



## MarinTrust Standard V2

# By-product Fishery Assessment SLV12 – Yellowfin tuna in FAO 34, 41 and 47

**MarinTrust Programme**

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Yellowfin Tuna ( <i>Thunnus albacares</i> )
	Geographical area:	FAO 34 Eastern Central Atlantic, FAO 41 Southwest Atlantic and FAO 47 Southeast Atlantic
	Country of origin of the product:	El Salvador, Ecuador, Spain, USA, Philippines, Panama
	Stock:	Atlantic Yellowfin tuna
Date	June, 2024	
Report Code	SLV12	
Assessor	Jose Peiro Crespo	
Country of origin of the product - PASS	El Salvador, Ecuador, Spain, USA, Philippines, Panama	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Calvo Conservas El Salvador SA de CV			
Country: El Salvador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Jose Peiro Crespo	Sam Peacock	0.5	Surveillance 2
Assessment Period	June 2024 - June 2025		

Scope Details	
Main Species	Yellowfin Tuna ( <i>Thunnus albacares</i> )
Stock	Atlantic Yellowfin Tuna
Fishery Location	FAO 34 Eastern Central Atlantic FAO 41 Southwest Atlantic FAO 47 Southeast Atlantic
Management Authority (Country/ State)	International Commission for the Conservation of Atlantic Tunas (ICCAT)
Gear Type(s)	Purse seine, longline
Outcome of Assessment	
Peer Review Evaluation	Agree with assessment conclusion
Recommendation	<b>Pass</b>

Table 2. Assessment Determination

Assessment Determination
<p>Yellowfin tuna (<i>Thunnus albacares</i>) meets the eligibility criteria for approval as Marin Trust by-product raw material, as it is not categorized as Endangered or Critically Endangered on the Union for Conservation of Nature's Red List (IUCN) (it is listed as Least Concern), nor does it appear in CITES appendices.</p> <p>For assessment and management purposes, one single stock of yellowfin tuna is found in the Atlantic. It is managed and assessed relative to a target reference point (BMSY) and it is assessed under category C.</p> <p>The assessment processes take into account fishery removals from the stock. Thus, the stock attains a <b>pass against Clause C1.1</b>. In the last stock assessment, conducted for the stock in 2019, indicated that the stock was over the target reference point (B2018/BMSY is 1.17). Therefore, it <b>passes against C1.2</b>.</p> <p>Consequently, Yellowfin tuna from FAO 34, 41 and 47 has been granted <b>approval</b> for the production of fishmeal and fish oil, adhering to the existing MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>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.</p> <p>The peer reviewer notes that the most recent stock assessment for this stock was conducted in 2019, 5 years ago. The next MT assessment of this byproduct should consider whether this stock assessment is sufficiently up-to-date, should no further stock assessment be conducted in the interim.</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 <sup>1</sup>	CITES Appendix 1 <sup>2</sup>
Yellowfin tuna	<i>Thunnus albacares</i>	Atlantic Ocean yellowfin tuna	ICCAT	C	Least concern <sup>3</sup>	No

<sup>1</sup> <https://www.iucnredlist.org/>

<sup>2</sup> <https://cites.org/eng/app/appendices.php>

<sup>3</sup> <https://www.iucnredlist.org/species/21857/46624561>

## CATEGORY C SPECIES

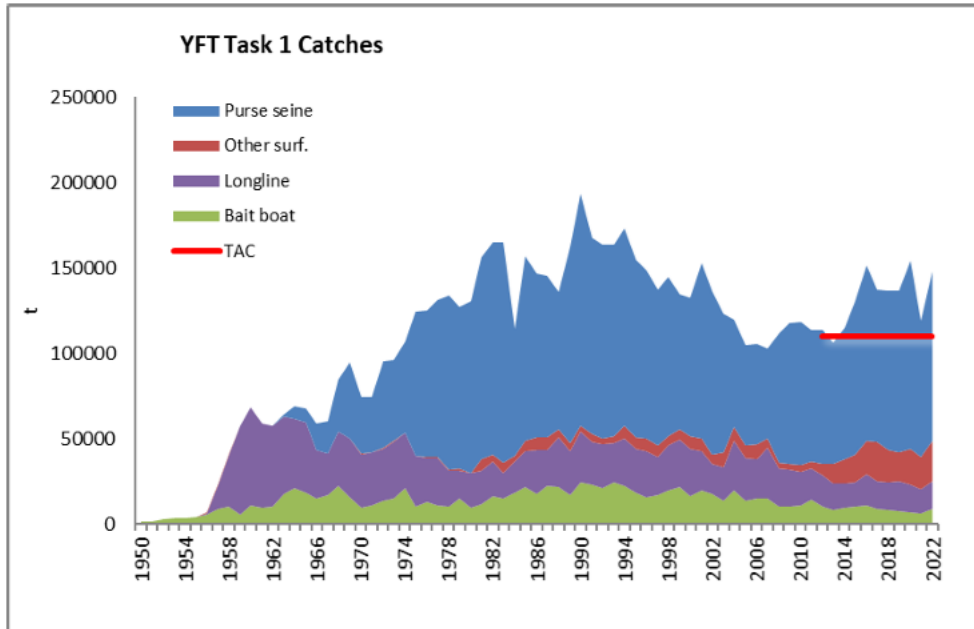
In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

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.

