MarinTrust Standard V2

By-product Fishery Assessment

Skipjack Tuna, FAO 51

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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 51
	Country of origin of the product:	Mauritius
	Stock:	Western Indian Ocean
Date	January 2023	
Report Code	MUS04	
Assessor	Vineetha Aravind	
Country of origin of the product - PASS	Mauritius	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): Marine Biotechnology Products Ltd.: Riche Terre			
Country: Mauritius			
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	0.5	Surveillance 1
Assessment Period	Jan 2023- Jan 2024		

Scope Details	
Main Species	Skipjack Tuna *(Katsuwonus pelamis)*
Stock	Western Indian Ocean
Fishery Location	FAO 51
Management Authority (Country/ State)	IOTC
Gear Type(s)	Purse seine, Pole-and-line and gillnets
Outcome of Assessment	
Peer Review Evaluation	Agree
Recommendation	Approve byproduct

Table 2. Assessment Determination

Assessment Determination
Skipjack Tuna has been categorised as Least Concern by IUCN Red data List, and does not appear in CITES appendices. Therefore, it is eligible for approval for use as Marine Trust raw material.

Skipjack tuna in the Indian Ocean are considered a single stock for stock assessment purposes. They are managed by the Regional RFMO, the Indian Ocean Tuna Commission, resolutions are binding on its members. Scientific advice is provided by the IOTC's Scientific Committee. The latest stock assessment was undertaken in 2020.

There is species-specific management and therefore the fishery is assessed under Category C.

Fishery removals of the stock are considered in the stock assessment processes so the stock PASSES Clause C1.1.

As of the latest assessment of stock status biomass is considered to be above the corresponding limit reference such that the stock PASSES Clause C1.2.

As the stock passes both Clause C1.1 and C1.2, the by-product covered by this report is APPROVED for the production of fishmeal and fish oil under the current IFFO RS v 2.0 by-product standard.

Fishery Assessment Peer Review Comments

PR agrees that the species meets the MT pre-requisites and has been correctly assessed under Category C. The references provided support the conclusions of the Section C assessment and PR agrees with the assessor's conclusion that the byproduct should be approved for use as a raw material.

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*	FAO 51	IOTC, National authorities of Mauritius	C	Globally Least concern	No

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[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			
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.

Skipjack tuna is managed by the RFMO, the Indian Ocean Tuna Commission and its resolutions are binding on its members. Scientific advice is provided by the IOTC's Scientific Committee supported by working parties. Fishery removals of the stocks in the fishery under this assessment are included in the IOTC stock assessment process with skipjack catches being available to view through the IOTC Online Data Querying Service.

The Skipjack Tuna of Indian Ocean is assessed as one stock. The summary of 2021 estimates the stock status to be above the adopted target for this stock and that the current exploitation rate is just below the target.

According to the 2020 summary of nominal catches, total Mauritian catches of skipjack tuna from the Western Indian Ocean in 2019 were 12,759 mt while total catches by all nations were 547,248 mt.

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.

A new stock assessment was carried out for skipjack tuna in 2020 using data up to 2019 (IOTC–2020–SC23–ES03). Stock status and current exploitation rate are estimated above target ($SSB2019/SSB40\%SSB0 = 1.11$ (0.95 – 1.29)) and just below ($E2019/E40\%SSB0 = 0.92$ (0.67 – 1.21)) their respective targets. Model-estimated spawning biomass remains above SSBMSY ($SSB2019/SSBMSY = 1.99$ (1.47 – 2.63)) with very high probability.

The summary states that the current spawning biomass relative to unexploited levels is at 45%. On the weight-of-evidence available in 2020, the skipjack tuna stock is determined to be: (i) above the adopted biomass target reference point; (ii) not overfished ($SB2019>SB40\%SB0$); (iii) with fishing mortality below the adopted target fishing mortality, and (iv) not subject to overfishing ($E2019<E40\%SB0$).

