MarinTrust Standard V2

By-product Fishery Assessment, THA34, *Yellowfin tuna (Thunnus albacares), Thailand*

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Yellowfin tuna *(Thunnus albacares)*
	Geographical area:	FAO 77, Pacific Eastern Central; and FAO 87, Pacific Southeast
	Country of origin of the product:	Thailand (India, China, Taiwan, South Korea, Vanuatu, USA, Kiribati, Solomon Islands, Tuvalu, Nauru, Micronesia)
	Stock:	Western Central Pacific Ocean (WCPO) and Eastern Pacific Ocean (EPO)
Date	August 2023	
Report Code	THA34	
Assessor	Blanca Gonzalez	
Country of origin of the product - PASS	Thailand (India, China, Taiwan, South Korea, Vanuatu, USA, Kiribati, Solomon Islands, Tuvalu, Nauru, Micronesia)	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Chotiwat Manufacturing Public Co. Ltd, Piyo Bhokabhan Company Limited, TC Union Agrotech Co. Ltd, TCF Co. Ltd			
Country: Thailand			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Blanca Gonzalez	Sam Peacock	0.5	Surveillance 1
Assessment Period	August 2023-August 2024		

Scope Details	
Main Species	Yellowfin tuna (*Thunnus albacares*)
Stock	Western Central Pacific Ocean (WCPO) and Eastern Pacific Ocean (EPO)
Fishery Location	FAO 77, Pacific Eastern Central; and FAO 87, Pacific Southeast
Management Authority (Country/ State)	The Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC)
Gear Type(s)	Longlines, purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	Approve

Table 2. Assessment Determination

Assessment Determination
Yellowfin tuna (*Thunnus albarcares*) was assessed as a category C species considering that it is a Least Concern species by the IUCN, it is not in included in any CITES Appendixes, and the two recognized Pacific Ocean stocks (Western Central Pacific Ocean and Eastern Pacific Ocean) are assessed and managed by the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC). Both Pacific Ocean stocks uses catches data for the stock assessment process and both stocks have a biomass above their respective limit reference points. The yellowfin tuna by-product meets the Marin Trust requirements and it should be approved for use as a raw material.
Fishery Assessment Peer Review Comments
The assessor has identified two yellowfin tuna stocks in the assessment area, both of which have been correctly assessed under Category C. The assessor has provided evidence of a reliable stock assessment in both cases, and in both cases the stock biomass was estimated to be above the limit reference point by the most recent stock assessment. The peer reviewer agrees that the raw material should remain approved.
Notes for On-site Auditor
There are no concerns that requires attention from the on-site assessor.

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 albarcares*	Western Central Pacific Ocean (WCPO) and Eastern Pacific Ocean (EPO)	Yes	C	Least Concern [3]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
[3] 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.

Species Name		**Yellowfin tuna (*Thunnus albarcares)***	
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.

Clause is met, considering that:

The latest yellowfin tuna stock assessment in the Western Central Pacific was carried out in 2020 by the Western and Central Pacific Fisheries Commission (WCPFC), where removals of the species are included as part of the assessment (WCPFC 2021) (Figure 1). In the other hand, the last benchmark assessment for yellowfin tuna in the Eastern Pacific Ocean (EPO) was conducted in 2020 by the Inter-American Tropical Tuna Commission (IATTC), where a total of 48 models composed the benchmark assessment and all EPO catches were added to the models. (IATTC 2023) (Figure 2).

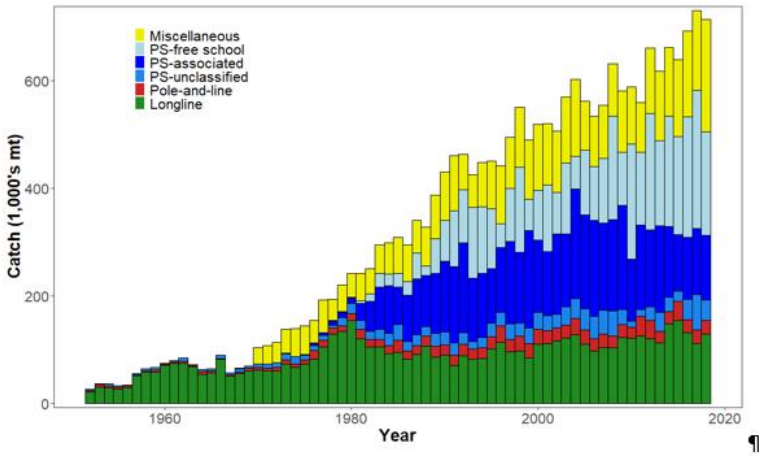

Figure 1. Yellowfin tuna catches in the Western Central Pacific (WCPFC 2021).