<b>Species Name</b>		<b>Yellowfin Tuna (<i>Thunnus albacares</i>)</b>	
<b>C1</b>	<b>Category C Stock Status - Minimum Requirements</b>		
	<b>C1.1</b>	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.	<b>Pass</b>
	<b>C1.2</b>	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.	<b>Pass</b>
<b>Clause outcome:</b>			<b>Pass</b>
<b>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.</b>			
Yellowfin tuna have been exploited by three major gears (longline, baitboat and purse seine fisheries) and by many countries throughout its range. Detailed data are available since the 1950s. Overall Atlantic catches declined by nearly half from the peak in 1990 (193,584 t) to 106,333 t estimated for 2013 but have since increased to an average of nearly 140,000 t during 2020-2022. A low catch was observed in 2021 (119,454 t),			

coincident with the COVID-19 pandemic and the imposition of the most recent moratorium. However, catches in 2022 rebounded to 148,211 t, well above the recommended TAC (ICCAT report 2022-2023).

Although some uncertainties were identified in the catch data, that information was incorporated in the stock assessment.



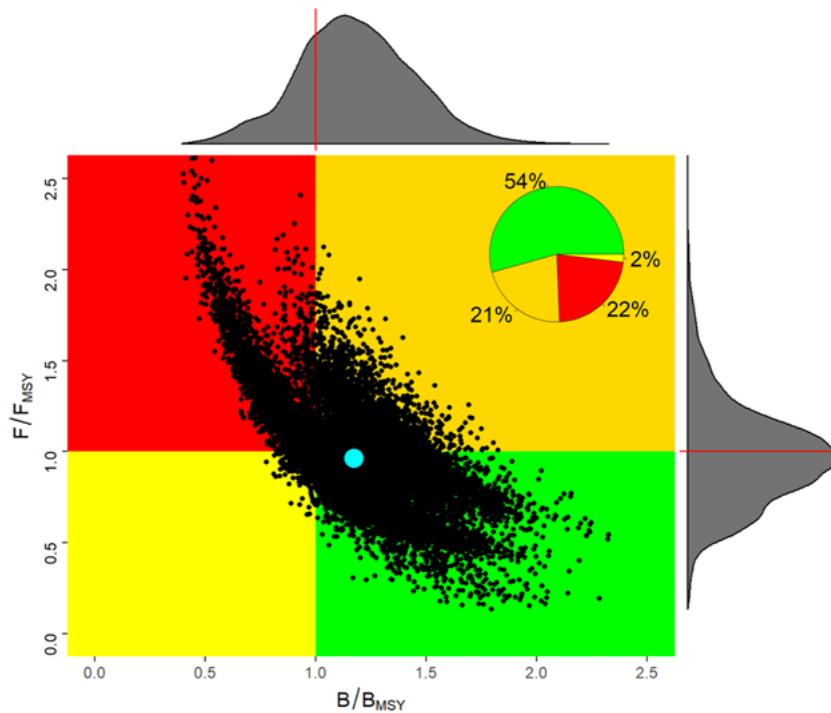
**FIGURE 1 YELLOWFIN TUNA TOTAL CATCH 1950 – 2022 BY MAIN FISHING GEAR GROUP (ICCAT REPORT 2022-2023)**

Fishery removals of the stock are included in the stock assessment processes such that **the fishery PASSES Clause C1.1.**

**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 full stock assessment was conducted for yellowfin tuna in 2019, applying two production models (Just Another Bayesian Biomass Assessment (JABBA), biomass production model (MPB)) and one age-structured model (Stock Synthesis (SS)) to the available catch data through 2018. The four SS model runs, were regarded as representing alternative recruitment, and steepness hypotheses. Likewise, the JABBA runs addressed different hypotheses about initial priors for  $r$ , and about which indices of abundance were representing the population. Finally, the base case selected for MPB estimated biomass and fishing mortality trends that varied somewhat from JABBA. The Group decided that, in order to capture this uncertainty in the population dynamics for developing the management advice, it was best to incorporate results from all of the accepted model runs.

