MarinTrust Standard V2

By-product Fishery Assessment

FAO 51-57 Indian Ocean Yellowfin tuna *(Thunnus albacares)*

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:	Yellowfin tuna (*Thunnus albacares*)
	Geographical area:	FAO 51-57 – Indian Ocean
	Country of origin of the product:	El Salvador, Ecuador, Spain, USA, Phillipines, Panama, Portugal (Flag countries)
	Stock:	Indian Ocean Yellowfin tuna (*Thunnus albacares*)
Date	May 2022	
Report Code	SLV03	
Assessor	Vito Romito	
Country of origin of the product - PASS	El Salvador, Ecuador, Spain, USA, Phillipines, Panama, Portugal (Flag countries)	
Country of origin of the product - FAIL		

Application details and summary of the assessment outcome			
Company Name(s): Calvo conservas S.A			
Country: El Salvador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Vito Romito	Ivan Mateo	0.5	Surveillance 2
Assessment Period	To May 2022		

Scope Details	
Main Species	Yellowfin tuna
Stock	Indian Ocean Yellowfin tuna (*Thunnus albacares*)
Fishery Location	FAO 51-57 – Indian Ocean
Management Authority (Country/ State)	Indian Ocean Tuna Commission and contracting parties (States)
Gear Type(s)	Purse seine (free and associated schools), longline, handline, gillnet, and pole-and-line.
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor's determination
Recommendation	APPROVE

Table 2. Assessment Determination

Assessment Determination
If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin Trust raw material. Yellowfin tuna is neither listed as Endangered or Critically Endangered on IUCN's Red List, nor listed in CITES appendices; therefore, it is eligible for approval for use as Marin Trust by-product raw material. Yellowfin tuna (*Thunnus albacares*) in the Indian Ocean is currently subject to a number of Conservation and Management Measures adopted by the Indian Ocean Tuna Commission (IOTC) including among others: • Resolution 19/01 and 18/01 On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence set out measures including gear and CPC specific catch reductions required to rebuild the yellowfin tuna Indian Ocean stock • Resolution 15/02 Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs) indicated that the provisions are applicable to tuna and tuna-like species • Resolution 15/10 On target and limit reference points and a decision framework sets out procedures for the SC to follow when setting interim target and limit reference points when assessing stock status and providing recommendations to the Commission including the target and limit reference points for yellowfin tuna of BTARGET = BMSY and BLIM = 0.40 BMSY respectively. The stock is assessed by the IOTC and therefore assessed as a Category C here. The 2021 yellowfin tuna model used four types of dataset: catch data, size frequency, tagging and CPUE indices. 2020 spawning biomass is considered to be 13% below the interim target reference point of SBMSY and above the interim limit reference point of 0.4*SBMSY. According to the above the stock passed Clause C1.1. and C1.2. This stock is APPROVED for the production of fishmeal and fish oil under the current Marin Trust v 2.0 Standard for by-products.
Fishery Assessment Peer Review Comments
The assessor correctly classified the Indian Ocean Yellowfin tuna (*Thunnus albacares*) in FAO 51-57 as category C, 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. The most recent stock assessment shows that the stock is considered to have a biomass well above the limit reference point. Therefore, the Indian Ocean Yellowfin tuna (*Thunnus albacares*) in FAO 51-57 fishery passes both C1.1 and C1.2 and therefore the Indian Ocean Yellowfin tuna (*Thunnus albacares*) in FAO 51-57 is approved
Notes for On-site Auditor
None

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]
Yellowfin tuna	*Thunnus albacares*	Indian Ocean Yellowfin tuna (*Thunnus albacares*)	Indian Ocean Tuna Commission and contracting parties (States)	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	Indian Ocean Yellowfin tuna (*Thunnus albacares*)	
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.

