



MarinTrust Standard V2

By-product Fishery Assessment *Katsuwonus pelamis, FAO 51,57* *Indian Ocean*

MarinTrust Programme

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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
	Country of origin of the product:	El Salvador, Ecuador, Spain, Panama, Portugal
	Stock:	Indian Ocean
Date	January 2023	
Report Code	ESP32	
Assessor	Vineetha Aravind	
Country of origin of the product - PASS	Spain	
Country of origin of the product - FAIL	NA	

Application details and summary of the assessment outcome			
Company Name(s): Sarval Bio-industries Noroeste, S.A.U. Arteixo, Calvo Conservas S.A.			
Country: El Salvador, Ecuador, Spain, Panama, Portugal			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:			
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Vineetha Aravind	Kate Morris	0.5	Re-Approval
Assessment Period	Jan 2023 – Jan 2024		

Scope Details	
Main Species	Skipjack Tuna (<i>Katsuwonus pelamis</i>)
Stock	Indian Ocean
Fishery Location	FAO 51, 57
Management Authority (Country/ State)	El Salvador, Ecuador, Spain, Panama, Portugal
Gear Type(s)	Purse seine, bait boat, gillnet and other
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
<p>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.</p> <p>Fishery removals of the stocks in the fishery under assessment are included in the IOTC stock assessment process. Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery PASSES clause C1.1.</p> <p>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.</p> <p>As the stock passes both Clause C1.1 and C1.2, the skipjack tuna in FAO Areas 51 and 57 is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-product standard.</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment here is the Skipjack Tuna (<i>Katsuwonus pelamis</i>) fishery, pursued by vessels in FAO fishing area 51 and 57. Skipjack tuna is managed by Indian Ocean Tuna Commission (IOTC) of and the regulations under each flag state. For this Marin Trust assessment, the Skipjack tuna stock is scored against Category C and passed.</p> <p>The species scoring table has been completed by the auditor with sufficient evidence presented to support their final determination.</p> <p>The peer review supports the auditor's recommendation to pass the FAO 51, 57, Skipjack stock pursued by the fishery under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.</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 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	<i>Katsuwonus pelamis</i>	Indian Ocean Skipjack tuna	IOTC, National authorities of Spain	C	Least Concern	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			
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.			
Fishery removals of the stocks in the fishery under assessment are included in the IOTC stock assessment process with skipjack catches being available to view through the IOTC Online Data Querying Service and are summarised annually. According to the 2021 summary of nominal catches the catches by gear types are shown in the figure 1.			
Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process and the fishery PASSES clause C1.1.			

