



MarinTrust Standard V2

By-product Fishery Assessment *Skipjack tuna in FAO Areas 51 (Indian Ocean, Western) and 57 (Indian Ocean, Eastern)*

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 (<i>Katsuwonus pelamis</i>)
	Geographical area:	FAO 51, 57 Indian Ocean
	Country of origin of the product:	Indonesia
	Stock:	Skipjack tuna (<i>Katsuwonus pelamis</i>) in FAO 51, 57
Date	27 July 2023	
Report Code	IND01	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	Indonesia	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): PT Pahala Bahari Nusantara			
Country: Indonesia			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ana Elisa Almeida Ayres	Matthew Jew	0.5	Initial
Assessment Period	Up to July 2023		

Scope Details	
Main Species	Skipjack tuna (<i>Katsuwonus pelamis</i>)
Stock	Skipjack tuna (<i>Katsuwonus pelamis</i>) in FAO 51, 57
Fishery Location	FAO 51, 57 – Indian Ocean
Management Authority (Country/ State)	Ministry of Marine Affairs and Fisheries (Indonesia), Indian Ocean Tuna Commission (IOTC)
Gear Type(s)	Purse seine, baitboat, gillnet and pole-and-line
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's recommendation
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
<p>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 (<i>Katsuwonus pelamis</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, Skipjack tuna (<i>Katsuwonus pelamis</i>) is eligible for approval for use as Marin Trust by-product raw material.</p> <p>For assessment and management purposes, one discrete stock of skipjack tuna is recognised in the Indian Ocean; therefore, this assessment covers one stock (i.e. Skipjack tuna in the Indian Ocean) when fished within Food and Agriculture Organization of the United Nations - FAO fishing areas 51 and 57.</p> <p>Indonesia is a member of the Indian Ocean Tuna Commission (IOTC). Fishery removals from the stock are considered in the IOTC stock assessment processes such that the stock achieves a PASS against Clause C1.1.</p> <p>In addition, in most recent stock assessment published in 2022 and over the history of the fishery, biomass has been well above the adopted limit reference, thus the stock PASS against C1.2.</p> <p>Therefore, skipjack tuna (<i>Katsuwonus pelamis</i>) in FAO 51, 57 - Indonesia is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified the skipjack tuna in the Indian Ocean under category C, as the stock is managed and reference points are defined to assess the stock status against.</p> <p>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: the fishery passes both clauses C1.1 and C1.2.</p> <p>Therefore, the skipjack tuna in the Indian Ocean tuna is APPROVED for the production of fishmeal and fish oil under the current MarinTrust V2.3 by-products standards.</p>
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 a 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	<i>Katuswonus pelamis</i>	<i>Katuswonus pelamis</i> - Skipjack tuna in FAO 51, 57	IOTC, Ministry of Marine Affairs and Fisheries (Indonesia)	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 (<i>Katsuwonus pelamis</i>)	
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
<p>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.</p> <p>According to United Nation Convention of the Law of the Sea - UNCLOS (1982) which has been ratified by Indonesia through Act No. 17 Year 1985, highly migratory species are managed by international or regional agreement, in this case is tuna Regional Fisheries Management Organization (tRFMO). The development of harvest strategies for Skipjack tuna is consistent with Indonesia's rights and obligations as a member of the Indian Ocean Tuna Commission (IOTC). The majority of skipjack tuna catches in Indian Ocean during 2017-2021 period are attributed to vessels flagged to Indonesia (18.4%) followed by EU (Spain) (17.8%) and Maldives (17.2%) in Indian Ocean (IOTC, 2022).</p> <p>The stock assessment conducted by IOTC takes all fishery removals into account. The most recent assessment was conducted in 2022, using Stock Synthesis with data up to 2019 (IOTC, 2022). The catch limit calculated applying the HCR specified in Resolution 16/02 was 513,572 t for the period 2021-2023. The catch in 2021 (650,331t) exceeded the 2020 level by 17%. IOTC (2022) pointed that this was likely due favourable environmental conditions and highlighted the need of ensuring that catches of skipjack tuna do not exceed the agreed limit and impact associated tuna stocks (bigeye and yellowfin tuna).</p>			