As the stock is reported to have a biomass above the limit reference point, the stock achieves a PASS against C1.2.
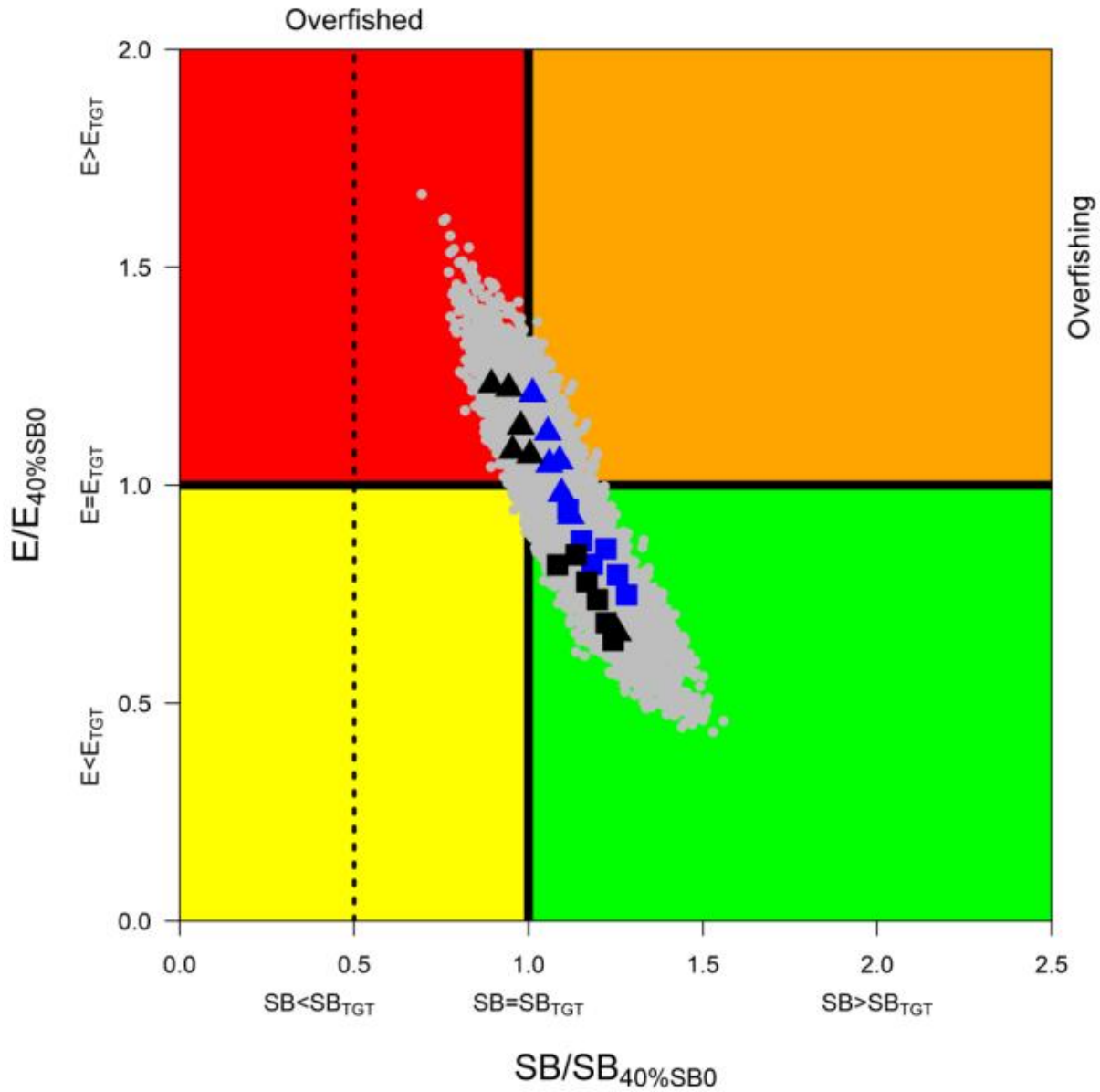
Fig 1. Skipjack tuna: SS3 Aggregated Indian Ocean assessment Kobe plot of the 2020 uncertainty grid. Symbols represent MPD estimates of current stock status relative to SB40%SB0 (x-axis) and E40%SB0 (y-axis) for the individual models (blue, no effort creep; black, additional effort creep; triangle, full weighting of tagging data; square, tagging data downweighted). Grey dots represent uncertainty from individual models. The vertical dashed line represents the limit reference point for Indian Ocean skipjack tuna (SBlim = 20%SB0)

References

https://www.iattc.org/GetAttachment/0acfc999-fbcd-4b07-9e8d-fc5f85fd88e8/SAC-13-07_Skipjack-tuna-interim-assessment-2022.pdf

https://sourcingtransparencyplatform.org/sites/default/files/2022-07/3_Skipjack2021E%20%281%29.pdf

IOTC-2020-WPTT22(AS)-DATA03. IOTC Nominal Catches by Fleet, Year, Gear, IOTC Area and Species, 2020: https://www.iotc.org/WPTT/22AS/Data/03-NC.

IOTC Online Data Querying Service: https://www.iotc.org/node/6240.

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		
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