive change in the data sources and reduces negative bias. C1.1 is met.

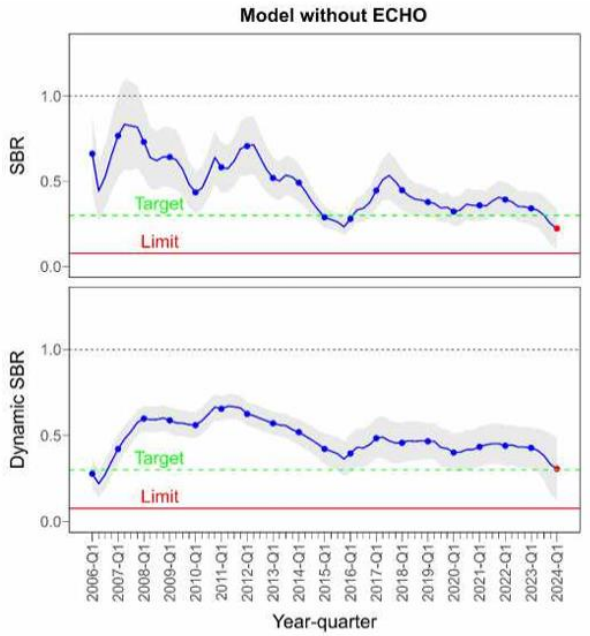
C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.

The Benchmark assessment in 2024 used the reference points proposed in the interim assessment (Mark et al., 2022). It was decided that MSY-based metrics are unreliable, due to the growth-mortality trade off and the assumption of recruitment independence from stock size, so a conservative proxy for target biomass is used. The target reference point was decided to be dynamic spawning biomass ratio (dSBR) which was fixed at 0.3. The dSBR accounts for variability in recruitment. A limit reference point of SBR at 0.077 was also decided.

During the benchmark assessment, the reference model (marked in red) and most sensitivity models tried estimates that the spawning biomass (SB) is currently above the target proxy of 30% of the unexploited SB under dSBR, and this is statistically significant. Only one sensitivity model, which excludes the ECHO index (marked in black), estimates that the stock is not significantly above the target proxy (Figure). (Rujia Bi et al., 2024)



*Each dot is based on the average *F* over the most recent three years, 2021-2023.



*80% CIs would represent the 10% probability of exceeding the reference point.

Figure: Kobe plot developed during Benchmark assessment 2024. (Rujia Bi et al. 2024)

References

Rujia Bi, Mark N. Maunder, Haikun Xu, Carolina Minte-Vera, Juan Valero, and Alexandre Aires-da-Silva. 2024. Stock assessment of skipjack tuna in the eastern Pacific Ocean: 2024 benchmark assessment. 15thMeeting of the Scientific Advisory Committee – 10-14 June 2024. SAC-15-04 Skipjack tuna benchmark assessment 2024

https://iattc.org

Mark N. Maunder, Haikun Xu, Carolina Minte-Vera, Juan L. Valero, Cleridy E. Lennert-Cody, and Alexandre Aires-da-Silva. 2022. DOCUMENT SAC-13-07 SKIPJACK TUNA IN THE EASTERN PACIFIC OCEAN, 2021: INTERIM ASSESSMENT.

https://iattc.org

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 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**	**NA**	
	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**
	Availability (area overlap)		
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)		
	Selectivity of gear type		
	Post-capture mortality		
		Average Susceptibility Score	
		PSA Risk Rating (From Table D3)	
		Compliance rating	
	Further justification for susceptibility scoring (where relevant) *For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision*		
References			
Standard clauses 1.3.2.2			

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

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