MarinTrust Standard V2

By-product Fishery Assessment

Atlantic Ocean Yellowfin Tuna

FAO Areas 21, 27, 31, 34, 41, and 47

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Table 1. Application details and summary of the assessment outcome.

Fishery Under Assessment	Species:	Yellowfin Tuna (*Thunnus albacares*)
	Geographical area:	Atlantic Ocean, FAO fishing areas: 21 (Atlantic, Northwest) 27 (Atlantic, Northeast) 31 (Atlantic, Western Central) 34 (Atlantic, Eastern Central) 37 (Mediterranean and Black Sea) 41 (Atlantic, Southwest) 47 (Atlantic, Southeast)
	Country of origin of the product:	Spain and Portugal (Flag Country)
	Stock:	Yellowfin Tuna in the Atlantic Ocean
Date	April 21 2022	
Report Code	ESP03	
Assessor	Ivan Mateo, Ph.D	
Country of origin of the product - PASS	Spain and Portugal (Flag Country)	
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.			
Country: Spain			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ivan Mateo, Ph.D	Vito Romito	0.5	Surveillance 2
Assessment Period	April 2022		

Scope Details	
Main Species	Yellowfin Tuna (*Thunnus albacares*)
Stock	Yellowfin Tuna in the Atlantic Ocean
Fishery Location	Atlantic Ocean, FAO fishing areas: 21 (Atlantic, Northwest) 27 (Atlantic, Northeast) 31 (Atlantic, Western Central) 34 (Atlantic, Eastern Central) 37 (Mediterranean and Black Sea) 41 (Atlantic, Southwest) 47 (Atlantic, Southeast)
Management Authority (Country/ State)	ICCAT and National authorities of Spain and Portugal
Gear Type(s)	Longline, baitboat and purse seine.
Outcome of Assessment	
Peer Review Evaluation	Approved
Recommendation	APPROVED

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 IFFO RS raw material. Yellowfin Tuna in the Atlantic Ocean does not appear as Endangered or Critically Endangered on IUCN's Red List, nor does it appear in CITES appendices; therefore, Yellowfin Tuna in the Atlantic Ocean is eligible for approval for use as IFFO RS by-product raw material. This assessment covers a single stock (i.e., Yellowfin Tuna in the Atlantic Ocean) when fished within the above FAO fishing areas by Spanish or Portuguese vessels. Fishery removals of the stock are considered in the ICCAT stock assessment process so the stock **PASSES** Clause C1.1. ICCAT does not employ an explicit limit reference point to manage this stock; however, given that the latest assessment estimated stock biomass to be above BMSY, biomass can correspondingly be considered to be above any nominal limit reference point (or proxy); therefore, the stock **PASSES** Clause C1.2. In order to be approved, the stock assessed must pass both Clause C1.1 and C1.2; therefore, as this is the case here, by-product covered by this report is **APPROVED** for the production of fishmeal and fish oil under the current IFFO RS v 2.2 by-product standard.
Fishery Assessment Peer Review Comments
The peer reviewer agrees with the assessment of yellowfin tuna as a category C. Catch information is used in the assessment. A full stock assessment was conducted in 2019. The combined results show that the median estimate of B2018/BMSY is 1.17 and that the stock is not overfished and overfishing is not occurring. Therefore, since the stock is considered to have a biomass above the limit reference point, the stock should be APPROVED for the production of fishmeal and fish oil under the current IFFO RS v 2.2 by-product standard.
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]
Yellowfin Tuna	*Thunnus albacares*	Yellowfin Tuna in the Atlantic Ocean	ICCAT and National authorities of Spain and Portugal	C	NT	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		**Yellowfin Tuna**	
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.

A full stock assessment was conducted in 2019 applying two production models and one age-structured model to the available catch data through 2018. Total catches from the 1950-2018 period are shown in Figure 1~~Figure 1~~. Therefore, the stock **PASSES** Clause C1.1.