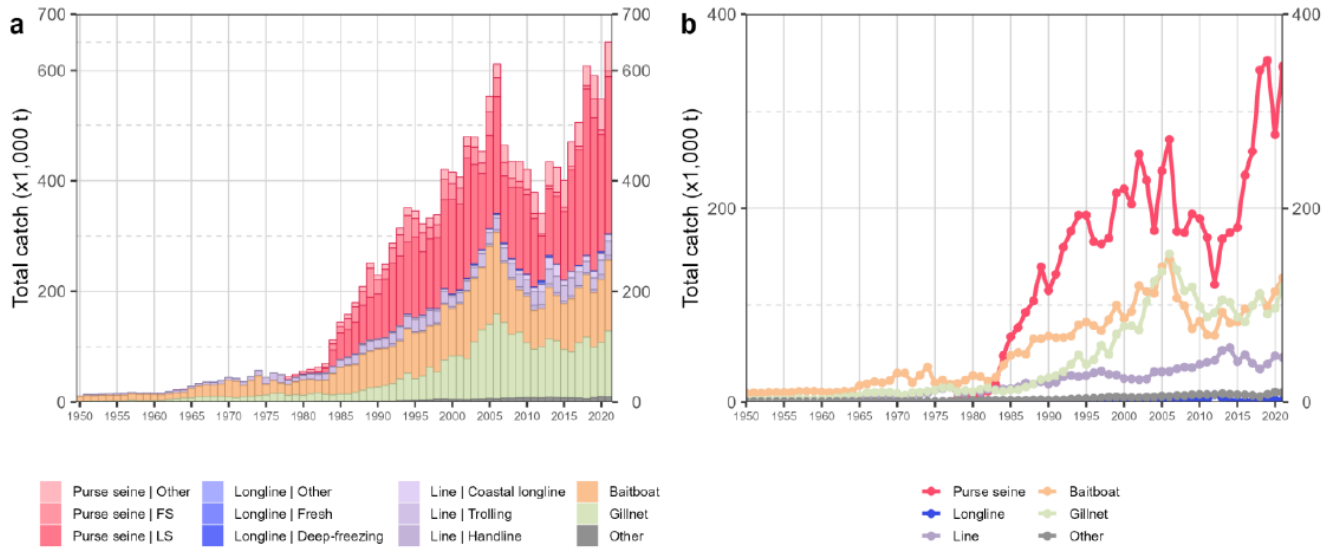


Fig. 1. Annual time series of (a) cumulative nominal catches (metric tonnes; t) by fishery and (b) individual nominal catches (metric tonnes; t) by fishery group for skipjack tuna during 1950–2021. ES = free-swimming schools; LS = schools associated with drifting floating objects. Purse seine | Other: coastal purse seine, purse seine of unknown association type, ring net; Longline | Other: swordfish and sharks-targeted longlines; Other: all remaining fishing gears

FIGURE 1. SOURCE: IOTC (2022).

Fishery removals of yellowfin tuna 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.

According to ISSF (2023):

“Resolution 16/09 established a Technical Committee on Management Procedures to help guide the Commission on policy choices for establishing Management Procedures and Resolution 21/03 on skipjack Harvest Control Rules requests to develop a full Harvest Strategy. The following components have been agreed:

Limit reference point: Interim limit reference points are $0.2 \cdot SSB_0$ and $F_{0.2SSB_0}$ (the fishing mortality value associated with sustaining the stock at $0.2 \cdot SSB_0$) (Resolutions 21/03 and 15/10). The value of $SSB_{current}/SSB_0$ is 0.45, which is above the SSB limit, and $F_{current}/F_{40\%SSB_0}$ equals 0.92, which is below the F limit.

Target reference point: Interim target reference points are $0.4 \cdot SSB_0$ and $F_{0.4SSB_0}$ (the fishing mortality value associated with sustaining the stock at $0.4 \cdot SSB_0$) (Resolutions 21/03 and 15/10). $F_{current}/F_{40\%SSB_0}$ is 0.92, which is below the F target, and $SSB_{current}/SSB_0$ is 0.45 which above the SSB target.”

Whereas,

SSB_0 = unfished spawning biomass

$F_{0.2SSB_0}$ = the fishing mortality value associated with sustaining the stock at $0.2 \cdot SSB_0$

$SSB_{current}$ = spawning biomass in 2019

$F_{40\%SSB_0} = F_{0.4SSB_0}$ = the fishing mortality value associated with sustaining the stock at $0.4 \cdot SSB_0$

Over the history of the fishery, biomass has been well above the adopted limit reference point. On the weight-of-evidence available in 2020, the skipjack tuna stock is determined to be above the adopted biomass target reference point; not overfished, with fishing mortality below the adopted target fishing mortality, and not subject to overfishing (IOCT,2022).