A new stock assessment was carried out for Indian Ocean yellowfin tuna in 2021 (IOTC 2021) using Stock Synthesis III (SS3), a fully integrated model that is currently used to provide scientific advice for the three tropical tunas stocks in the Indian Ocean. The model used in 2021 is based on the model developed in 2018 with a series of revisions that were noted during the WPTT in 2018, 2019 and 2020. The model used four types of dataset: catch data, size frequency, tagging and CPUE indices.

Clause 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.

Spawning biomass in 2020 was estimated to be 31% on average of the unfished (1950) levels. Biomass estimates have been generally declining over time and particularly since 2011. Spawning biomass in 2020 was estimated to be 87% of the level that supports the maximum sustainable yield (SB2020/ SBMSY = 0.87). 2020 spawning biomass is considered to be 13% below the interim target reference point of SBMSY and above the interim limit reference point of 0.4*SBMSY.

Current fishing mortality is estimated to be 32% higher than FMSY (F2020/ FMSY = 1.32). The probability of the stock being in the red Kobe quadrant in 2020 is estimated to be 68%. On the weight-of-evidence available since 2018, the yellowfin tuna stock is determined to remain overfished and subject to overfishing. Overall stock assessment results are shown in the Kobe plot below.

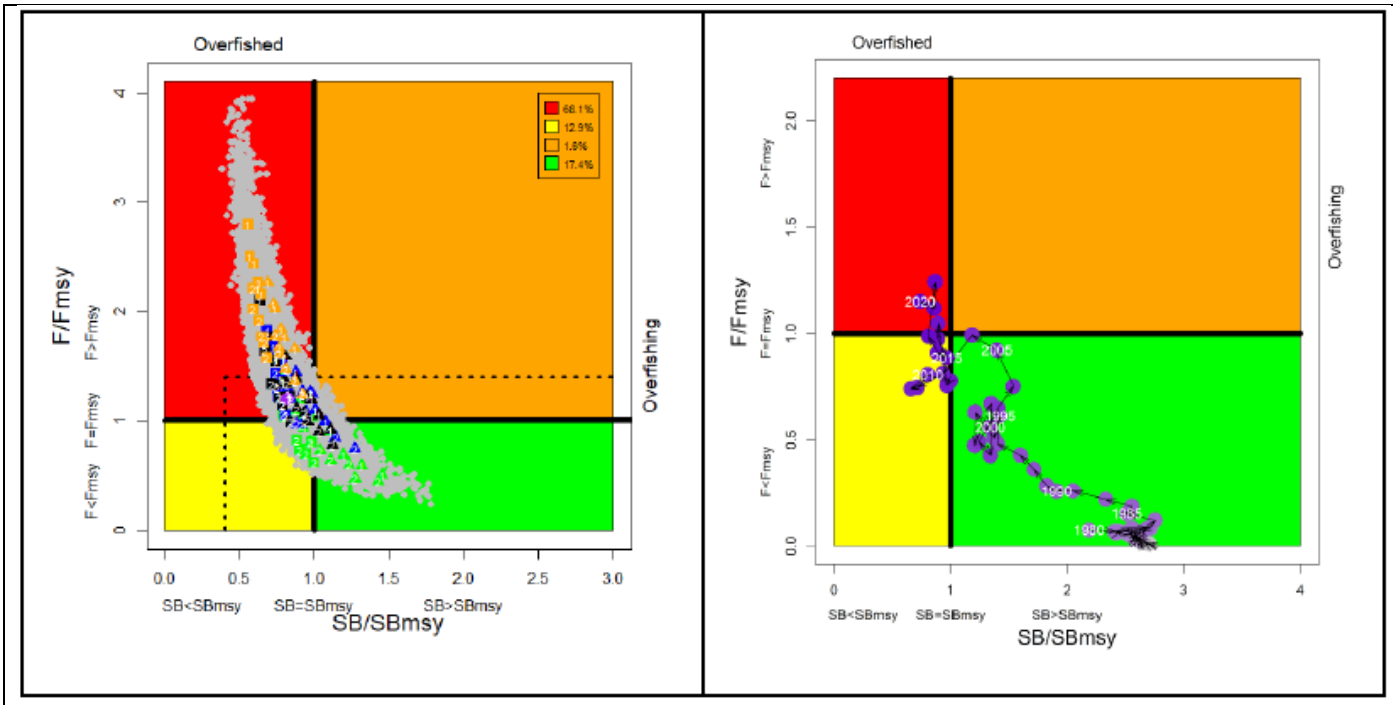

Figure 1. Yellowfin tuna: SS3 Indian Ocean assessment Kobe plot: (left): current stock status, relative to SBMSY (x-axis) and FMSY (y-axis) reference points for the final model options. Coloured symbols represent Maximum posterior density (MPD) estimates from individual models: square and Triangles and represents LL CPUE catchability options q1 and q2 respectively; green, blue, black, and orange represents growth and natural mortality option combination Gbase_Mbase, GDortel_Mbase, Gbase_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 (SBlim = 0.4 SBMSY and Flim = 1.4 FMSY); (right) stock trajectory from the base model.

Since the stock is above its limit reference point, **Clause C1.2 is met.**

References

CITES. 2022. Cites Appendix 1. https://cites.org/eng/app/appendices.php

Collette, B.B., Boustany, A., Fox, W., Graves, J., Juan Jorda, M. & Restrepo, V. 2021. Thunnus albacares. The IUCN Red List of Threatened Species 2021: e.T21857A46624561. https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T21857A46624561.en. Accessed on 17 May 2022.