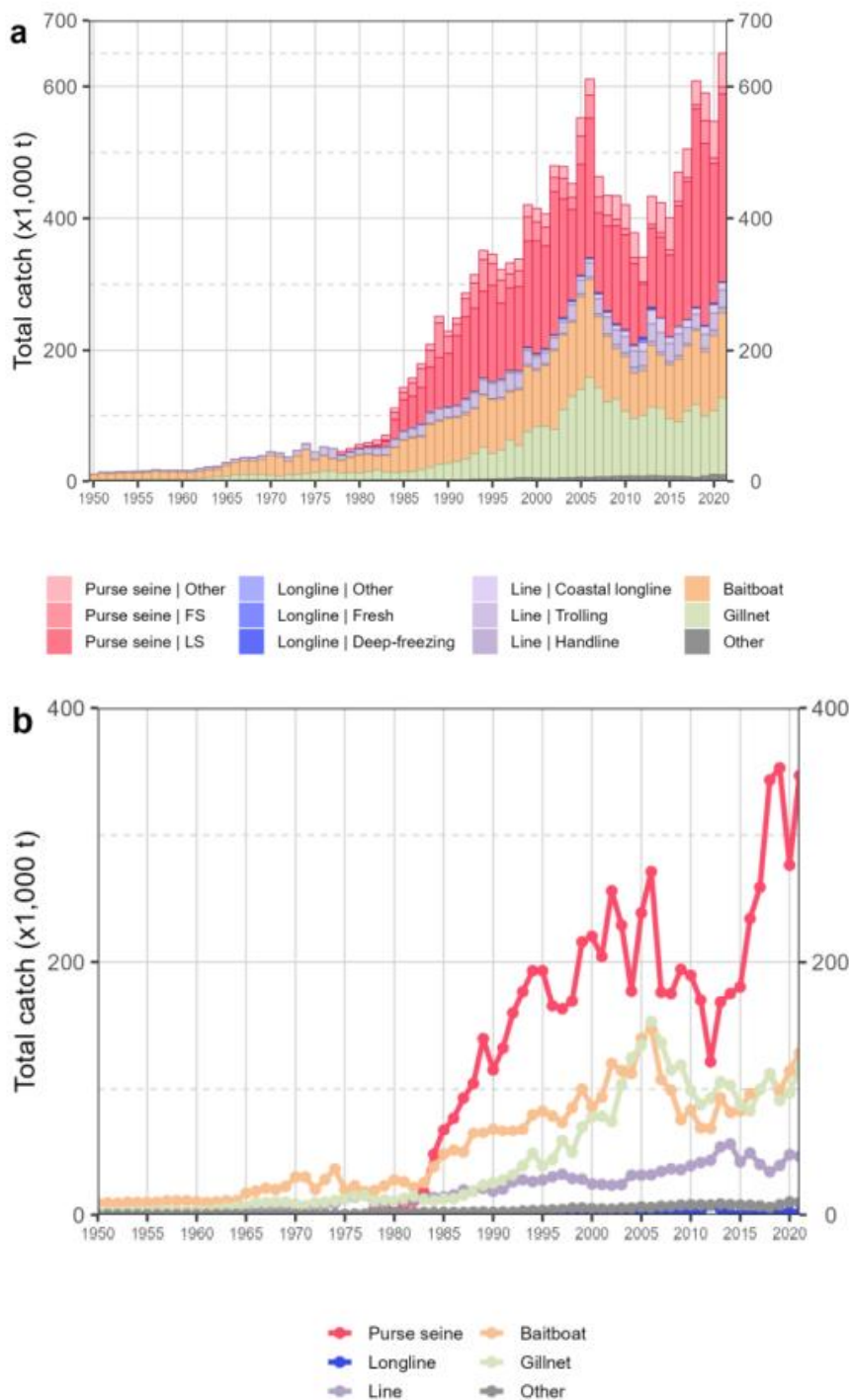


Fig. 1. Annual time series of (a) cumulative nominal catches (metric tonnes; t) by fishery and (b) individual nominal catches (metric tonnes; t) by fishery group for skipjack tuna during 1950–2021. FS = free-swimming schools; LS = schools associated with drifting floating objects. Purse seine | Other: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

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.

No new stock assessment was conducted in 2022 by IOTC and so the advice of IOTC is based on the 2020 assessment using Stock Synthesis with data up to 2019. The outcome of the 2020 stock assessment model does not differ substantially from the previous

assessment (2017) despite the large catches recorded in the period 2018-2019, which exceeded the catch limits established in 2017 for this period. The stock estimate of Skipjack tuna in 2020 was using data up to 2019 (IOTC–2020–SC23–ES03).

The estimated stock status indicates that the stock is above the adopted target and the current exploitation rate is just below the target. The models estimate that the spawning biomass remains above its SBMSY and the fishing mortality remains below EMSY with very high probability. Throughout the history of the fishery, biomass has been well above the adopted limit reference point ($0.2 \times SB_0$). The recent catches have been within the range of estimated target yield (see $C40\%SB_0$). Current spawning biomass relative to unexploited levels is estimated at 45%.

Thus, 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 ($SB_{2019} > SB_{40\%SB_0}$); (iii) with fishing mortality below the adopted target fishing mortality, and (iv) not subject to overfishing ($E_{2019} < E_{40\%SB_0}$)

Current spawning biomass was considered to be above the target reference point of 40% of SB_0 , and above the limit reference point of $0.2 \times SB_0$ as per Resolution 16/02 (Fig. 2).