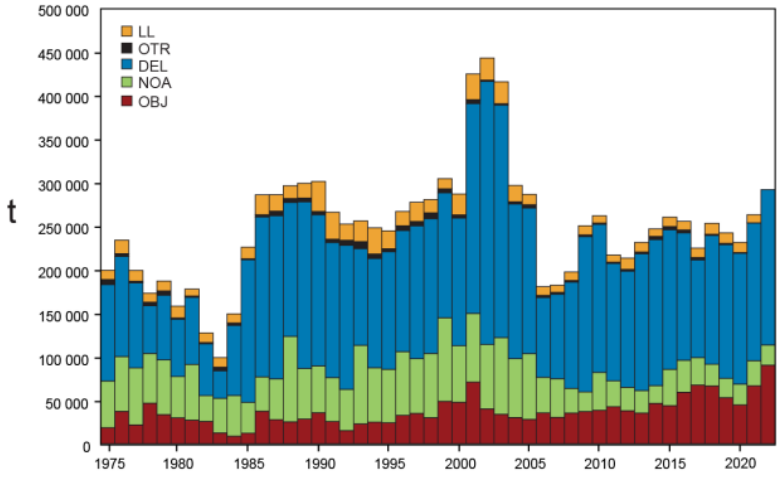

Figure 2. Yellowfin tuna catches in the Eastern Pacific Ocean. LL=longline, OTR=other, DEL, NOA, OBJ=purse seine (IATTC 2023).

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.

Clause is met, considering that:

The WCPO yellowfin tuna spawning biomass is above the biomass LRP; thus, the stock is not in an overfished condition and stochastic projections predict there to be no risk of breaching the LRP (WCPFC 2021) (Figure 3). Meanwhile in the EPO spawning biomass is above the limit reference point, and the probability of being below SMSY_d is low, while the probability of the spawning biomass exceeding SLIMIT is zero (IATTC 2023) (Figure 4).

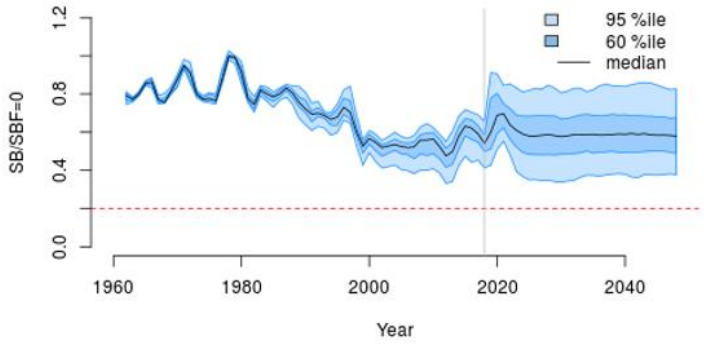

Figure 3. Yellowfin tuna spawning biomass in the Western Central Pacific. The red horizontal dashed line represents the agreed limit reference point. (WCPFC 2021).

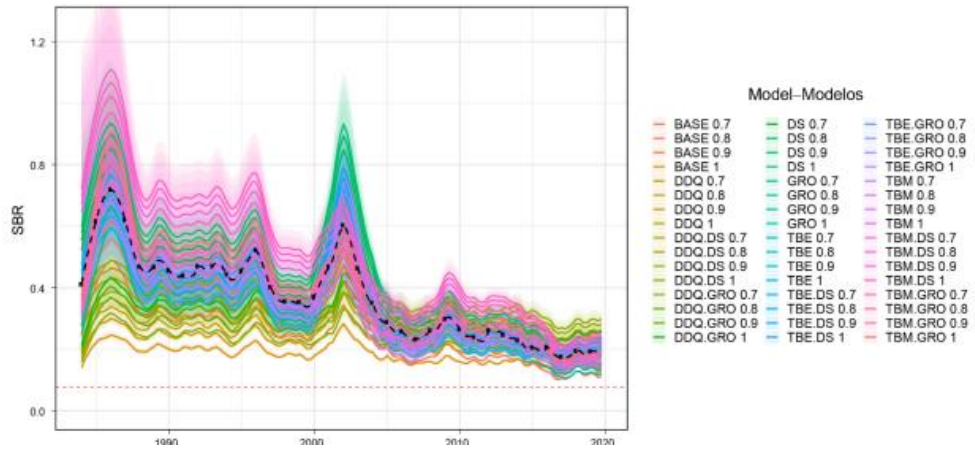

Figure 4. Spawning biomass ratios (SBRs) for yellowfin tuna in the Eastern Pacific Ocean. The solid lines represent the maximum likelihood estimates and the shaded areas the approximate 95% confidence intervals around those estimates estimated by the 48 models and weighted average (black dashed line). The red dashed horizontal line (at 0.077) identifies the SBR at SLIMIT. (IATTC 2023).

References

WCPFC (2021). The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Scientific Committee, WCPO Yellowfin Tuna (Thunnus albacares). Stock Status and Management Advice. February 2021. https://www.wcpfc.int/doc/02/yellowfin-tuna

IATTC (2023). Inter-American Tropical Tuna Comission. 101st meeting Victoria, B.C., Canada. 7-11 August 2023. Document IATTC-101-01. The tuna fishery in the Eastern Pacific Ocean in 2022. https://www.iattc.org/GetAttachment/691ea981-c917-457b-8085-272740718465/IATTC-101-01_The-tuna-fishery-in-the-Eastern-Pacific-Ocean-in-2022.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	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