IOTC. 2021. Executive summary Yellowfin tuna 2021 stock assessment. Indian Ocean Tuna Commission. https://www.iotc.org/sites/default/files/documents/science/species_summaries/english/4_Yellowfin2021E.pdf

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	Low productivity/ High risk	Medium productivity/ Medium risk	High productivity/ Low risk
	Score 3	Score 2	Score 1
Average age at maturity (years)	>4	2 to 4	<2
Average maximum age (years)	>30	10 to 30	<10
Fecundity (eggs/spawning)	<1 000	1 000 to 10 000	>10 000
Average maximum size (cm)	>150	60 to 150	<60
Average size at maturity (cm)	>150	30 to 150	<30
Reproductive strategy	Live bearer, mouth brooder or significant parental investment	Demersal spawner "berried"	Broadcast spawner
Mean trophic level	>3.25	2.5–3.25	<2.5

Susceptibility attributes		High susceptibility/ High risk	Medium susceptibility/ Medium risk	Low susceptibility/ Low risk
		Score 3	Score 2	Score 1
Availability	1) Overlap of adult species range with fishery	>50% of stock occurs in the area fished	Between 25% and 50% of the stock occurs in the area fished	<25% of stock occurs in the area fished
	2) Distribution	Only in the country/ fishery	Limited range in the region	Throughout region/ global distribution
Encounterability	1) Habitat	Habitat preference of species make it highly likely to encounter trawl gear (e.g. demersal, muddy/sandy bottom)	Habitat preference of species make it moderately likely to encounter trawl gear (e.g. rocky bottom/reefs)	Depth or distribution of species make it unlikely to encounter trawl gear (e.g. epi-pelagic or meso-pelagic)
	2) Depth range	High overlap with trawl fishing gear (20 to 60 m depth)	Medium overlap with trawl fishing gear (10 to 20 m depth)	Low overlap with trawl fishing gear (0 to 10 m, >70 m depth)
Selectivity		Species >2 times mesh size or up to 4 m length	Species 1 to 2 times mesh size or 4 to 5 m length	Species <mesh size or >5 m length
Post capture mortality		Most dead or retained Trawl tow >3 hours	Alive after net hauled Trawl tow 0.5 to 3 hours	Released alive Trawl tow <0.5 hours

Note: Availability 2 is only used when there is no information for Availability 1; the most conservative score between Encounterability 1 and 2 is used.

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