For the combined results (MPB, JABBA, SS) used to develop management advice, the median estimate of  $B_{2018}/B_{MSY}$  is 1.17 - and the median estimate of  $F_{2018}/F_{MSY}$  is 0.96 -. The median FMS estimated is 121,298 t. Combining the results of all models provides a way to estimate the probability of the stock being in each quadrant of the Kobe plot in 2018 (YFTFigure 12). The corresponding probabilities are 54% in the green quadrant (not overfished not subject to overfishing), 21% in the orange (subject to overfishing but not overfished) 2% in the yellow (overfished but not subject to overfishing) and 22% in the red (overfished and subject to overfishing). In summary, the results point to a stock status of not overfished (24% probability of overfished status), with no overfishing (43% probability of overfishing taking place) (ICCAT report 2022-2023).



**FIGURE 2 KOBE PLOT ESTIMATED FROM THE COMBINATION OF STOCK SYNTHESIS, JABBA AND MPB MODEL RUNS CHOSEN TO DEVELOP THE MANAGEMENT ADVICE (ICCAT REPORT 2022-2023).**

**ATLANTIC YELLOWFIN TUNA SUMMARY**

Estimates	Mean (90% confidence intervals)
Maximum Sustainable Yield (MSY)	121,298 t (90,428 - 267,350 t) <sup>1</sup>
2022 Yield	148,211 t
Relative Biomass <sup>2</sup> : $B_{2018} / B_{MSY}$	1.17 (0.75 - 1.62)
Relative Fishing Mortality: $F_{2018} / F_{MSY}$	0.96 (0.56 - 1.50)

2018 Total Biomass<sup>3</sup> 729,436 t

Stock Status (2018) Overfished: No<sup>4</sup>  
Overfishing: No<sup>5</sup>

**(Rec. 17-01, Rec. 22-01)**

- No fishing with natural or artificial floating objects from 1 January to 13 March 2023, throughout the Convention area. Prohibition of drifting FADs during a period of 15 days prior to the start of the closure period
- TAC of 110,000 t (since Rec. 11-01)
- Specific authorization to fish for tropical tunas for vessels 20 meters or greater
- Prohibition of discarding from purse seine
- Specific limits on FADs, non-entangling FADs required

<sup>1</sup> Minimum and maximum values of 90%LCI and 90%UCI among all runs by the SS, JABBA, and MPB

<sup>2</sup> SSB (Stock Synthesis) or exploited biomass (production models)

<sup>3</sup> Mean of the central estimates of the SS, JABBA and MPB models

<sup>4</sup> (24% probability of overfished status)

<sup>5</sup> (43% probability of overfishing taking place)

**FIGURE 3 ATLANTIC YELLOWFIN TUNA SUMMARY (ICCAT REPORT 2022-2023)**

The results of the most recent stock assessment indicates that the stock status is not overfished (it is over the target reference point) (ICCAT report 2022-2023). Therefore, the fishery **passes Clause C1.2**.

**References**

ICCAT report 2022-2023. YELLOWFIN TUNA (*Thunnus albacares*). STOCK STATUS (summary). Available at: <https://www.iccat.int/en/assess.html>

**Links**

<b>MarinTrust Standard clause</b>	1.3.2.2
<b>FAO CCRF</b>	7.5.3
<b>GSSI</b>	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.

<b>D1</b>	<b>Species Name</b>	n/a	
	<b>Productivity Attribute</b>	<b>Value</b>	<b>Score</b>
	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		
	<b>Average Productivity Score</b>		
	<b>Susceptibility Attribute</b>	<b>Value</b>	<b>Score</b>
	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		
	<b>Average Susceptibility Score</b>		
	<b>PSA Risk Rating (From Table D3)</b>		
	<b>Compliance rating</b>		
	<b>Further justification for susceptibility scoring (where relevant)</b>		
	<i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
<b>References</b>			
<i>Standard clauses 1.3.2.2</i>			

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.

	Average Susceptibility Score
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<b>D3</b>		<b>1 - 1.75</b>	<b>1.76 - 2.24</b>	<b>2.25 - 3</b>
<b>Average Productivity Score</b>	<b>1 - 1.75</b>	PASS	PASS	PASS
	<b>1.76 - 2.24</b>	PASS	PASS	TABLE D4
	<b>2.25 - 3</b>	PASS	TABLE D4	TABLE D4

<b>D4</b>	<b>Species Name</b>	<b>n/a</b>	
<b>Impacts On Species Categorised as Vulnerable by D1-D3 - Minimum Requirements</b>			
<b>D4.1</b>	The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.		
<b>D4.2</b>	There is no substantial evidence that the fishery has a significant negative impact on the species.		
			<b>Outcome:</b>
<b>Evidence</b>			
<b>D4.1:</b> The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.			
<b>D4.2</b> There is no substantial evidence that the fishery has a significant negative impact on the species.			
<b>References</b>			
<b>Links</b>			
<b>MarinTrust Standard clause</b>		1.3.2.2, 4.1.4	
<b>FAO CCRF</b>		7.5.1	
<b>GSSI</b>		D.5.01	