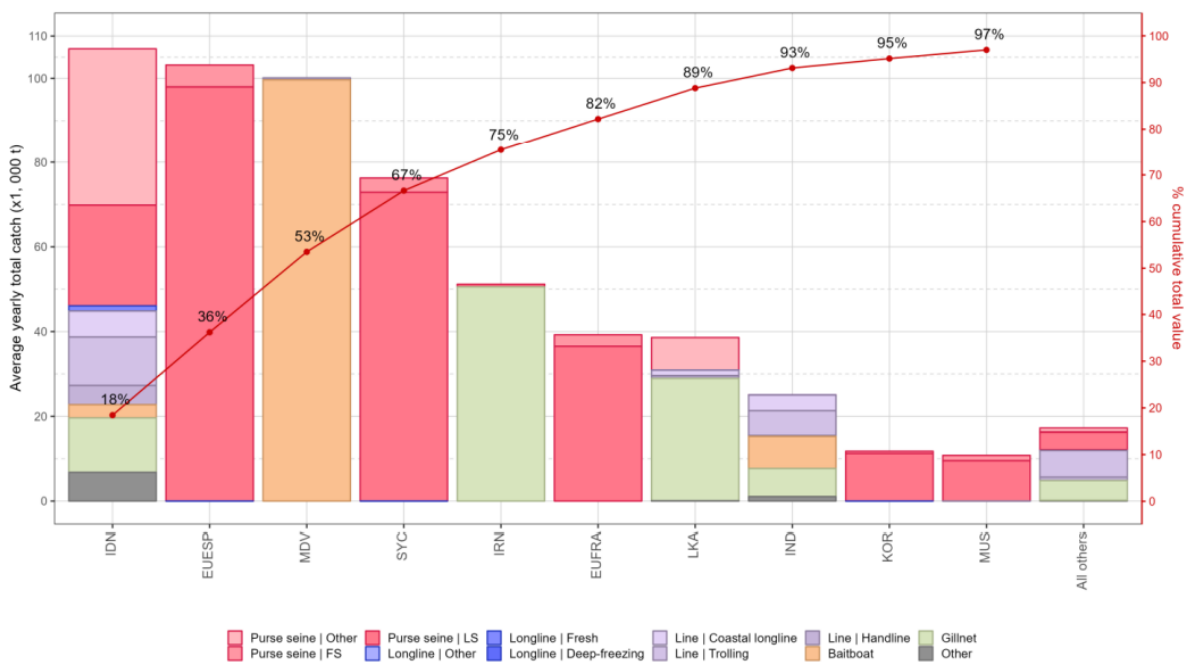


Fig. 2. Mean annual catches (metric tonnes; t) of skipjack tuna by fleet and fishery between 2017 and 2021, with indication of cumulative catches by fleet. FS = free-swimming schools; LS = schools associated with drifting floating objects. Purse seine | Other: coastal purse seine, purse seine of unknown association type, ring net; Longline | Other: swordfish and sharks-targeted longlines; Other: all remaining fishing gears

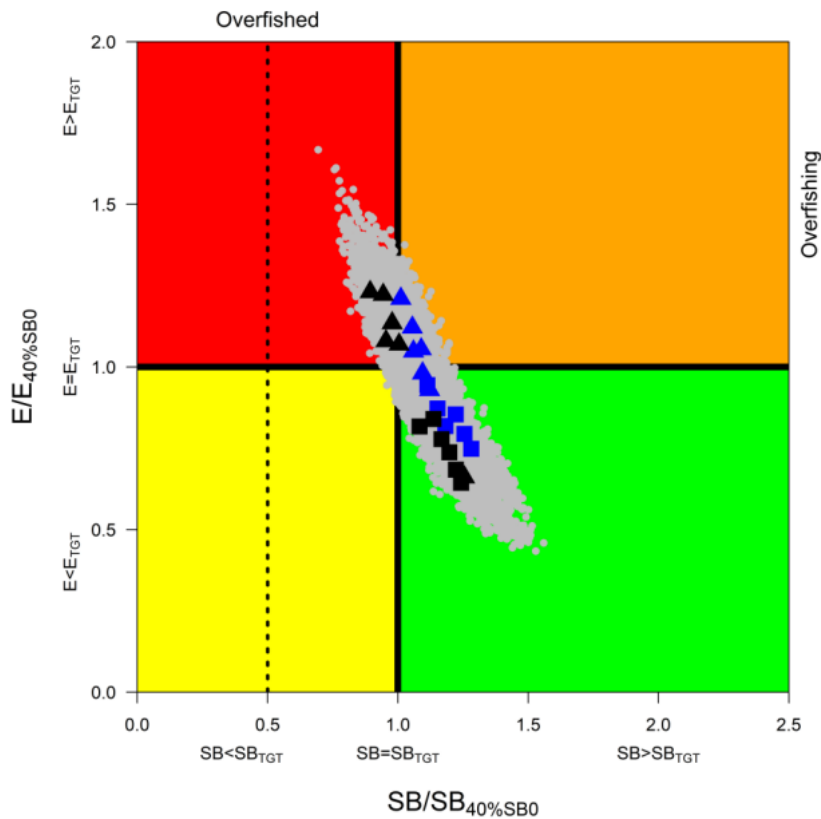


Fig. 3. Skipjack tuna: SS3 Aggregated Indian Ocean assessment Kobe plot of the 2020 uncertainty grid. Symbols represent Maximum posterior density (MPD) estimates of current stock status relative to SB40%SB0 (x-axis) and E40%SB0 (y-axis) for the individual models (blue, no effort creep; black, additional 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)

Therefore, the stock can be considered, in its most recent stock assessment, to have a biomass above its limit reference point (or proxy) and it PASSES C1.2.

References

IOTC-2022-SC25-ES03 <https://iotc.org/documents/SC/25/ES03E>

Charles T T Edwards.2022. Presentation of an empirical MP for Indian Ocean skipjack tuna Prepared for the Indian Ocean Tuna Commission May 8, 2022. IOTC-2022-TCMP05-09_Rev1

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) <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>			
	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	