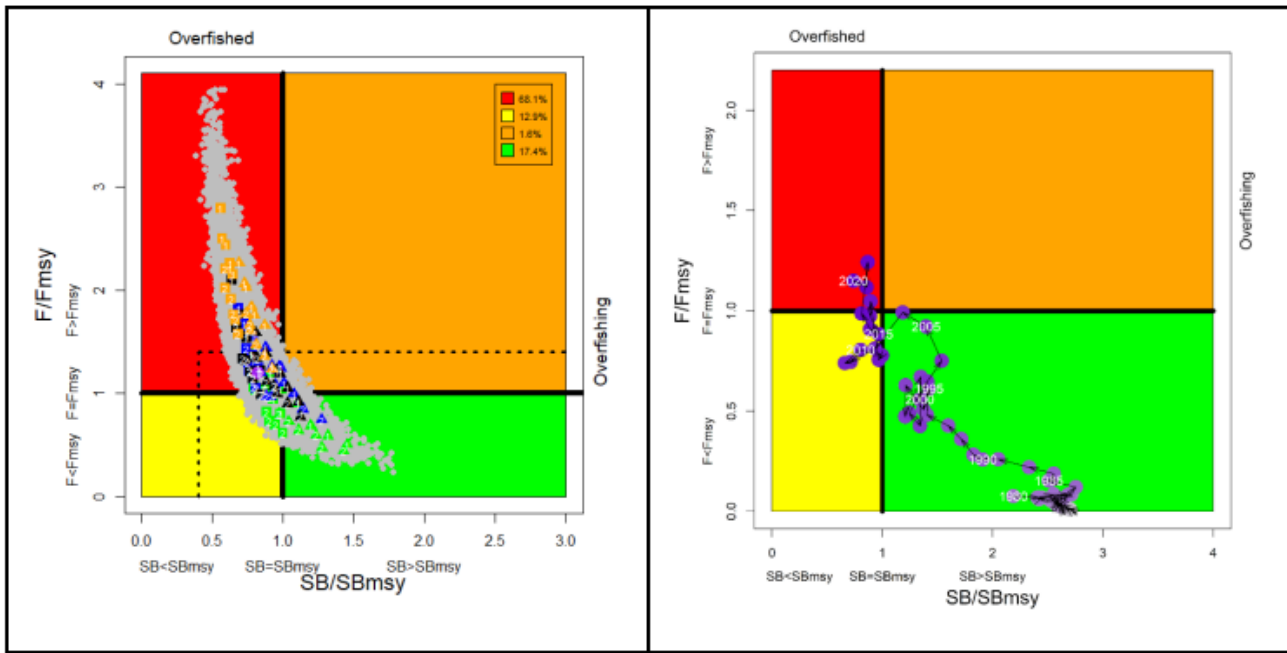


Fig. 4. Yellowfin tuna: SS3 Indian Ocean assessment Kobe plot: (left): current (2020) stock status, relative to SB_{MSY} (x-axis) and F_{MSY} (y-axis) reference points for the final model options. Coloured symbols represent Maximum posterior density (MPD) estimates from individual models: square and Triangles and represents LL CPUE catchability options q_1 and q_2 respectively; green, blue, black, and orange represents growth and natural mortality option combination G_{base_Mbase} , $GDortel_Mbase$, G_{base_Mlow} , and $GDortel_Mlow$ respectively; 1,2, represents spatial structure option io and sp respectively. The purple dot represents the base model. Grey dots represent uncertainty from individual models. The dashed lines represent limit reference points for IO yellowfin tuna ($SB_{lim} = 0.4 SB_{MSY}$ and $Flim = 1.4 F_{MSY}$); (right) stock trajectory from the base model

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

IOTC. 2022. Indian Ocean Yellowfin Tuna Stock Status: Executive Summary. https://iotc.org/sites/default/files/content/Stock_status/2022/Yellowfin2022E.pdf

ISSF. 2023. Status of the World Fisheries for Tuna: March 2023. ISSF Technical Report 2023-01. International Seafood Sustainability Foundation, Pittsburgh, PA, USA. <https://www.issf-foundation.org/research-advocacy-recommendations/our-scientific-program/scientific-reports/download-info/issf-2023-01-status-of-the-world-fisheries-for-tuna-march-2023/>

Links

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