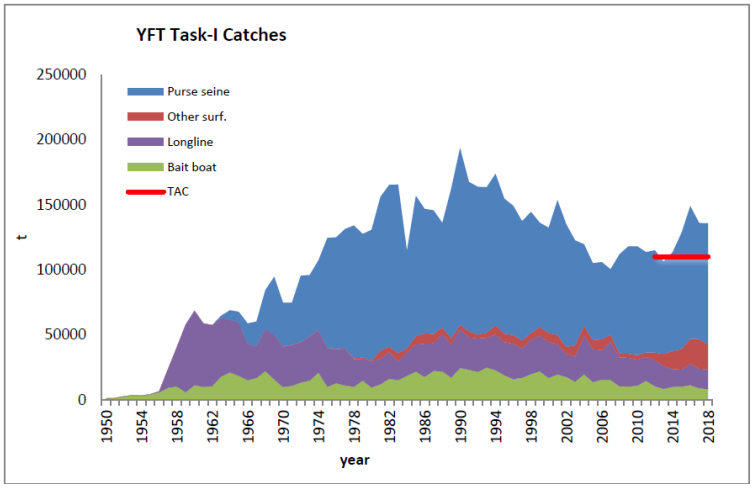

Figure 1. Yellowfin Tuna total catch 1950 – 2018 by main fishing gear group.

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 in 2019 applying two production models and one age-structured model to the available catch data through 2018. All models show that estimated biomass continuously declines through time. The combined results show that the median estimate of B2018/BMSY is 1.17 (Table 4) and that the stock is not overfished and overfishing is not occurring (Figure 2). Therefore, the assessor determines that, the stock is considered to have a biomass above the limit reference point, it **PASSES** Clause C1.2.

Table 4. Atlantic Yellowfin Tuna stock status summary.

Estimates	Mean (90% confidence intervals)
Maximum Sustainable Yield (MSY)	121,298 t (90,428 - 267,350 t)[1]
2018 Yield	135,689 t
Relative Biomass[2]: 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[3]	729,436 t
Stock Status (2018)	Overfished: No[4] Overfishing: No[5]

[Rec. 16-01]
- No fishing with natural or artificial floating objects during January and February in the area encompassed by the African coast, 20º W, 5ºN and 4ºS.
- TAC of 110,000 t (since Rec. 11-01).
- Specific authorization to fish for tropical tunas for vessels 20 meters or greater
- Specific limits of number of longline and/or purse seine boats for a number of fleets
- Specific limits on FADs, non-entangling FADs required

1) Minimum and maximum values of 90%LCI and 90%UCI among all runs by the Stock Synthesis, JABBA, and MPB
2) SSB (Stock Synthesis) or exploited biomass (production models)
3) Mean of the central estimates of the SS, JABBA and MPB models
4) (24% probability of overfished status)
5) (43% probability of overfishing taking place)

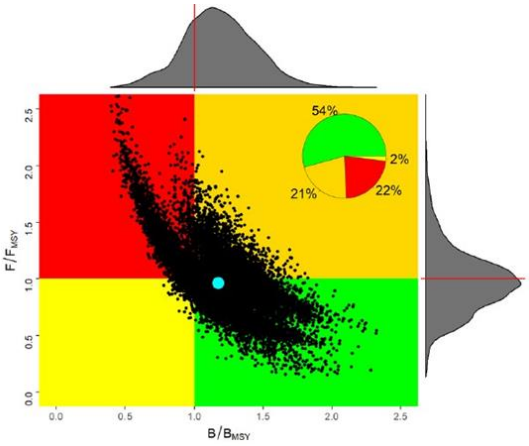

Figure 2. Kobe plot estimated from the combination of Stock Synthesis, JABBA and MPB model runs chosen to develop the management advice.

References

Collette, B., Acero, A., Amorim, A.F., Boustany, A., Canales Ramirez, C., Cardenas, G., Carpenter, K.E., Chang, S.-K., de Oliveira Leite Jr., N., Di Natale, A., Die, D., Fox, W., Fredou, F.L., Graves, J., Guzman-Mora, A., Viera Hazin, F.H., Hinton, M., Juan Jorda, M., Minte Vera, C., Miyabe, N., Montano Cruz, R., Masuti, E., Nelson, R., Oxenford, H., Restrepo, V., Salas, E., Schaefer, K., Schratwieser, J., Serra, R., Sun, C., Teixeira Lessa, R.P., Pires Ferreira Travassos, P.E., Uozumi, Y. & Yanez, E. 2011. *Thunnus albacares*. *The IUCN Red List of Threatened Species* 2011: e.T21857A9327139. https://dx.doi.org/10.2305/IUCN.UK.2011-2.RLTS.T21857A9327139.en.

ICCAT Stock Assessment and Executive Summary – Yellowfin Tuna https://www.iccat.int/en/assess.html

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